BUHL SONS CO.

DETROIT, - MICH.

TOOLS
IRON AND STEEL
FACTORY AND RAILWAY SUPPLIES
ELECTRICAL AND AUTOMOBILE ACCESSORIES
ROOFING, METALS AND TINPLATE

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Wholesale hardware: mill, factory and railway supplies, mechanics' tools, iron and steel, valves, pipe and fittings, abrasive wheels, belting and transmission, automobile accessories and electrical supplies, building paper, roofing, metals and tin plate, builders' hardware.

Buhl Sons Company.
Detroit, 1918.

http://hdl.handle.net/2027/mdp.39015021210805

HathiTrust

www.hathitrust.org

Public Domain

http://www.hathitrust.org/access_use#pd

We have determined this work to be in the public domain, meaning that it is not subject to copyright. Users are free to copy, use, and redistribute the work in part or in whole. It is possible that current copyright holders, heirs or the estate of the authors of individual portions of the work, such as illustrations or photographs, assert copyrights over these portions. Depending on the nature of subsequent use that is made, additional rights may need to be obtained independently of anything we can address.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

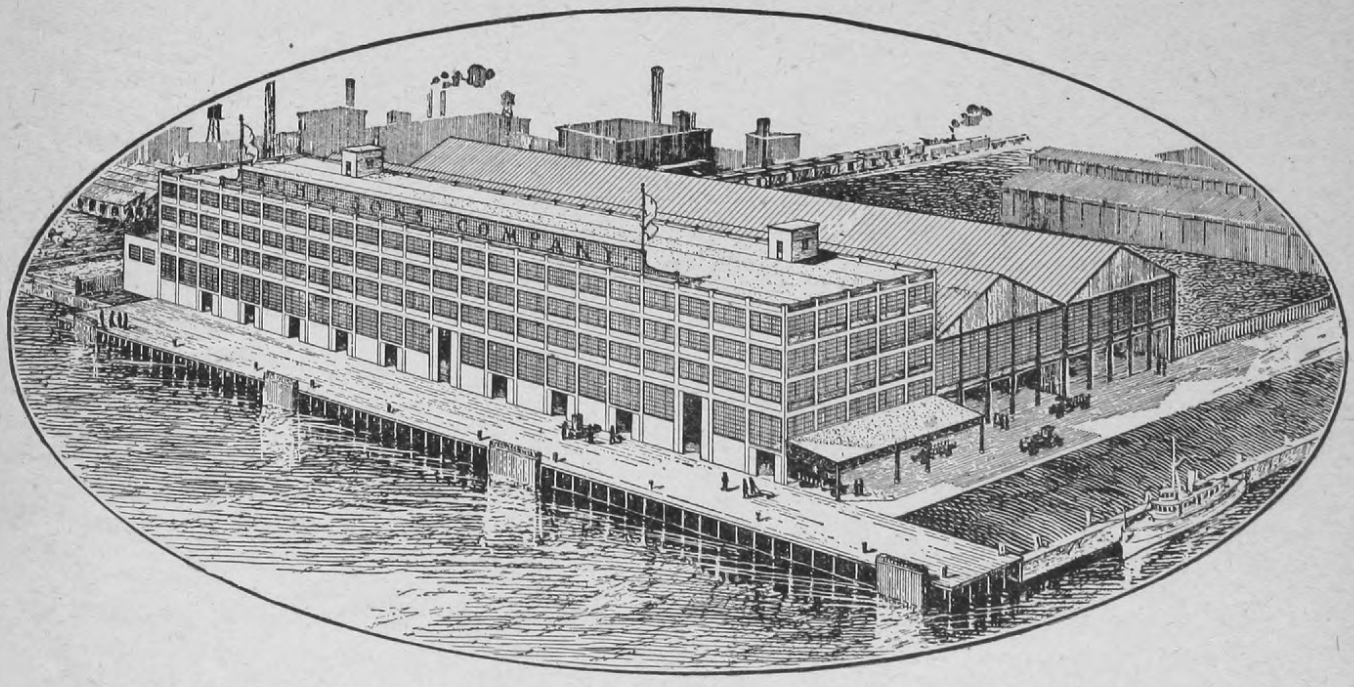
Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

BUHL SONS COMPANY

Store Room, Warehouse and Offices
Dock in Rear
Nos. 103-119 Woodbridge Street, West



Reinforced Concrete Warehouse and Dock, Detroit River, Adair and Walker Streets

DETROIT - - - MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

COMPOSITION, ELECTROTYPING, PRINTING
AND BINDING BY THE
W. B. CONKEY COMPANY
HAMMOND, INDIANA

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Public Domain / http://www.hathitrust.org/access_use#pd

BUHL SONS COMPANY

WHOLESALE

HARDWARE

"MILL, FACTORY AND RAILWAY SUPPLIES,"

MECHANICS' TOOLS

IRON and STEEL

Valves, Pipe and Fittings.

Abrasive Wheels, Belting and Transmission,
Automobile Accessories and Electrical Supplies,
Building Paper, Roofing, Metals and Tin Plate.

Builders' Hardware,

—:— 1918 —:—

Nos. 103-119 Woodbridge Street, West

DETROIT - - - MICHIGAN

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

Engin. Library
TC
405
B93
1918

"DOMESTIC POSTAGE" CLASSIFICATION AND RATES

First Class Matter includes letters and all matter, wholly or partly in writing, whether sealed or not, except manuscript copy accompanying proof-sheets; also all matter sealed .....3c an oz.
Except drop letters at **local** offices.....2c an oz.
Postal cards and private mailing cards.....2c each

Second Class Matter includes Newspapers and Periodicals bearing notice of entry as second-class matter.....
.....1c for each 4 ounces or part thereof when not sealed.

Third Class Matter—Unsealed, and weighing 4 pounds and under, includes "point print" correspondence of the blind, books—printed, not blank*—circulars, other printed matter, photographs, printer's proof, or proof-sheets and manuscript copy accompanying same, sheet music, chromos, posters, lithographs and printed advertising matter in general, all, when not sealed.....1c for 2 ounces or fraction
For over 4 pounds in weight.....Parcel Post zone rates apply

Fourth Class Matter includes merchandise and all matter not included in any of the other classes, and not in its nature perishable or liable to injure the contents of the mails. Parcels weighing **Four** ounces or less are mailable at the rate of One Cent for each ounce or fraction of an ounce regardless of distance. For parcels weighing more than Four ounces, see Parcel Post.

By Express Ruling the postage on packages of seeds, cuttings, roots, scions and plants weighing 8 ounces or less is at the rate of.....1c for each 2 oz.
On packages in excess of 8 ounces in weight.....Parcel Post zone rates apply

Sealing—Any matter is regarded as sealed and subject to 1st class postage rates when it is not so wrapped as to allow of a thorough examination without in any way injuring the wrapping.

Registration—First, Second and Third-class matter.....10c in addition to regular postage
First-class matter insures to actual value up to $50.00, Third-class up to $25.00. Fourth-class matter may be insured, see parcel post regulations.

Special Delivery Stamp—Regular mail or parcel post matter.....10c in addition to regular postage
Regular Postage Stamps may be used, in which case mark package "Special Delivery."

"PARCEL POST" REGULATIONS

Under the Parcel Post Law, Fourth-class Matter embraces all other matter, including Farm and Factory products, not now embraced by Law in either First, Second or Third Classes. The Law does not, however, permit the mailing of packages in form or kind likely to injure the person of any postal employe, or damage the mail equipment, or other mail matter, or of a character perishable within a period reasonably required for transportation and delivery.

A Fraction of a Pound is considered as a full pound in all instances.

Printed Matter, Photographs, Maps, Pictures, Etc., on paper are **not** regularly classed as parcel post matter. They are third class matter and must bear the regular postage stamps at 1 cent for each 2 ounces or fraction thereof.

* Limit of weight is 4 pounds. For 4 pounds and over parcel post zone rates are to apply.

***Books**—Printed, not blank, may be sent by Parcel Post, except the rate of postage on books weighing 8 ounces or less shall be 1 cent for each 2 ounces or fraction thereof, and on those in excess of 8 ounces the regular parcel post zone rates shall apply.

Note—For Parcel Post Map, Rates and other regulations, see following pages.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

Engin. Lib.
City
Hist. Found.
102 4/01-210

PARCEL POST RATES AND REGULATIONS

"First and Second Zones"

The limit of weight of parcels of Fourth-class mail for delivery by Parcel Post within the **First** and **Second** Zones, shall be 70 pounds. The rate of Postage on parcels exceeding Four ounces in weight shall be Five Cents for the First pound and One Cent for each additional Two pounds or fraction thereof when intended for **local delivery,** and Five Cents for the First pound and One Cent for each additional pound or fraction thereof when intended for delivery at other offices within the First and Second Zones.

Note

The rate for local delivery shall apply to all parcels mailed at a post office from which a rural route starts, for delivery on such route, or mailed at any point on such route for delivery at any other point thereon, or at the office from which the route starts, or any rural route starting therefrom, and on all matter mailed at a city carrier office, or at any point within its delivery limits, for delivery by carriers from that office, or at any office for local delivery.

Third, Fourth, Fifth, Sixth, Seventh and Eighth Zones

The Limit of Weight for the Third Zone shall be 70 pounds, and for the Fourth to Eighth Zone, inclusive, shall be 50 pounds, mailable at the various rates given in the table on the following page.

Postage Stamps

Effective July 1st, 1913, the law was changed so that **Regular** Postage Stamps are permitted and accepted on all parcels.

Insurance Indemnity and Fee

Parcels may be insured against loss in an amount equal to actual value, but not exceeding **$5.00** on payment of 3 cents; $25.00, 5 cents; $50.00, 10 cents; $100.00, 25 cents. The fee to be in the form of postage stamps affixed to the package insured in addition to the regular rate of postage which applies to the package. To insure a package the sender first affixes the fee in the form of postage stamps to the package as above and then takes the package to the parcel post window at the postoffice, where a numbered insurance tag is tied to the parcel and an insurance receipt, numbered to correspond with the tag, is given the sender.

This insurance takes the place of registration, and parcel post matter cannot be registered.

Collect on Delivery

The sender of a parcel post package may have the price of the article and the charges thereon collected from the addressee on payment of a fee of 10 cents, provided the amount to be collected does not exceed $50.00. When the amount to be collected is greater than $50.00 the fee is 25 cents. Such a parcel will be insured against loss, without additional charge, in an amount equivalent to its actual value.

Limit of Weight and Size

For the **First, Second** and **Third** Zone, if a parcel exceeds 70 pounds in weight or is greater in size than 72 inches in length and girth combined, it must be refused, no matter how small the excess may be in either case.

For the Fourth to Eighth Zones, inclusive, if a parcel exceeds 50 pounds in weight, or is greater in size than 72 inches in length and girth combined, it must be refused, no matter how small the excess may be in either case.

Size—How Measured

The law prescribes that a package to be admitted to the parcel post shall not exceed 72 inches in combined length and girth. In measuring the length the greatest distance in a straight line between the two ends of the parcel shall be taken, while the girth is the actual measurement by a tape encircling the parcel at its thickest part.

Places of Mailing

Parcels must be mailed at a postoffice, branch postoffice, named or lettered station, or such numbered stations as may be designated by the postmaster, or delivered to a rural or other carrier duly authorized to receive such matter.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

DOMESTIC PARCEL POST RATES

Parcels weighing four ounces or less are mailable at the rate of one cent for each ounce or fraction of an ounce, regardless of distance. Parcels weighing more than four ounces are mailable at the pound rates shown in the following table, a fraction of a pound being considered a full pound.

WEIGHT	First Zone		Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth
	Local Rate	Zone Rate	Zone Rate	Zone Rate	Zone Rate	Zone Rate	Zone Rate	Zone Rate	Zone Rate
1 pound	0.05	$0.05	$0.05	$0.06	$0.07	$0.08	$0.09	$0.11	$0.12
2 pounds	.06	.06	.06	.08	.11	.14	.17	.21	.24
3 "	.06	.07	.07	.10	.15	.20	.25	.31	.36
4 "	.07	.08	.08	.12	.19	.26	.33	.41	.48
5 "	.07	.09	.09	.14	.23	.32	.41	.51	.60
6 "	.08	.10	.10	.16	.27	.38	.49	.61	.72
7 "	.08	.11	.11	.18	.31	.44	.57	.71	.84
8 "	.09	.12	.12	.20	.35	.50	.65	.81	.96
9 "	.09	.13	.13	.22	.39	.56	.73	.91	1.08
10 "	.10	.14	.14	.24	.43	.62	.81	1.01	1.20
11 "	.10	.15	.15	.26	.47	.68	.89	1.11	1.32
12 "	.11	.16	.16	.28	.51	.74	.97	1.21	1.44
13 "	.11	.17	.17	.30	.55	.80	1.05	1.31	1.56
14 "	.12	.18	.18	.32	.59	.86	1.13	1.41	1.68
15 "	.12	.19	.19	.34	.63	.92	1.21	1.51	1.80
16 "	.13	.20	.20	.36	.67	.98	1.29	1.61	1.92
17 "	.13	.21	.21	.38	.71	1.04	1.37	1.71	2.04
18 "	.14	.22	.22	.40	.75	1.10	1.45	1.81	2.16
19 "	.14	.23	.23	.42	.79	1.16	1.53	1.91	2.28
20 "	.15	.24	.24	.44	.83	1.22	1.61	2.01	2.40
21 "	.15	.25	.25	.46	.87	1.28	1.69	2.11	2.52
22 "	.16	.26	.26	.48	.91	1.34	1.77	2.21	2.64
23 "	.16	.27	.27	.50	.95	1.40	1.85	2.31	2.76
24 "	.17	.28	.28	.52	.99	1.46	1.93	2.41	2.88
25 "	.17	.29	.29	.54	1.03	1.52	2.01	2.51	3.00
26 "	.18	.30	.30	.56	1.07	1.58	2.09	2.61	3.12
27 "	.18	.31	.31	.58	1.11	1.64	2.17	2.71	3.24
28 "	.19	.32	.32	.60	1.15	1.70	2.25	2.81	3.36
29 "	.19	.33	.33	.62	1.19	1.76	2.33	2.91	3.48
30 "	.20	.34	.34	.64	1.23	1.82	2.41	3.01	3.60
31 "	.20	.35	.35	.66	1.27	1.88	2.49	3.11	3.72
32 "	.21	.36	.36	.68	1.31	1.94	2.57	3.21	3.84
33 "	.21	.37	.37	.70	1.35	2.00	2.65	3.31	3.96
34 "	.22	.38	.38	.72	1.39	2.06	2.73	3.41	4.08
35 "	.22	.39	.39	.74	1.43	2.12	2.81	3.51	4.20
36 "	.23	.40	.40	.76	1.47	2.18	2.89	3.61	4.32
37 "	.23	.41	.41	.78	1.51	2.24	2.97	3.71	4.44
38 "	.24	.42	.42	.80	1.55	2.30	3.05	3.81	4.56
39 "	.24	.43	.43	.82	1.59	2.36	3.13	3.91	4.68
40 "	.25	.44	.44	.84	1.63	2.42	3.21	4.01	4.80
41 "	.25	.45	.45	.86	1.67	2.48	3.29	4.11	4.92
42 "	.26	.46	.46	.88	1.71	2.54	3.37	4.21	5.04
43 "	.26	.47	.47	.90	1.75	2.60	3.45	4.31	5.16
44 "	.27	.48	.48	.92	1.79	2.66	3.53	4.41	5.28
45 "	.27	.49	.49	.94	1.83	2.72	3.61	4.51	5.40
46 "	.28	.50	.50	.96	1.87	2.78	3.69	4.61	5.52
47 "	.28	.51	.51	.98	1.91	2.84	3.77	4.71	5.64
48 "	.29	.52	.52	1.00	1.95	2.90	3.85	4.81	5.76
49 "	.29	.53	.53	1.02	1.99	2.96	3.93	4.91	5.88
50 "	.30	.54	.54	1.04	2.03	3.02	4.01	5.01	6.00
51 "	.30	.55	.55	1.06					
52 "	.31	.56	.56	1.08					
53 "	.31	.57	.57	1.10					
54 "	.32	.58	.58	1.12					
55 "	.32	.59	.59	1.14					
56 "	.33	.60	.60	1.16					
57 "	.33	.61	.61	1.18					
58 "	.34	.62	.62	1.20					
59 "	.34	.63	.63	1.22					
60 "	.35	.64	.64	1.24					
61 "	.35	.65	.65	1.26					
62 "	.36	.66	.66	1.28					
63 "	.36	.67	.67	1.30					
64 "	.37	.68	.68	1.32					
65 "	.37	.69	.69	1.34					
66 "	.38	.70	.70	1.36					
67 "	.38	.71	.71	1.38					
68 "	.39	.72	.72	1.40					
69 "	.39	.73	.73	1.42					
70 "	.40	.74	.74	1.44					

Important

The name and address of the sender, preceded by the word "FROM" must appear on every package.

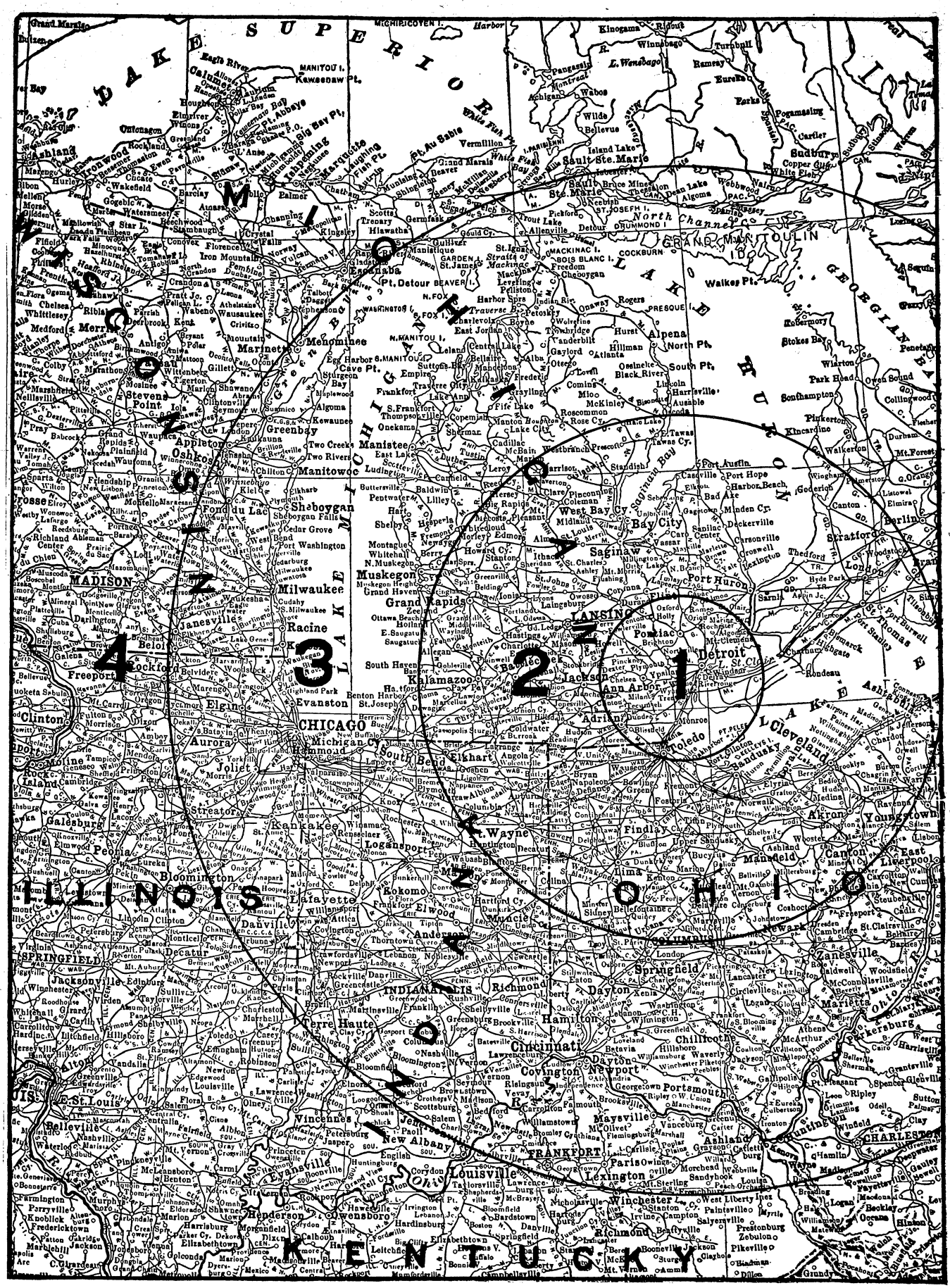
It is to the interest of the sender to see that parcels are securely packed, wrapped and tied. Parcels improperly packed will not be accepted for mailing. Parcels sealed or otherwise closed against inspection are subject to first-class rate of postage.

Revenue Stamps

Parcels on which the postage amounts to 25 cents or more require a revenue stamp of 1 cent for each 25 cents or fractional part thereof.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

PARCEL POST MAP



Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN
Public Domain / http://www.hathitrust.org/access_use#pd

"A QUALITY RULE—BUY GOODS BRANDED BUHL"

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

INDEX

A

PAGE

Abrasite Cloth 484
Abrasive Wheels .....486 to 489
ABSORBERS, Shock 780, 781
Accelerator Foot Rests 806
Plates 760
ACCESSORIES—
Automobile .....702 to 844
Auto Tire 703, 704
Auto Tire Valve 718, 719
Eave Trough 692, 693
Conductor Pipe 692, 693
Acme Casters 1216T
ADAPTERS, Electric Lamp 821
Switch Box 897
Adjustable Chimney Caps 694
Clamps 405
Elbows, Conductor Pipe 690
Farm Gates 50
Hollow Mills 236
Parallels 468
Pipe Threading Devices 254
Round Dies 248
Stencil Letters 418
Tap Wrenches 246
Wrenches 259, 260
ADJUSTERS, Cord, Spool 907
Weed Chain 705
Window Stop 1127T
Adze Eye Hammer Handles 408
Handles 410
ADZES, Carpenters' 301
Coopers' 309
Railroad 301
Ship 301
Agricultural Wrenches 257, 258
Air Cocks, Auto Tubing..... 759
Cocks, Brass 142
Compressors 732
Drill Hose 108
Hose, Auto 751
Tubing, Hot 752
Air-O-Lite Lanterns 919T
Alarm Door Bells 951T
Tills 605
Alfalfa Belting 86
Alligator Wrenches 258, 259
Alto Tar Roofing 666
Aluminum Cleaner 641
Hawks 545
Heel Plates 807
Japalac 650
Levels 433, 434
Paint 743
Polish 641
Solder 19
Alumishine Polish 641
Always Ready Wrenches 259
American Coil Chain 154
Cut Tacks 42
Halter Chains 155
AMMETERS, Pocket 762
Anchor Packings .....95 to 99
ANCHORS, Screw 67
Angle Check Valves 139
Cutters 227, 228
Dividers 478
Iron Cutters 518
Steel, Bar Sizes 3
Steel, Weights of 11
Structural Steel 3
Valves 138, 140

A

PAGE

ANGLES, Steel, Bar Sizes..... 3
Steel, Weights of 11
Structural Steel 3
Angular Bit Stocks 368
Annealed Fence Wire 56
Spool Wire 59
Stone Wire 57
Annunciator Wire 904
ANTIMONY 21
ANTI-Freeze, Radiator 744, 745
Rattlers 159
Rattlers, Auto 806
Skid Chains .....705 to 707
Slip Metal Tread 1118T
Splashers 1230T
Anvil Tools 280
ANVILS, Blacksmiths' 198
Vises and 196
APRONS, Carpenters' 419
Machinists' 419
Wash 724
ARBORS for Screw Slotting Cutters 229
For Shell End Mills 235
For Shell Reamers 225
Arc Light Rope 600
Armco Ingot Iron Roofing....676, 677
Armored Conductors 885
Lamp Cord 885
Artists' Brushes 625
Asbestos Felt 665
Gaskets, Manhole 99
Gaskets, Copper .....773 to 775
Mill Board 665
Paper 665
Roll Board 665
Ash Can Covers 1239T
Cans 1239T
Pit Doors 1235T
Asphalt Cement 654
Felt 666
Rakes 933T
Rock Surface Roofing 669
Rock Surface Shingles 669
Roll Roofing 669
Roof Coating 655
Rubber Roofing 667, 668
ASPHALTUM 652, 653
Assorted Cap Screws 66, 800
Set Screws 66, 800
ASSORTMENTS, Auto Clip 790
Carborundum Stones 510
Carpenters' Pencils 425
Coil Spring 779
Coil Spring, Tuck 1115T
Gasket .....773 to 775
Hook, "Hang-Up" 1224T
Lead Pencil 424
Lock Washer, Auto 799
Measuring Tape 444
Oil Stone 504, 510
Paint and Varnish Brush ... 621
Pen and Pencil 425
Punch 275
Rule 444
Screw Driver 355
Scythe Stone 502
Shoe Brushes 634
Spooled Wire 59
Spring Cotter, Auto 799
Spring Cotters 76
Steel Letters and Figures .. 418
Steel Squares 438

A

PAGE

ASSORTMENTS—Continued.
Thumb Tack 1224T
Vise 190
Wire Brushes 629
Attachment Plug Bases 866
Plug Caps 866
Plugs .....864 to 867
ATTACHMENTS, Center Gauge. 458
Grooving Machine 526
Micrometer 461
Sew-E-Z 914T
Shifting 125C
Square 454
Stock and Die 252
Tester 719
Auger Bit Boxes 373
Bit Files 179
Bit Gauges 372
Bit Rolls 373
Bit Sets 373, 374
Auger Bits .....372 to 375
Forstner 375
Machine 371
Ship 370
Auger Handles 408
AUGERS, Boring Machine 369
Hollow 369
Machine 369, 371
Nut, Carpenters' 369
Post Hole 567
Ship 370
AUTO-LAK 744
Autoguard Bumpers 781
Autolock Switches 813
Automatic Drills 359
Fire Door Fixtures 1199T to 1201T
Injectors 142
Swing Fire Door Fixtures..1201T
AUTOMOBILE ACCESSORIES.
.....702 to 844
See separate subjects in their alphabetical order in addition to the following staple items:
Automobile Body Hammers..... 284
Cables 824, 825
Carbide 729
Catches 1141T
Clocks 766, 767
Exhaust Heaters 727
Filling Cans 737
Finishes 742, 743
Fuses 823
Hammers 283
Heaters 727, 728
Horns 765, 766
Jacks 267, 268, 712, 713
Lamps, Electric 843, 844
Lights, Electric 835
Lock Chains 812
Oil and Grease .....739 to 741
Oilers 929T
Padlocks 810, 811, 1037T
Pliers 345
Polish 743
Push Buttons 814
Radiators 777
Robes 724, 726
Running Board Mats 647
Screw Drivers 354
Specialties .....744 to 748
Springs 788, 789

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

A

PAGE

Automobile—Continued.
- Tire Accessories 703, 704
- Tire Chains 705
- Tire Patches 717
- Tire Pry Bars 710
- Tire Pumps 730, 731
- Tire Tools 710
- Tire Valves and Parts .718, 719
- Tires 702
- Tool Kits 793
- Tool Rolls 797
- Top Dressing 653
- Tow Lines 711
- Trailers 798
- Vises 197
- Washers 729
- Wheels 708
- Wrenches 261

Autospra Brushes 729
Auto-Spray Outfit 744
AUTOWLOCKS, Powersteel 812
Auxiliary Springs 1052T
Awl and Tool Sets 378
- Hafts 411
- Handles 411

AWLS, Belt 93
- Brad 379
- Harness 379
- Pegging 379
- Sewing 379
- Sewing, Lock Stitch 379
- Scratch 378

Awning Pulleys 1214T, 1215T
Axe Handles 409
- Sheaths 300
- Stones 503, 505, 508
- Wedges 278

AXES, Boys' 299
- Broad 301
- Double Bit .....294 to 298
- Firemen's 299
- Handled .....296 to 299
- Hunters' 300
- Ice 579
- Pocket 300
- Safety 300
- Ship 301
- Single Bit .....294 to 298
- Standard Extras 298
- Wagon 579
- Wood Choppers' .....294 to 298

Axle Clip Yokes 166
- Clips 163
- Washers, Leather 160

AXLES, Emergency 805

B

Babbitt Metals 20
Back Flap Hinges 1091T
- Saws 381

Bag Hinges 1089T
- Trucks 576

BAGS, Grocers' 662
- Nail 662

Bailey Differentials 777
- Planes 322, 325

BALANCES, Ice 575
- Sash 1209T
- Spring 574, 575
- Warehouse 574

Bale Ties 53
BALERS, Waste Paper 53
Ball Check Valves, Auto Tubing 757
- Points 476
- Socket Joints 755

Ballast Forks 933T
BALLS, Fuller Bibb 115
- Steel 77
- Tank 102

B

PAGE

Bamboo Pipe Extensions 945T
Band Iron 1
- Lining, Brake 749
- Saw Files 180
- Saws 393
- Steel 2

BANDS, Hose 112
Bar Bumpers 103
- Chisels, Ice 579
- Clamps 404
- Iron 1
- Iron, Weights of .....12 to 14
- Lead 21
- Sash Lifts ..964T to 986T, 1128T
- Solder 19
- Steel 2
- Steel, Weights of.....12 to 14
- Tin 19

Barbed Box Nails 28, 30
- Car Nails 28, 32
- Dowel Pins 28, 34
- Roofing Nails 35
- Wire 55

Bark Spuds 317
Barn Door Hangers ...1186T to 1193T
- Door Latches .....997T to 1001T
- Door Latches, Sliding..... 999T to 1001T
- Door Locks, Sliding 999T to 1001T
- Door Rail 1203T
- Door Stay Rollers 1204T
- Door Track .....1187T to 1203T
- Forks 932T
- Paint 655
- Push Brooms 638

Barrel Bolts 1061T, 1062T
- Carts 942T
- Hatchets 309
- Nails 27, 28, 32
- Staples 44
- Swings 577
- Trucks 577

BARRELS, Steel 738, 927T
Barrette Files, XF 187
BARROWS, Coal 553
- Contractors' 552
- Garden 551
- Mortar 552
- Tubular 552, 553
- Wheel .....551 to 553
- Wheel, Tubular 553

BARS, Breaking, Ice 579
- Car Starter 270
- Claw 270, 277
- Crow 270
- Floor 277
- Fork, Ice 579
- Ice 579
- Lining 270
- Pinch 270
- Pry, Auto Tire 710
- Push 1059T
- Shutter 1127T
- Tamping 270

Bartlett Bit Boxes 373
Base Knobs 1117T
Basement Window Sets 1133T
BASES, Attachment Plug 866
- Canopy, Metal Molding 897
- Concealed 847
- Post 1178T
- Socket 848
- Switch, Porcelain 900

Basin Stoppers 102
Basket Nails 37
BASKETS, Grain 948T
- Steel 948T
- Waste Paper 1232T

Bastard Files .....180 to 183

B

PAGE

Bath Room Hooks.....1224T
- Scales 573
- Stoppers 102
- Thermometers 1227T

Battery Charging Clips..... 834
- Connectors 834
- Switches 815, 875
- Syringe Hydrometers 761
- Testers 842

BATTERIES, Columbia 832, 833
- Hot Shot 832
- Flashlight 842
- Dry 833

Bayonet Sockets 859
Beaded Boot Calks..... 174
- Ceiling 672
- Siding 672

BEADERS, Gutter..... 528
- Hand 329

Beading Machines 524, 525
- Planes 526
- Tools, Brick and Tile..... 549

BEADS, Corner, Metal 683
Beam Clamps for National Shaft Hangers 125C
BEAMS, "I," Steel, Structural... 5
- Scale 575

Bearing Scrapers 797
Bed Casters 1216T, 1218T
- Rock Planes 323
- Spring Staples 44

Beef Splitting Saws..... 399
Beet Forks 932T
- Hoes 934T
- Topping Knives 938T

Bell Hangers' Bits..... 217
- Ringing Transformers 904
- Sets, Electric 904
- Traps 947T

BELLOWS, Moulders' 550
- Parlor 550

BELLS, Door, Alarm..... 951T
- Gong 951T
- Iron Box 903

Belt Awls 93
- Cement 92
- Couplings 85
- Dressing 92
- Fasteners 84
- Fasteners, Fan 751
- Holders, Fan 806
- Hooks .....83 to 85
- Lacers, Clipper 85
- Lacing, Leather 91
- Lacing Pins 85
- Lacing, Steel 84
- Lacing, Wire 85
- Makers' Planes 325
- Preservative 92
- Punch Pliers 350
- Punches 350
- Rivets 81
- Rivets and Burs 81
- Studs 83

BELTING, Alfalfa 86
- Canvas, Stitched 86
- Detachable Link Chain..... 126
- Fan 750, 751
- Leather .....88 to 91
- Rubber 87

BELTS, Fan 750
- Thresher, Endless Canvas.. 86
- Tool 349

Bench Brackets 406
- Brushes 636
- Dogs 406
- Drills 364
- Dusters 629

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

B

PAGE

Bench Grinders 491, 492
Grinders, Power 497
Hatchet Handles 408
Hatchets 302
Plane Irons 332
Planes ....318 to 323
Plates 532
Screws 405
Shears, Compound Lever.... 514
Shears, Iron 519
Shears, Tinners' 514
Stones 503, 505, 509
Stops 406
Vises ....190 to 197
BENDERS, Brace 519
BENDS, Return 131
Bernard Pliers 347
Berry Box Nails 32
Berry Brothers' Varnishes...652, 653
Berrycraft Stain Finish.....652, 653
Bevel Protractors 454, 465
BEVELS, Combination 464
Flush T 440
Improved 464
Ship Carpenters' 448
Sliding T 440
Universal 464
Bibb Balls, Fuller.... 115
Calks 146
Washers 115
BIBBS, Compression 143, 144
Fuller 145, 146
Oil, Lock 148
Bicycle Wrenches 261
Bill Posters' Tacks.... 41
Binder Stops, Wall.....1204T
Twine 603
BINDERS, Load 150
Binding Chain 149
BINS, Nail 62
Bit and Square Levels 435
Boxes, Bartlett 373
Brace Die Holders.... 247
Brace Wrenches 261
Braces 366, 367
Braces, Corner 367
Gauges, Auger 372
Holders, Extension 368
Stock Drills 216
Stock Drills, in Sets.... 218
Stock Taper Reamers.... 224
Stocks, Angular 368
BITS, Auger .....372 to 375
Bell Hangers' 217
Car 370
Center 375
Electricians' 217
Expansive 375
Forstner 375
Gimlet 375
Machine 371
Screw Driver 377
Ship Auger 370
Valve Grinding 796
Black Carbon Cement.... 654
BLACK, Lamp 657
BLACK-LAC 744
Blacksmiths' Anvils 198
Blowers 199
Drills .....207 to 209
Flatters 280
Forges 201, 202
Hand Hammers 283
Hardies 280
Rules 450
Sledges 282

B

PAGE

Blacksmiths' Tongs 203
Tools 280, 281
Vises 197
BLADES, Buck Saw 388
Butcher Saw 399
Coping Saw 398
Hack Saw .....396 to 398
Wood Saw 388
Blank Butts 1105T
Nuts 73
BLANKS, Key 1054T, 1055T
Blind Nail Tools 329
Staples 44
Block Plane Irons 332
Planes 321, 324, 325
Tin 21
BLOCKS, Chain .....581 to 587
Drill 468
Loading 174
Pillow .....125 to 125B
Pulley .....581 to 584
Snatch 592
Snatch, Lumbering 174
Tackle, Steel 590
Tackle, Wire Rope 591
Tackle, Wood 589
BLOWERS, Blacksmiths' 199
Electric 199
Exhausters and 200
Pressure 200
Blowout Patches 704
BLOW-TORCHES, Gasoline 820
B. L. Shellac 653
Blunt Files 183
BOARD, Mill, Asbestos.... 665
Plaster 665
Roll, Asbestos 665
Rules 445
Drawing 479
Glass 443
Step Level 271
Boat Nails 27, 28, 33
Spikes 26
BOBS, Plumb 430
Body Trimmers' Hammers.... 290
BOILER Fittings, Circulating... 135
Handles 1246T
Lamps 921T
Ratchets 206
Rivets 80
Bolster Plates 164
Bolt Cases 62
Clippers 204
Copper 698
Dies, Solid 247
Ends 69
Socket 1067T
Sockets, Window Spring....1132T
Tongs 203
BOLTS, Barrel 1061T, 1062T
Bottom 1070T
Bottom, Spring 1065T
Cant Hook 72
Carriage 68
Cased, Square 1063T
Chain .....1066T to 1070T
Combination 1077T
Commode 1071T
Cremone, Extra Heavy.....1077T
Cultivator 72
Cupboard 1141T
Door .....1061T to 1077T
Door, Mortise 987T
Elevator 71
Eye 601
Factory Door 1065T, 1077T
Flat Spring 1065T
Flush .....1071T to 1073T

B

PAGE

BOLTS—Continued.
Foot .....1066T to 1070T
Garage Door 1065T, 1077T
Hook 601
Lavatory Door 1149T
Machine 69
Neck 1064T
Panic 1075T
Plow 72
Screw Socket 1132T
Shaft, T Head.... 71
Ship 1071T
Sink 71
Sleigh Shoe 72
Spring, Square 1064T
Step 71
Stove 71
Surface 1062T
Tire 68
Toggle 66
Top, Spring 1065T
Wagon Box Strap.... 163
Window, Mortise 987T
Window, Spring 1132T
Window Ventilating 1129T
Bonney Vises 189
Boot Calk Punches 174
Calk Sets 174
Calks, Beaded 174
BORAX 205
BORERS, Bung 369
Sill or Joist 368
Boring Machine Augers 369
Machines 368
Tools 240, 241
Borocarbone Wheels 486
Bottle Brushes 631
Bottom Bolts 1070T
Bolts, Spring 1065T
Fullers 280
Swages 280
BOTTOMS, Copper 698
Door 609
Bow Irons 168
BOWLS, Wash 1241T
Box and Crate Openers.....292, 293
Chisels 292
Connectors, Flexsteel 886
Gutters 686
Hooks 293
Nails 27, 28, 30
Scrapers 293
Staples 168
Strapping, Metal 53
Trimmings .....1146T to 1148T
Trucks 576
BOXES, Bit, Bartlett.... 373
Loom, Ceiling 895
Miter 380
Oil Stone 508
Outlet 895
Post, Rigid 125B
Shop 1240T
Switch 896, 897
Tool, Auto 778
Twine 605
Boxwood Rule Assortments.... 444
Rules .....446 to 448
Boy Scout Shovels.... 559
Scout Spades 559
Boys' Axes 299
Brace Benders 519
Drills 216
Wire 56
BRACES, Bit 366, 367
Bit, Corner 367
Corner, Wrought Steel 167
Drill 367
Drill, Ratchet 367

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

B

PAGE

BRACES—Continued.
Lightning 358
Push 358
Screen Door 1114T
Wrench, Universal 795
BRACKETS, Bench 406
Corner, Coburn 1191T
Flower Pot 1161T
Hand Rail 1158T
Roof 1160T
Scaffold, Folding 1160T
Shelf 1159T
Shingle 1160T
Sink 1159T
Trolley Track 1195T, 1196T
Brad Awls 379
Awls, Handled 379
BRADS, Common 27, 28, 30
Flooring 27, 28, 30
Wire, Steel 28, 36
Braided Rope 1205T
Brake Band Lining..... 749
Compound 745
Lining Shears 519
Shoes 806
BRAKES, Cornice 529, 530
BRASS Air Cocks..... 142
Butts 1092T
Cup Hooks 1168T
Escutcheon Pins 38
Ferrules 412
Flush Bolts 1071T
Machine Screws 63
Pipe Fittings, Auto..... 758
Racking Cocks 146
Screw Hooks 1168T, 1172T
Sheet 700
Strainer Cloth 606
Tubing, Brazed 701
Tubing, Seamless 757
Valves 138, 140
Washers 75
Wire 58, 59
Wood Screws 61
Brazed Brass Tubing..... 701
Brazing Compound 205
Torches, Gas, Electric..... 820
Breaking Bars, Ice 579
Breast Drills 362, 363
Drills, in Sets..... 218
Brewery Cord 883
Brick Chisels 276, 549
Drills 365
Hammers 285
Hods 549
Jointers 549
Liners 626
Markers 549
Sets 549
Siding 672
Trowels 548
BRICKS, Rubbing 490
Bright Tin Plate 697
Broad Axes 301
Brass Butts 1092T
Hatchet Handles 408
Hatchets 302
Reversible Loose Pin Butts.1087T
Transom Butts 1088T
BRONZE, Bushing 776
Bushings 776
Bronzing Liquid .....651 to 653
BROOMS, Factory 638
House 637
Mill 638
Push 638
Switch 638
Warehouse 638
Whisk 637

B

PAGE

Browning Trowels 546
Brush Poles, Window..... 635
BRUSHES, Artists' 625
Autospra 729
Bench 636
Bottle 631
Camel Hair 623
Car Washers' 635
Casting 630
Counter 636
Creamery 631, 633
Dairy 631
Duster, Painters' 627
File 185
Floor 636
Foundry 630
Furnace Cleaning 630
Furniture 626
Glue 620
Kalsomine 627
Kitchen 633
Marking 625
Milk Can 631
Paint .....617 to 625
Popes Eye 635
Radiator 631
Roof 626
Sanitary 631
Sash 624
Scratch, Painters' 629
Scratch, Radiator 629
Scrub 632, 633
Scrub, Painters' 629
Seaming 626
Separator 631
Shoe 634
Sign Writers' 625
Sink 633
Smoothing, Paper Hangers'. 627
Spout 631
Steel Wire 629, 630
Stencil 626
Stove 632
Striping 624, 625
Stucco 618
Toilet Bowl 631
Varnish .....620 to 623
Wall .....617 to 619
Wheel, Wire 630
Whitewash 628
Window 635
Buck Saw Blades 387
Saw Frames 388
Saw Rods 388
Saws 387
Buckeye Cleanser 746
BUCKS, Saw 388
Builders' Folding Scaffold Brackets 1160T
Levels 437
Building Felts .....663 to 666
Papers .....663 to 666
Bulb Testers 842
BULBS, Electric Lamp.....845, 846
Electric Lamp, Auto 843, 844
Flashlight 842
Horn 766
Bulk Glue 482
Bull Nose Planes 325
BUMPERS, Autoguard 781
Automobile .....772 to 786
Bar 103
Checking, Lavatory 1149T
Door 1117T
Round 103
Rubber 781
Rubber, Plumbers' 103
Tack 103

B

PAGE

Bumping Hammers 284
Bung Borers 369
Burner Pliers 348
BURNERS, Lamp 924T
Lantern 924T
BURNISHERS, Cabinet Makers'. 331
Burring Machines 521
Reamers 246
BURS, Riveting, Iron..... 82
Bush Scythes 938T
BUSHING, Bronze 776
BUSHINGS, Auto Tubing..... 758
Bronze 776
Conduit 888
Dust Cap 718
Iron Pipe 133
Metal Molding 898
Socket 900
Union, Conduit 887
Wood Pulley 120
Butcher Block Planes..... 330
Saw Blades 399
Saw Punches 399
Saws 399
Butt Chains 158
Chisels, in Sets.....309, 312
Chisels, Socket 309, 312
Gauges 428
Button Catches, Push..... 1138T
Head Rivets 80
Pliers 340
BUTTONS, Door 1136T
Push 902
Push, Automobile 814
Push, Electric .....965T to 984T
BUTTS, Blank 1105T
Brass 1092T
Cabinet 1085T, 1086T
Fast Joint .....1087T to 1090T
Loose Joint 1089T
Loose Pin .....1081T to 1087T
Narrow Loose Pin.....1086T
Narrow Riveted Pin..... .....1087T to 1089T
Parliament 1090T
Shutter 1092T
Shutter, Broad 1088T
Spring .....1105T to 1108T
Surface 1084T
Transom 1088T
BUZZERS, Iron Box..... 903

C

Cabin Door Hooks.....1169T
Cabinet Clamps 404
Door Butts 1085T, 1086T
Files 184
Flush Bolts 1071T
Key Plates 1056T
Locks .....1020T to 1033T
Makers' Burnishers 331
Makers' Planes 325
Rasps 185
Scrapers 330, 331
Screw Drivers 353, 355
CABINETS, Tool 415
Tool, Carpenters' 416
Cable Door Chain.....1206T
Sash Chain 1206T
CABLES, Automobile 824, 825
Mining Machine 884
Slow Burning 884
Towing 711
Weatherproof 884
Cadet Lanterns 919T
Calcium Carbide 729

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

C

PAGE

Caliper Rules 447
Rules, Slide 457
Squares 457
CALIPERS, Firm Joint 476
Hermaphrodite 475
Lock Joint 476
Spring 474
Thread 474, 475
Vernier 457
Yankee 474
Calk Extractors, Drive..... 25
Punches, Boot 174
Punches, Drive 25
Sets 174
Taps, Shoe..... 25
Wrenches, Toe 25
CALKS, Boot, Beaded..... 174
Horse Shoe 24
Toe 24
Calcimine Brushes 627
Camel Hair Brushes..... 623
Can Covers, Ash.....1239T
Screws 1246T
Candelabra Sockets 858
Candle Wicking 100
Candy Thermometers 1227T
Canopy Bases, Metal Molding... 897
CANS, Ash 1239T
Auto Filling 737
Garbage 1239T
Gasoline 737, 738, 926T, 927T
Kitchen 1239T
Milk 1238T
Oil 738, 926T, 927T
Tote 1239T
Waste, Oily 1240T
Cant Hook Bolts..... 72
Hook Clasps 172
Hook Handles 171
Hook Steel 9
Hook Toe Rings..... 172
Hooks 171, 172
Saw Files 180
Canvas Auger Bit Rolls..... 373
Belting, Stitched 86
Roofing 668
Thresher Belts 86
Cap Screw Wrenches..... 266
Screws, Assorted 66, 800
Screws, Iron 65
Cape Chisels 276
CAPS, Attachment Plug..... 866
Chimney, Adjustable 694
Current Tap 866
Drive 132
Dust, Auto Tire..... 718
Eave Trough 687
Hub 777
Interchangeable 865
Malleable Iron 132
Pendent 848
[illegible] ..... [illegible]
Porcelain, Composition 863
Pole 163
Post 1178T
Radiator 777
Receptacle, Hubbell 863
Roofing, Tin 666
Socket 848
Valve, Motor 718
Car Bits 370
Builders' Wrenches 263
Jacks 268
Movers 270
Nails 27
Nails, Barbed 28, 32
Starter Bars 270
Washers' Brushes..... 635
Window Fasteners 1130T

C

PAGE

CARBIDE, Automobile 729
Calcium 729
Carbon Lamps 845
Remover 744
Roof Cement 654
Scrapers 797
Carborundum Files 510
Grinders .....496 to 498
Scythe Stones 502
Sharpening Stones ....508 to 510
Valve Grinding Compound.. 796
Carburetor Parts, Rayfield..... 771
CARBURETORS, Master 772
Rayfield .....768 to 770
Sunderman 773
Card Holders 1150T
Carded Belt Hooks..... 85
CARDS, File 185
Carpenters' Adze Handles..... 410
Adzes 301
Aprons 419
Carpenters' Chalk 419
Clamps 404
Drawing Knives 315
Mallets 413
Nut Augers 369
Pencils 425
Pincers 347
Plumbs and Levels ....431 to 433
Slicks 314
Vises 192
Tool Cabinets 416
Tool Cases 416
Carpet Lining 664
Tacks 43
Carriage Bolts 68
Heater, Coal 728
Heaters 728
Makers' Clamps 404
Makers' Planes 325
Rivets 79
Top Dressing 652, 653
Wrenches 170
CARRIERS, Luggage, Auto..... 709
Carrying Systems, Overhead....
.....1197T, 1198T
CARTS, Barrel 942T
Concrete 554
Hand 555
Hose 117
Carving Tool Sets..... 314
Cased Bolts, Square.....1063T
Carpet Tacks 43
CASES, Bolt 62
Level 435
Screw 62
Tool, Carpenters' 416
Tool, Machinists' 417
Cash Box Locks 1032T
Casing Nails 27, 30
Cast Iron Fittings 129
Iron Pulleys 123
Iron Sink Traps 136
Iron Washers 75
Castellated Nuts, Assorted..... 800
CASTERS, Acme 1216T
Bed 1216T, 1218T
Faultless 1217T, 1218T
Furniture .....1216T to 1221T
Gem 1219T, 1220T
Gliding 1216T
Philadelphia 1219T
Piano 1222T
Plate .....1218T to 1221T
Range 1221T
Stove 1221T
Truck 1222T
Yale 1221T
Casting Brushes 630

C

PAGE

CATCHES, Auto 1141T
Cupboard 1141T
Door, Forg's 1135T
Door, Gravity 1204T
Elbow 1135T
French Window 1140T
Friction 1135T
Push Button 1138T
Screen Door.1114T, 1143T to 1145T
Show Case ... .1141T
Spring, Forg's 1135T
Suit Case 1032T
Transom 1139T, 1140T
Cedar Hawks 545
Oil 640
Spuds 317
CEILING, Beaded 672
Hooks 1164T
Ingot Iron 677
Loom Boxes 895
Plates 678, 679
Pull Switches, Perkins..... 872
Pulleys 1212T
Receptacles 859
Steel 672
Switches 848
Switches, Pull, New Wrinkle 854
CEILINGS, Metal .....678 to 682
Steel .....678 to 682
Cellar Window Sets.....1133T
CELLS, Dry 833
CEMENT, Belt 92
Black Carbon, Roof..... 654
Coated Nails 34
Drills 365
Furnace 1237T
Hard Asphalt 654
Iron 1237T
Joint 654
Liquid Asphalt 654
Nails, Cut 27
Pails 1245T
Patching 747
Radiator 745
Roof 654
Rubber, Auto 704
Stove Lining 1237T
Tools .....542 to 545
Vulcanizing 747
Wood Rim 704
Workers' Tools .....542 to 545
Workers' Trowels 546
Cementless Patches 704
Center Bits 375
Drills 217
Gauge Attachments 458
Gauges 458
Irons, Neckyoke 164
Keys 217
Punches 274, 275
Punches, Starrett 470
Reamers 223
Stops 1191T
CENTERS, Sash.1120T, 1123T to 1125T
Transom 1120T
Cesspool Traps 947T
CHAIN Adjusters, Weed 705
Belting, Detachable Link... 126
Binding 149
[illegible] .....581 to 587
Block .....1066T to 1070T
Bolts 154
Coil, America 153
Coil, Liberty 154
Coil, Lock Link..... 149
Coil, Straight Link..... 154
Coil, Tenso .....
Cow Ties 15
Door, Cable 1206T

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

C

PAGE

CHAIN—Continued.
Dredge 149
Drills 364
Hoist Trolleys 586
Hoists .....581 to 587
Hooks 150
Jack 151
Jacks, Weed 267, 712
Key Rings 1229T
Ladder 152
Loading 149
Log 149
Machine, Liberty 152
Nose Pliers 341, 342
Pipe Vises 195
Pipe Wrenches 255
Plumbers' 151
Pump 157
Safety 151
Sash 1206T, 1207T
Sprocket 126
Tools, Tire 710
CHAINS, Anti-Skid .....705 to 707
Butt or Half Trace..... 158
Cross Weed 705, 706
Halter 155
Hammock 152
Heel 158
Key 1228T, 1229T
Lumber 157
Motorcycle 705
Porch Swing 152
Ticket 156
Tie-Out 156
Tire Lock 812
Towing 711
Trace 158
Weed Tire 705, 706
Chair Glides 1216T
Seats 646
CHAIRS, Folding, Steel..... 798
CHALK, Carpenters' 419
Crayons, Railroad 419
Line Reels 604
Lines 604
Lump 419
Chamber Door Locks....962T to 982T
Chamois Rubs 646
Skins 646
Champion Screw Drivers 355
Channel Steel, Bar Sizes..... 4
Steel, Weights of..... 11
Structural Steel 4
CHANNELS, Steel, Bar Sizes... 4
Steel, Weights of..... 11
Structural Steel 4
Charcoal Tin Plate..... 697
Charging Clips, Battery..... 834
Hose 751
Chase's Oilers 928T
Chassis Washers 729
Check and Waste Stops..... 141
Valves 139
Valves, Auto Tubing..... 757
Checking Bumpers, Lavatory...1149T
Crayons 420
Floor Hinges 1107T, 1108T
Pencils 420
CHECKS, Door .....1109T to 1113T
Hotel 1055T
Key 1055T
Screen Door 1112T, 1113T
Chest Handles 1156T, 1157T
Hinges 1091T
Locks .....1027T to 1029T
CHESTS, Tool .....414 to 417
Tool, Machinists' 417
Chicken Coops 46
Fountains 45

C

PAGE

Chimney Caps, Adjustable..... 694
Tops, Swing 694
Chisel Handles 411
Grinders 331
Sets .....309 to 312
CHISELS, Bar, Ice..... 579
Box 292
Brick 276, 549
Butt, Socket 309, 312
Cape 276
Cold 276
Cold, Blacksmiths' 281
Corner, Socket 314
Diamond Point 276
Drilling 277
Framing, Socket 313
Hot 281
Knob, Ice 579
Lantern 532
Nail 277
Round Nose 276
Socket Firmer 310, 311
Socket Pocket 312
Tanged Firmer 312
Track 281
Turning, Tanged 314
Wall 276
Wire 532
Wood, Solid 277
Chuck and Drill Points..... 358
Chucking Reamers .....220 to 222
CHUCKS, Drill 237
Lathe 238, 239
CHUTES, Coal 554
Coal, Foundation 1234T, 1235T
Cigar Box Nails..... 32
Lighter Tips 838
Lighters 838
Circular Glass Cutters 661
Hand Snips .....511 to 513
Mats 101
Oil Stones 505
Planes 328
Saws 392
Shears, Tinners' 517
Warehouse Balances 574
Circulating Boiler Fittings..... 135
Circumference Rules 450
CLEANER, Aluminum 641
Automobile 744, 746
Johnson's 640
Radiator 745
Wall Paper 641
CLEANERS and Cleansers..... 641
Drain 562
File 185
Flue 630
Lawn 941T
Oat 950T
Sink 634
Spark Plug 831
Vacuum 910T
Window 645
Windshield 729
Cleaning Brushes, Furnace 630
Devices, Auto 729
CLEANSERS and Cleaners..... 641
Buckeye 746
Cleat Receptacles 860
CLEATS, Line 1215T
Porcelain 899
Clevis Links 168
CLEVISES, End 170
Evener 169
Malleable Iron 169
Plow 170
Shackle 169
Steel 169

C

PAGE

CLEVISES—Continued.
Swivel 169
Whiffletree 169
Clamp Couplings, Ribbed..... 125D
Heads 405
Staples 44
CLAMPS, Adjustable 405
Bar 404
Beam, Shaft Hanger 125C
Cabinet 404
Carpenter 404
Carriage Makers' 404
Door 404
Drill 468
Hose 112
Key Seat 453
Metal Molding 898
Mirror 764
Parallel 467
Quick 404
Quilt Frame 404
Rule 453
Saw 403
Splicing 349
Steel 467
Toolmakers' 467
Universal 404
Wire and Sleeve 349
Clapboard Gauges 428
Markers 428
Clark Coal 728
CLASPS, Cant Hook 172
Pencil 478
Claw Bars 270, 277
Hatchets 304
CLAWS, Nail 293
Tack 292
Clay Picks 272
Climber Straps 349
CLIMBERS, Linemen's 349
Clinch Nails 27, 28, 31
Rings 33
Rivets, Slotted 82
Clip Yokes, Auto 791
Clipper Belt Lacers 85
CLIPPERS, Bolt 204
CLIPS and Rings, Wire.....1246T
Auto Spring 790
Axle 163
Damper 1240T
License Pad 709
Paper 605
Pen 426
Pencil 426
Singletree 164
Test, Battery 834
Wire Rope 601
CLOCKS, Automobile 766, 767
Electric, Auto 766
Nipples, Auto Tubing 758
CLOSERS, Door .....1109T to 1113T
Closet Door Locks, Mono..... 959T
CLOTH, Abrasite 484
Emery 484
Screen, Wire 606
Strainer 606
Wire 606
Wire, Hardware Grade..... 606
Clothes Line Hooks 1166T
Line Pulleys 1214T
CLOTHS, Dust, O-Cedar..... 639
Clout Nails 39
Nails, Copper 39
Nails, Wire 32
CLUSTERS, Plug 867
Clutch Compound 745
Coach Dusters 627
Screws 70
Varnish .....651 to 653

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

C

PAGE

Coachmakers' Vises 192
COAL, Auto Heater 728
Barrows 553
Carriage Heater 728
Chutes 554
Chutes, Foundation..1234T, 1235T
Forks 932T
Hods 1236T
Miners' Pick Handles..... 410
Picks 273
Scoops 563
Shovels 561
Tar 654
Coat and Hat Hooks...1161T to 1164T
COATING, Roof 655, 656
Cobblers' Shoe Nails..... 40
Coburn Store Ladders..... 614
COCKEYES, Whiffletree 166
COCKS, Air, Auto Tubing..... 759
Air, Brass 142
Bibb 146
Drip, Auto Tubing..... 758
Gas Service 141
Hydrant 142
Iron 141
Racking, Brass 146
Sill 142
Shut-off, Auto Tubing..... 759
Steam 141
Cocoa Door Mats 647
Running Board Mats....647, 760
Coffee Flask Screws..... 1246T
Coil Chain, American..... 154
Chain, Liberty 153
Chain, Lock Link..... 154
Chain, Straight Link..... 149
Chain, Tenso 154
Files, Igneto 795
Springs 779
Springs, Tuck Steel..... 1115T
Units 813
Coke Fork Handles 936T
Forks 932T
Cold Chisels 276
Chisels, Blacksmiths' 281
Rolled Steel 8, 9
Shuts 150
Water Paste 654
COLLARS, Safety Set..... 125D
COLLETS, Drill 219
Coloring Fluid 905
Columbia Batteries 832, 833
Combination Bevels 464
Bolts 1077T
Burner Pliers 348
Countersinks 217
Drawer Locks 1021T
Oil Stones .....503 to 509
Plane Parts 333
Planes 326
Pliers 340, 343, 344
Sharpening Stones 508
Snips, Tinners' 514
Squares 454, 455
Switches 876
Vises 195, 196
Wrenches 257
COMBINATIONS, Heater Control 868
Combined Anvils and Vises..... 196
COMBS, Graining 626
COMEALONGS 349
Commode Bolts 1071T
Common Brads.....27, 28, 30
Nails .....27 to 29
Communicating Door Locks.....
.....959T to 982T, 1004T
Comparative Gauges of Wire.... 54
Compass Saws 382

C

PAGE

COMPASSES, Dividers and..... 477
Composition Polarized Caps..... 863
Roll Roofing .....667 to 669
Shingles 669
COMPOUND, Brazing..... 205
Clutch and Brake..... 745
End Cutting Nippers..... 347
Gear 739, 740
Splicing, Rubber 748
Sweeping 643
Valve Grinding 483, 796
COMPOUNDS, Splicing..... 901
Welding 205
Compression Bibbs 143, 144
Couplings, Solderless 757
Flange Couplings 125D
Grease Cups 754, 755
Sill Cocks 142
COMPRESSORS, Air 732
Concave Cutters 228
Concealed Bases 847
Concrete Carts 554
Drills 365
Inserts 66
Pick Handles 410
Picks 273
Reinforcement 52
Shovels 561
Conducting Hose, Water..... 106
Conductor Elbows, Galvanized..
.....689, 690, 693
Pipe, Galvanized 688, 692
Pipe Hooks 691
Pipe Shoes 693
Strainers 690
CONDUCTORS', Armored 885
Punches 351
CONDUIT Couplings, Flexsteel.. 886
Economy 888
Entrance Fittings 889
Fittings, Rigid 888, 889
Flexible 887
Flexsteel 886
Sherarduct 888
Steel, Rigid 888
Union Bushings 887
CONDUITS, Metal Molding..... 898
Cone Head Rivets 80
Pulleys, Step 120
Pulleys, Taper 120
CONNECTIONS, Pump, Auto Tire 718
CONNECTORS and Switchcs... 821
Battery 834
Box, Flexsteel 886
Lamp Cord, Flexsteel 887
Molding, Paiste 898
Panel, Flexsteel 886
Construction Wrenches 263
CONSUMERS, Rubbish 1232T
Contractors' Barrows 552
Tools 272, 273
Convex Cutters 228
Cooler Stands, Water..... 1231T
COOLERS, Water 1231T
Coopers' Adzes 309
Drivers 317
Nails 27
Rivets 80
COOPS, Chicken 46
Coping Saw Blades 398
Saws 398
COPPER Asbestos Gaskets 773 to 775
Belt Rivets 81
Bolt 698
Bottoms 698
Clout Nails 39
Rivets and Burs 81
Rivets, Auto 800

C

PAGE

COPPER—Continued.
Sheet 698, 699
Tacks 41
Tubing, Seamless 757
Wire, Soft 58, 59
Coppered Iron Rivets and Burs.. 81
COPPERS, Soldering 536
Soldering, Electric 820
Copying Pencils 421
CORD Adjusters, Spool..... 907
Brewery 883
Connectors 867
Connectors, Lamp, Flexsteel. 887
Irons, Sash 1205T
Lamp 883
Lamp, Armored 885
Packing House 883
Rosettes, Unilet 889
Sash 1205T
Sash, Wire 600
Cork Gasket Sheets 775
Gaskets 775
Corn Knives 938T
Corner Beads, Metal..... 683
Bit Braces 367
Braces, Wrought Steel..... 167
Brackets, Coburn 1191T
Chisels, Socket 314
Hay Racks 950T
Irons, Malleable 167
Irons, Wrought Steel..... 167
Mangers 950T
Trowels 547
Cornering Tools 329
CORNERS, Box 1146T, 1147T
Stair 1222T
Cornice Brakes 529, 530
CORNICES, Ceiling 678, 680
Corridor Door Locks.....960T, 961T
Corrugated Bottom Planes.....
.....320, 322, 323
Carpet Lining 664
Conductor Pipe 688, 692
Conductor Pipe Elbows.....
.....689, 692, 693
Hinges 1095T
Matting 101
Ridge Roll 684
Sheets .....670 to 675
Steel Siding 670
Steel Roofing 670
Steel Fasteners 34
Cotter Pin Extractors..... 795
COTTERS, Spring 76
Spring, Auto 799
Cotton Garden Hose..... 105
Gloves 949T
Hooks 293
Mop Heads 643
Rubber Lined Fire Hose.... 109
Rubber Lined Mill Hose.... 109
Waste 94
Wrapping Twine 604
Coulter Steel 9
Counter Brushes 636
Scales .....571 to 573
COUNTERS, Revolution 473
Speed 473
Tally 473
COUNTERSINKS, Combination. 217
Diamond 375
For Metal 376
For Wood 376
Standard 217
Yankee 358
Countersunk Head Rivets..... 79
COUPLINGS, Auto Tubing..... 758
Belt 85
Compression, Solderless..... 757

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

C

PAGE

COUPLINGS—Continued.
Conduit 888
Conduit, Flexsteel 886
Flange 125C
Flange, Compression 125D
Hose 113
Iron Pipe 133
Malleable Iron 131
Metal Molding 897
Pump Rod 133
Ribbed Clamp 125D
Ring, Expansion 113
Shaft Finished 159
Turned 133
Whiffletree 166
Covered Wire, Rubber 882
COVERS, Ash Can.....1239T
Hood 725, 726
Outlet, Box 895
Radiator 725, 726
Salamander 1237T
Seat, Auto 722, 723
Seat Back 724
Tire 720, 721
Top Slip 724
Unilet 890, 892, 894
Cow Ties, Chain 157
CRANES, Portable 587
Pull-U-Out 587
Crate Hasps 1098T
Openers 292, 293
CRAYONS, Chalk, Railroad..... 419
Checking 420
Lumber 421
Metal Workers' 421
School 419
Shipping 420
CREAM, Polishing 642
Creamery Brushes .....631 to 633
CREEPERS, Ice 175
Cremone Bolts, Extra Heavy...1077T
Crescent Wrenches 260
Crimping Machines 525
Cronk Pliers 340
Crook Neck Claw Bars 277
Cross Chains, Weed.....705, 706
Cut Saw Handles..... 407
Cut Saw Tools 401, 402
Cut Saws .....389 to 391
CROSSES, Malleable Iron..... 131
CROSS-OVERS, Molding Paiste. 898
Crow Bars 270
Crushed Stone Scoops..... 561
Cultivator Bolts 72
Cup Grease 739, 740
Hooks, Brass 1168T
Hooks, Wire 1173T
Steel Lathing 683
Cupboard Bolts 1141T
Catches 1141T
Locks 1024T, 1026T
Turns 1141T, 1142T
CUPS, Drinking 1242T
Force, Plumbers' 103
Grease 142
Grease, Compression 754, 755
Oil 753, 754
Priming 756
Curbing Edgers 543
Current Indicators 762
Tap Caps 866
Taps .....865 to 867
Curtain Lights, Ford..... 724
Curved Needle Nose Pliers..... 343
CURVES, Irregular 480
Of Involute Cutters..... 231
CUSPIDORS 1242T, 1243T
Custom Screens 607

C

PAGE

Cut Lacing 91
Nails, Iron 27
Nails, Steel 27
Tacks 42
CUT-OFFS, Rain Water 690
Cut-Out Pedals 804
CUT-OUTS, Enclosed Fuse 878
Muffler 804
Panel 877
Plug 877
Cutter Grinders 331
Shoes 9
CUTTERS, Wire, Pexto 519
Angle 227, 228
Angle Iron 518
Concave 228
Convex 228
Gasket 93
Gauge Glass 661
Gear 232
Glass 660, 661
Iron .....517 to 519
Lace 85
Mill, Spiral 228
Milling 226, 227
Paper Roll 662
Pipe 255
Screw Slotting 229
Slot 230
Valve Seat 495
Washer 93
Wire 204
Cutting and Straightening Wire. 57
Nippers 347
Cutting-Off Tools 241
Cylinder Locks, in Sets.....
Front Door, etc.....962T to 981T
Store Door, etc.....988T to 993T
Cylinder Locks .....See Locks
Oil 741
Rings 1054T
Sliding Door Locks, in Sets.1001T
CYLINDERS, Lock 1054T
Lock, in Detail 952T

D

D Tops 936T
Dado Planes 328
Dagger Stripers 624
Dairy Brushes 631
Scales 574
Thermometers 1227T
Damar Varnish 652, 653
Damper Clips 1240T
DARBIES, Plasterers' 545
Dash and Trouble Lamps 822
Lamps 822
Lanterns .....918T to 920T
Primers 756
DAUBERS, Shoe 634
Dead Locks, Mortise...1015T to 1017T
Locks, Rim 1018T, 1019T
Deadening Felt, Wool..... 664
Decimal Equivalents 212
Deck Hose 107
Tight Rubber Roofing..... 668
DEFLECTORS, Exhaust 806
Dehorning Saws 399
Demountable Wheel Sets 708
Depth Gauges 465
Desk Butts 1092T
Hooks 1168T
Locks 1027T, 1030T
Push Buttons 902
Slides 1136T
Detachable Link Chain Belting.. 126
Detroit Rubber Roofings..... 667

D

PAGE

DEVICES, Fire Exit....1074T to 1076T
Hook Dogging 1076T
Pipe Threading 254
Diagonal Packings 97
Diamond Combination Vises.... 196
Countersinks 375
Drill Points 365
Drills 365
Point Chisels 276
Silent Salesman 703
Tires 702
DIAMONDS, Glaziers' 660
Die Holders, Bit Brace..... 247
Makers' Squares 456
Sets, Round .....249 to 252
Stocks, Solid 248
Stones 507
DIES, Bolt, Solid..... 247
Pipe, Stocks and.....252, 253
Round, Adjustable 248
Stocks and .....249 to 253
Taps and .....249 to 253
DIFFERENTIALS, Bailey 777
DIGGERS, Post Hole 567, 568
Dim-A-Lite Sockets 860
Dimming Switches 815
DIPPERS, Laundry 1241T
Water 1241T
Dirt Shovels .....557 to 559
Tampers 545
Disc Wheels 200
DISCS, Valve, Anchorite 98
Valve, Jenkins Bros..... 138
Dish Mops 643
Display Stands, Auto Tire..... 709
Ditching Scrapers 556
Spades 560
DIVIDERS, Angle 478
Compass 477
Extension 476, 477
Spring 474, 475
Universal 476
Wing 477
DOGS, Bench 406
Lathe 242
DOLLIES, Timber 578
Door Bells, Alarm..... 951T
Bolts .....1061T to 1077T
Bolts, Lavatory 1149T
Bolts, Mortise 987T
Bottoms 609
Braces, Screen 1114T
Bumpers 1117T
Buttons 1136T
Butts .....1081T to 1092T
Catches, Forg's 1135T
Catches, Gravity 1204T
Catches, Screen .....
..... 1114T, 1143T to 1145T
Chain, Cable 1206T
Checks .....1109T to 1113T
Clamps 404
Closers .....1109T to 1113T
Fixtures, Fire ....1199T to 1201T
Guards 1059T
Guides and Stops, Sliding..1197T
Hangers .....1182T to 1194T
Hangers, Barn ....1186T to 1193T
Hangers, Factory 1193T
Hangers, Fire 1199T, 1200T
Hangers, Garage 1188T
Hangers, House ...1182T to 1185T
Hangers, Mill 1193T
Hangers, Sliding ..1182T to 1200T
Holders 1116T
Holders, Garage 1079T
Hooks, Cabin 1169T
Knobs 1051T
Knobs, Malaga 964T

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

D

PAGE

Door Knobs, Yuma 968T
Latches ..... See Latches
Locks ..... See Locks
Mats, Cocoa 647
Mats, Folding 647
Openers, Electric 1052T
Pulleys, Heavy 1206T
Pulls, 965T to 984T, 1056T to 1058T
Rail 1203T
Springs ..... 1112T to 1115T
Stay Rollers, Barn 1204T
Stops 1117T
Track, Fire 1199T, 1200T
Trim Planes 329
DOORS, Ash Pit 1235T
Hand of 957T
Screen 608
Double Bitted Axes ..... 294 to 298
End S Wrenches 266
End S Wrenches, Malleable. 170
End Taper Files 180
Pointed Tacks 44
Seamers, Roofing 534
Seaming Machines 523
Squares 455
Throw Switches ..... 873 to 876
Unions, Auto Tubing 757
Doubletree Sets, Wagon, Ironed. 162
Woods 162
DOUBLETREES, Plow, Ironed.. 161
Wagon, Ironed 161, 162
Dovetail Planes 327
Dowel Pins, Barbed 28, 34
Pins, Pattern Makers' 93
Doweling Jigs 327
Drain Board Mats 103
Cleaners 562
Spades 560
Drawer Knobs 1134T
Locks ..... 1020T to 1024T
Pulls ..... 1151T to 1155T
Pulls, Drop ..... 971T to 980T
Pulls, Druggists' 1151T
DRAWERS, Money 605
Drawing Boards 479
Instruments 480, 481
Knives 315
Tools 479, 480
Dredge Chain 149
DRESSERS, Emery Wheel 490
DRESSING, Auto Top 653
Belt 92
Black-Lac 744
Carriage Top 652, 653
Floor 652, 653
Leather 743
Top 743, 745
Upholstering 745
Drift Punches 274
Drifting Picks 273
Drifts or Center Keys 217
Drill Blocks 468
Braces 367
Braces, Ratchet 367
Chucks 237
Clamps 468
Collets 219
Gauges 471, 472
Heads 365
Hose, Air 108
Points 360
Points, Chuck and 358
Points, Rapid Fire 365
Presses 207, 208
Sleeves 218, 219
Sockets 218, 219
Drilling Chisels 277
Posts 206

D

PAGE

DRILLS, Automatic 359
Bench 364
Bit Stock 216
Blacksmiths' ..... 207 to 209
Brace 216
Breast 362, 363
Brick 365
Cement 365
Center 217
Chain 364
Concrete 365
Hand ..... 359 to 361
High Speed ..... 211 to 215
In Sets 218
Rapid Fire 365
Ratchet 206
Ratchet, Twist 209
Reciprocating 358
Star 365
Stone 365
Straight Shank ..... 212 to 215
Taper Shank 210, 211
Wood Boring 216
Drinking Cups 1242T
Drip Cocks, Auto Tubing 758
Drive Calk Extractors 25
Calk Punches 25
Caps 132
Pin Punches 275
Screws, Iron 61
DRIVERS, Coopers' 317
Robe, Ford 724
Screw ..... 352 to 358
Screw, All Steel 352
Screw, Assorted 355
Screw, Auto 354
Screw, Baby 353
Screw, Cabinet 353, 355
Screw, Champion 355
Screw, Electricians' 353, 354
Screw, Handy 353
Screw, Insulated 352, 353
Screw, Machinists' 352, 353
Screw, Magazine 355, 471
Screw, Miniature 355
Screw, Offset 355
Screw, Pocket 355
Screw, Pocket, Starrett 470
Screw, Ratchet 356, 357
Screw, Rubber Covered 352
Screw, Sewing Machine 355
Screw, Square Shank 354
Screw, Triple Lever 352
Screw, Yankee 356, 357
Driving Lamps 919T
Drop Drawer Pulls ..... 971T to 980T, 1153T, 1154T
Elbows 130
Forged Wrenches ..... 264 to 266
Handles, Flush 1052T
Tees 131
Druggists' Drawer Pulls 1151T
Dry Batteries 833
Cells 833
DRYER, Japan ..... 651 to 653
Duck Nests 198
Roofing 668
Dulgloss Finish 652, 653
Dumb Waiter Fixtures. 1179T to 1181T
Waiter Pulleys 1212T
Waiters 1179T, 1180T
Duplex Flush Receptacles 864
Dust Cap Bushings 718
Caps, Auto Tire 718
Cloth, O-Cedar 639
Pans 1244T
DUSTERS, Bench 629
Coach 627
Feather 637

D

PAGE

DUSTERS—Continued.
O-Cedar 639
Painters' 627, 629
Wool 637
Dusting Mops 639, 643
Dustless Mop Heads 643
Dutch Brand Auto Specialties 747, 748

E

EARS, Kettle 1247T
Easy Repair Rivets 82
Eave Trough Caps 687
Trough End Formers 535
Trough End Pieces 687
Trough, Galvanized 686, 692
Trough Hangers 691
Trough Miters 687, 693
Trough Outlets 687
Economy Conduits 888
Edge Planes 325
EDGES, Straight 532
EDGERS, Cement Workers' 542
Curbing 543
Sidewalk 543, 544
Edging Machines, Elbow 522
Rolls, Elbow 522
Tongs, Roofing 534, 535
Elastic Gear Varnish 652, 653
Interior Finish 652, 653
Oil Roof Cement 654
Elbow Catches 1135T
Edging Machines 522
Edging Rolls 522
ELBOWS, Adjustable, Conductor Pipe 690
Auto Tubing 757, 758
Cast Iron 129
Conductor, Galvanized 689, 690, 693
Conduit 888
Drop 130
Forty-Five Degree 129, 130
Malleable Iron 130
Reducing 129
Speaking Tube 1060T
Street 130
Street, Auto Tubing 758
Electric Auto Lamps 843, 844
Auto Lights 835
Bell Sets 904
Blowers 199
Clocks, Auto 766
Door Openers 1052T
Fans 912T, 913T
Garage Lamps 731
Gas Brazing Torches 820
Glue Pots 911T
Grinders 491, 492
Grinders, H. B. 911T
Hand Lamps 839
Hoists 585
Lamp Adapters 821
Lamp Bulbs 845, 846
Lamp Bulbs, Auto 843, 844
Lamp Sockets ..... 847 to 860
Lamps 845, 846
Lamps, Wallace 923T
Lanterns 839
Lighting Outfits 817, 818
Motors ..... 914T to 916T
Push Buttons ..... 965T to 984T
Soldering Irons 820, 911T
Vacuum Cleaners 910T
Vulcanizers 716, 717
Electrical Supplies ..... 847 to 909

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

E

PAGE

Electricians' Bits 217
Screw Drivers 353, 354
Soldering Flux 905
Staples 44
Electrolier Switches 868
Electrolon Wheels 486
Elevator Bolts 71
Door Locks, Mono 960T, 961T
Door Locks, Sliding.....1000T
Hand Rope 598
EMBLEMS, Auto Radiator..... 792
Emergency Axles 805
Jacks 269
Emery Cloth 484
Paper 484
Turkish 485
Wheel Dressers 490
Wheels .....486 to 489
ENAMEL, Engine 745
Lamp 743
Screen, Japalac 650
Stove Pipe, Japalac 650
Undercoat 651
White, Glidden 651
White, Velvet 651
Encased Pulleys 1213T, 1214T
Enclosed Fuse Cut-Outs..... 878
Fuses 879
End Clevises 170
Cutting Nippers 346, 347
Formers, Eave Trough..... 535
Irons, Neckyoke 164
Mills .....233 to 236
Mills, Fluted 233, 234
Pieces, Eave Trough..... 687
Wall Flashing 683
Endless Canvas Thresher Belts.. 86
ENDS, Bolt 69
Engine Enamel 745
Heaters 726
Engineering Instruments 436
Engineers' Fillers 931T
Hammers 283
Oilers 930T, 931T
Wrenches 264
Ensilage Forks 932T
Entrance Fittings, Conduit..... 889
Unilets, Service 889
Equivalents, Decimal 212
Escutcheon Pins 38
ESCUTCHEONS, Push Button.. 902
Evener Clevises 169
Staples 172
Woods 162
Exhaust Deflectors 806
Heaters, Auto 727
EXHAUSTERS, Blowers and.... 200
Expanded Cup Steel Lathing.... 683
Expanding Pliers 346
Expansion Pipe Hangers 128
Reamers 224
Ring Couplings 113
Shields 67
Expansive Bits 375
Extension Bit Holders..... 368
Dividers 476, 477
Flush Bolts 1073T
Ladders 615
Rules 448
Sash Hooks 1123T
Window Screens 607
EXTENSIONS, Spray Pipe..... 945T
EXTINGUISHERS, Fire 119
Fire, Pyrene 760
EXTRACTORS, Cotter Pin 795
Drive Calk 25
Eye Bolts 601

E

PAGE

EYES, Hitching 1166T
Hooks and 1169T
Mosquito Bar 1173T
Padlock 997T
Screw, Wire 1174T, 1175T

F

Fabric Patches 704
Factory Brooms 638
Door Bolts 1065T, 1077T
Door Hangers 1193T
Door Latches .....996T to 998T
Floor Brushes 636
Family Scales 571, 572
Fan Belt Fasteners 751
Belt Holders 806
Belting 750, 751
Belts 750
Fancy Flap Hinges ....1093T to 1095T
Planes .....318 to 330
FANS, Electric 912T, 913T
Propeller 200
Sew-E-Z 914T
Farm Fence 48
Gates 50, 51
Levels 437
Special Grinders 498
Farriers' Hammers 285
Fast Joint Butts .....1087T to 1090T
FASTENERS, Belt 84
Car Window 1130T
Corrugated Steel 34
Fan Belt 751
Hook 44
Ice Box 1137T
Loom 887
Refrigerator .....1136T to 1138T
Sash 1126T
FAUCETS, Measuring 148
Oil Can 146
Petroleum 148
Wooden 147
Faultless Casters 1217T, 1218T
Feather Dusters 637
FEELERS, Thickness 467
FELT, Asbestos 665
Asphalt 666
Building .....663 to 666
Deadening, Wool 664
Slaters' 666
Tarred 666
Weather Strip 609, 610
Wool 664
FENCE, Farm 48
Lawn 49
Nails 27, 28
Pliers 348
Poultry 47
Staples 56
Wire 56
Ferrule Type Fuses 880, 881
FERRULES, Brass 412
Fork 936T
Hoe 936T
Rake 936T
Rings and 164
Singletree 165
Whiffletree 166
Fibre Chair Seats 646
Fifty Five Planes 326
FIGURES, Steel 418
File Brushes 185
Cards 185
Cleaners 185
Handles 412

F

PAGE

FILERS, Saw 403
FILES and Rasps .....176 to 188
Auger Bit 179
Band Saw 180
Bastard .....180 to 183
Blunt 183
Cabinet 184
Cant Saw 180
Carborundum 510
Coil, Igneto 795
Double End Taper 180
Flat Bastard 181
Flat, Second Cut..... 181
Float 184
Half Round 182, 184
Hand 182
Igneto 179
Illustrations of 176
India Oil Stone..... 506
Knife Bastard 183
Mill Bastard 180, 181
Paper 605
Round 183
Square 183
Swiss 187, 188
Taper 179, 180
Warding 184
XF 187, 188
FILLER, Tread 748
Wood, Liquid .....651 to 653
Wood, Paste 653
FILLERS, Engineers' 931T
Lamp 931T
Oil Can 931T
FILLET Gauges 466
Leather 93
Filletster Planes 327, 328
Filling Cans, Auto..... 737
Stations, Gasoline 734, 735
Filtering Funnels 1241T
Funnels, Gasoline 737
FILTERS, Water 1230T
Fine Nails 27, 28, 32
FINIALS, Globe 685
Little Beauty 685
FINISH, Hard Oil.....651 to 653
Interior 652, 653
FINISHES, Automobile 742, 743
Household 648, 649
Stain 652, 653
Finishing Nails 27, 28, 30
Paper 484
Sticks 490
Trowels 546, 547
Trowels, Cement Workers'.. 542
Fire Door Fixtures.....1199T to 1201T
Door Hangers and Track....
.....1199T, 1200T
Door Hinges 1097T
Door Latches 997T
Door Stock 696
Exit Devices .....1074T to 1076T
Exit Latches .....1074T to 1076T
Extinguishers 119
Extinguishers, Pyrene 760
Hose 109
Hose Nozzles 110
Pails 1245T
Pots, Gasoline 539
Shovels 1236T
Firemen's Axes 299
Firm Joint Calipers 476
Firmer Chisels 310, 311
Chisels, Tanged 312
Gouges, Socket 313
Gouges, Tanged 313
Fishing Torches 921T
Wire 905

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

F

PAGE

FITTINGS, Boiler, Circulating... 135
Brass Pipe, Auto 758
Cast Iron 129
Conduit, Flexsteel 886
Conduit, Rigid 888, 889
Entrance, Conduit 889
Iron Pipe .....129 to 134
Malleable Iron .....130 to 134
Metal Molding .....896 to 898
Spray Pump 945T
Stable 950T
Tube, Auto 757
FIXTURES, Dumb Waiter..... ..... 1179T to 1181T
Fire Door .....1199T to 1201T
Grindstone 500
Screen Door .....1103T to 1105T
Stair Gauge 471
Store 612
Flake Graphite 739
Graphite, Dutch Brand..... 747
Flange Couplings 125C
Couplings, Compression 125D
Pulleys 123
Unions 132
FLANGES, Floor 133
Flaring Pails 1245T
FLASHINGS, Wall 683
Flashlight Batteries 842
Bulbs 842
Lamps 842
FLASHLIGHTS 840, 841
Flat Bastard Files 181
Bottom Planes 320, 322 323
Head Rivets 80
Nose Pliers 341
Paint Brushes .....617 to 619
Spring Bolts 1065T
Spring Keys 76
Varnish Brushes 622, 623
FLATTERS, Blacksmiths' 280
Flax Packing, Square 95
Twine 604
Flexible Conduit 887
Steel Rules .....450 to 453
Steel Tubing 772
Terminals 1060T
Weather Strip 609
Flexsteel Conduit 886
Conduit Fittings 886
Lamp Cord 885
Flint Paper 484
Float Files 184
FLOATS, Cement Workers' 542
Floor Bars 277
Brushes 636
Dressing 652, 653
Hinges, Spring 1107T, 1108T
Ice Shavers 579
Flanges 133
Paint 649
Polish 639, 640
Push Buttons 902
Sets, Japalac 650
Scrapers 331
Scrubbers 645
Stops 1117T
Varnish .....651 to 653
Wax 640
Flooring Brads 27, 28, 30
Saws 381
Flower Bed Guards 51
Pot Brackets 1161T
Flowing Varnish Brushes....622, 623
Flue Cleaners 630
Scrapers 630
FLUID, Coloring 905

F

PAGE

Flush Bolts .....1071T to 1073T
Drop Handles 1052T
Handles 1156T
Plates, Heater Control..... 868
Plates, Receptacle 863
Pulls 1156T
Push Button Switches..... 868
Receptacles 861
Receptacles, Duplex 864
Receptacles, Hubbell 863
Receptacles, Screw Plug.... 864
Sash Lifts .....964T to 986T
Tee Bevels 440
Trap Door Rings 1157T
Fluted Chucking Reamers...220, 221
End Mills 233, 234
FLUX, Soldering, Electricians'.. 905
FOLDERS, Roofing 534
Folding Door Mats 647
Machines 527, 528
Pails 760
Saw Bucks 388
Scaffold Brackets 1160T
Shelf Brackets 1159T
Steel Chairs 798
Steel Rules 450
Foot Bolts .....1066T to 1070T
Rests, Accelerator 806
Scrapers 647
Warmers, Soapstone 728
Force Cups, Plumbers' 103
Pumps, Horizontal 946T
Ford Automobile Wheels..... 708
Curtain Lights 724
Drivers' Robe 724
Weather Strips 724
Fore Planes .....318 to 323
FORGES, Blacksmiths' 201, 202
Portable 201, 202
Forg's Spring Catches 1135T
Fork Bars, Ice 579
Handles 935T, 936T
Ferrules 936T
FORKS, Ballast 933T
Barn 932T
Beet 932T
Coal 932T
Coke 932T
Ensilage 932T
Rail 271
Scoop 932T
Stone 933T
Vegetable 932T
Formed Valley, Galvanized..685, 693
FORMERS, End, Eave Trough... 535
Forming Machines 524
Forstner Auger Bits..... 375
Forty Five Planes 326
Foundation Coal Chutes..1234T, 1235T
Foundry Brushes 630
Nails 32
FOUNTAINS, Chicken 45
Fractions and Decimal Equivalents 212
Frame Pulleys 1210T, 1211T
FRAMES, Buck Saw 388
Hack Saw 395
Sink 947T
Window Screen 607
Wood Saw 388
Framing Chisels, Socket 313
Franklin Cranes 587
Free Air Outfits 732
Freeze Proof 744, 745
FREEZOMETERS 761
French Coach Dusters 627
Parlor Bellows 550
Window Catches 1140T
Window Locks 1002T

F

PAGE

Friction Catches 1135T
Tapes 901
Tire Tape 748
FROGS, Plane 334, 335
Front Door Locks .....958T to 985T
Radius Rods 805
Fruit Ladders 615
Fuller Bibb Balls 115
Bibbs 145, 146
FULLERS, Bottom 280
Top 280
FUNNELS 1241T
Filtering 1241T
Gasoline 1241T
Gasoline Filtering 737
Furnace Cement 1237T
Cleaning Brushes 630
Scoops 564
FURNACES, Soldering 538
Furniture Brushes 626
Casters .....1216T to 1221T
Nails 1223T
Polish 639, 640
Varnish .....651 to 653
Fuse Renewal Links 880
Strip 882
Wire 882
Fuseless Rosettes, Pony 861
FUSES, Auto 823
Enclosed 879
Ferrule Type 880, 881
Knife Blade Type 880, 881
Plug 879, 880
Fusible Links 1200T
Rosettes 861

G

Galvanized Conductor Elbows.... .....689, 690, 693
Conductor Pipe 688, 692
Eave Trough 686, 692
Filtering Funnels 737
Formed Valley 685, 693
Hawsers 599
Mooring Lines 599
Poultry Netting 46, 47
Roll Valley 685
Running Rope 599
Sheets 18
Wire 56
Wire Hoop Staples 44
Wire Nails 28, 31
Gang Strips, Metal Molding..... 897
Switches 868
Garage Door Bolts.....1065T, 1077T
Door Hangers 1080T, 1188T
Door Holders 1079T
Door Latches .....996T to 1001T
Door Sets .....1078T to 1080T
Floor Brushes 636
Hinges 1097T
Hooks 1165T
Jacks 267, 713
Pumps, Electric 731
Garbage Cans 1239T
Garden Barrows 551
Hose, Cotton 105
Hose Couplings 113
Hose Nozzles 110
Hose, Rubber 104, 105
Rakes 933T
Scuffle Hoes 934T
Spades 560
Garnet Paper 484
Gas and Burner Pliers..... 348
Brazing Torches, Electric.... 820
Mantles 923T
Pipe 127
Service Cocks 141

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

G

PAGE

Gasket Cutters 93
Sheets, Cork 775
Shellac 745
Shellac, Dutch Brand..... 748
GASKETS, Asbestos 99
Copper Asbestos .....773 to 775
Cork 775
Liquid, Tenox 775
Ring 98
Sink 102
Tubular 99
Unilet 894
Victor .....773 to 775
Gasoline Barrels 738
Cans 737, 738, 926T, 927T
Filling Stations 734, 735
Filtering Funnels 737
Fire Pots 539
Funnels 1241T
Gauges 761
Hose 752
Hydrometers 761
Lamps 922T
Meters 761
Pumps 736
Systems, Vacuum 773
Tanks 736, 738, 927T
Torches 537, 538, 820
Torches, Wall 921T
Gate Hangers 1203T
Hooks 1167T
Hooks and Eyes 1169T
Latches, Office, Secret.....1015T
Valves 140
GATES, Farm 50, 51
Lawn 50
Molasses 147
Oil 147
Gauge Attachments, Center..... 458
Glass Cutters 661
Glass Preservers 115
Glass Washers 115
Glasses 135
Of Sheet Iron 18
GAUGES, Auger Bit 372
Butt 428
Center 458
Comparative, Wire 54
Depth 465
Drill 471, 472
Fillet or Radius 466
Gasoline 761
Inside 464
Jointer 429
Marking 427, 428
Mortise 427, 428
Of Tin Plate 697
Oil 761
Pitch 466
Rabbet 428
Rule 429
Saw Tooth 402
Shingle 429
Siding 428
Stair 471
Surface 469
Telescoping 464
Thickness 467
Tire Pressure 719
Track 271
Wire 471, 472
Gauging Rods 445
Gear Compound 739, 740
Cutters 232
Grease, Graphite 739
Oil .....739 to 741
Varnish 652, 653
Gem Casters 1219T, 1220T
Scribers 477

G

PAGE

General Purpose Wrenches 266
GENERATORS, Motor 819
Gimlet Bits 375
GIMLETS, Nail 376
Gimp Tacks 41
GLASS Boards 443
Cutters 660, 661
Preservers, Gauge 115
Window 658, 659
GLASSES, Gauge 135
Level 435
Storm 1226T
Glaziers' Diamonds 660
Hammers 290
Points 44
Glidden Automobile Finishes.742, 743
Varnishes 651
GLIDES, Chair 1216T
Gliding Casters 1216T
Globe Finials 685
Valves 138, 140
Street Lamps 925T
Glovers' Needles 379
GLOVES, Cotton, etc..... 949T
GLUE Brushes 620
Bulk 482
Liquid 482
Pots 482
Pots, Electric 911T
GOGGLES, Auto 808, 809
GOLD, Japalac 650
Gong Bells 951T
Gouge Slips 506
GOUGES, Socket Firmer 313
Tanged Firmer 313
Turning, Tanged 314
Grain Baskets 948T
Scoops 563
Scythes 937T
Graining Combs 626
Grant Overhead Pulleys.....1209T
GRAPHITE Cup Grease 739, 740
Flake 739
Flake, Dutch Brand..... 747
Gear Grease 739
Gear Oil 739
Grease, Dutch Brand..... 747
Motor 739
GRAPPLES, Timber 171
Grass Scythes 937T
GRATES, Salamander 1237T
Ventilator 1235T
Gravel Scoops 561
Gravity Door Catches.....1204T
GREASE, Automobile 739, 740
Cup 739, 740
Cups 142
Cups, Compression 754, 755
Gear, Graphite 739
Graphite, Dutch Brand 747
Guns 732, 733, 931T
Pumps, Auto 733
Green Label Varnishes 651
Sweeping Compound 643
GRINDERS, Bench 491, 492
Bench, Power 497
Carborundum .....496 to 498
Chisel 331
Cutter and Chisel 331
Electric 491, 492, 911T
Farm Special 498
Household 496
Sew-E-Z 914T
Surface 492
Tool, Luther .....496 to 498
Valve 796
Grinding Compound, Valve...483, 796
Machines .....491 to 494
Wheels .....486 to 489

G

PAGE

Grindstone Fixtures..... 500
GRINDSTONES, Mounted ...499, 500
Unmounted 500
GRIPS, Wire 349
Grocers' Bags 662
Scales 571
Scoops 1244T
Groove Planes 327
GROOVERS, Hand, Tinners' 531
Grooving Machines 526
Grub Hoes 272
GUARDS, Flower Bed..... 51
Lamp, Portable 906
Lamp, Wire 906, 907
Screen Door 1059T
Screen Window 1059T
Spout 690
Tree 51
GUIDES, Sliding Door 1197T
GUM, Repair, Auto Tire..... 714
GUNS, Grease 732, 733, 931T
Oil 732, 733
Gutter Beading Machines..... 528
Machines 528
Tongs 535
GUTTERS, Box 686
Ogee 686, 693
Roof 686, 693
Guy Rope Wire 598

H

Hack Saw Blades .....396 to 398
Saw Frames 395
Saw Machines 394
Saws, Handy 381
HAFTS, Awl 411
Hair Wire 59
Half Hatchets 305
Reflectors 908
Round Cabinet Rasps 185
Round Files 182, 184
Round Shoe Rasps 185
Round Wood Rasps 185
Trace Chains 158
Halter Chains 155
Hammer Handles 408
Straps 163
Wedges 278
HAMMERS, Auto Body 284
Automobile 283
Body Trimmers' 290
Brick 285
Bumping 284
Engineers' 283
Farriers' 285
Glaziers' 290
Hand, Blacksmiths' 283
Machinists' 283
Masons' 282
Nail .....285 to 289
Patterns Makers' 290
Raising 284
Rawhide Faced 413
Riveting 284
Set 280
Setting 284
Shoe 290
Slaters' 535
Spalling 282
Striking 282
Tack 290, 291
Tinners' 284
Trimmers' 290
Upholsterers' 290
Hammock Chains 152
Hooks 1166T

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

H

PAGE

Hand Beaders 329
Carts 555
Drills ..... 359 to 361
Files 182
Files XF 187, 188
Groovers, Tinners' 531
Hammers, Blacksmiths' 283
Lamps, Electric 839
Punches 520
Rail Brackets 1158T
Rail Screws 1158T
Reamers 220
Rope, Elevator 598
Rope, Wire 598
Saw Filers 403
Saw Handles 406
Saws ..... 384 to 386
Screws 405
Seamers, Roofing 534
Soap, O-My 641
Taps, Machinists' 243
Vises 189
Of Doors 957T
Handled Axes ..... 296 to 299
Brad Awls 379
Mops 643
HANDLES, Adze 410
Auger 408
Awl 411
Axe 409
Boiler 1246T
Cant Hook 171
Chest 1156T, 1157T
Chisel 411
Coal Miners' Pick 410
Coke Fork 936T
Cross Cut Saw 407
Drop, Flush 1052T
File 412
Flush 1156T
Fork 935T, 936T
Hammer 408
Hand Saw 406
Hatchet 408
Lamp Guard 907
Mattock 410
Peavey 171
Plane 408
Poll Pick 410
Rake 935T
Saw 406, 407
Scoop 936T
Shovel 935T, 936T
Sledge 410
Socket Wrench 262, 794
Soldering Copper 412
Spade 935T, 936T
Stone Pick 410
Telegraph Shovel 935T
Tool ..... 408 to 410
Tray 1155T
Handy Hack Saws 381
Seamers 534
Workers 191
Hanger Plates 1147T
HANGERS, Barn Door.. 1186T to 1193T
Door ..... 1182T to 1194T
Eave Trough 691
Factory Door 1193T
Fire Door 1199T 1200T
Garage Door 1080T, 1188T
Gate 1203T
House Door ..... 1182T to 1185T
Joist 1176T, 1177T
Mill Door 1193T
Pipe 128
Post 125
Sash 1126T
Shaft ..... 124 to 125A

H

PAGE

HANGERS—Continued.
Sliding Door ..... 1182T to 1200T
Trolley ..... 1183T to 1194T
Wall 1177T
Hang-Up Picture Hooks 1224T
Hard Asphalt Cement 654
Oil Finish ..... 651 to 653
HARDIES, Blacksmiths' 280
Hardware Grade Wire Cloth.... 606
Store Fixtures 612
Harness Awls 379
Hooks 1165T
Needles 379
Rivets, Tubular 82
Harrow Teeth 26
Harvester Oilers 928T
Hasp Locks 1100T
HASPS and Staples 1100T
Box 1148T
Crate 1098T
Hinge 1098T, 1099T
Hooks and Staples 1100T
Hat and Coat Hooks... 1161T to 1164T
Hatchet Handles 408
Wedges 278
HATCHETS, Barrel 309
Bench 302
Broad 302
Claw 304
Half 305
Lathing ..... 306 to 308
Produce 309
Shingling 303
Haulage Rope 594
HAWKS, Aluminum 545
Cedar 545
HAWSERS, Galvanized 599
Towing 600
Hay Fork Handles 935T
Hooks 293
Racks, Corner 950T
Heading Shaves 315
Headlight Lenses 835
HEADLIGHTS, Auto 835
Cold Blast 920T
HEADS, Clamp 405
Drill 365
Mop, Cotton 643
Mop, Dustless 643
Whitewash 628
Heat Coil Pliers 343
Heater Control Switches..... 868
Switches 872
HEATERS, Auto Exhaust 727
Automoboile 727, 728
Carriage 728
Engine 726
Radiator 726
Heavy Brass Valves 138
Door Hooks 1169T
Hedge Spades 560
Heel Chains 158
Nails 39
Plates, Accelerator 807
Plates, Neverslip 175
Hemp Packing 100
Twine 604
Hens' Nests 45
Hermaphrodite Calipers 475
Haxagon Nuts 73
Nuts, Assorted 800
Nuts, Semi-Finished 74
High Speed Drills ..... 211 to 215
Hinge Hasps 1098T, 1099T
Nails 28, 33
HINGES, Back Flap 1091T
Bag 1089T
Box 1148T
Chest 1091T

H

PAGE

HINGES—Continued.
Corrugated 1095T
Fire Door 1097T
Floor, Spring 1107T, 1108T
Garage 1097T
Ornamental ..... 1093T to 1095T
Ornamental Flap ..1090T to 1095T
Pin 1092T
Refrigerator 1095T
Screen 1102T
Screw Hook and Eye..... 1097T
Screw Hook and Strap..... 1097T
Show Case 1102T
Soss Invisible 1101T
Spring ..... 1102T to 1108T
Strap 1095T
T 1096T
Table 1091T
Trunk 1089T
Hip Shingle Starters 684
Shingles 684
Hitching Eyes 1166T
Hob Nails 40
HODS, Brick 549
Coal 1236T
Mortar 549
Hoe Ferrules 936T
HOES, Beet 934T
Grub 272
Mortar 934T
Nursery 934T
Scuffle 934T
Street 934T
Hoisting Rope, Wire..... 595 to 597
HOISTS, Chain ..... 581 to 587
Electric 585
Portable 587
Rope 588
HOLDERS, Bit, Extension 368
Card 1150T
Die, Bit Brace 247
Door 1116T
Fan Belt 806
Garage Door 1079T
Key, Safety 1229T
Lathe Tool 247
Oil Can 755
Peneil 478
Rein, Dash 160
Shade 909
Tire 787
Tool 240
Trace 160
Hollow Augers 369
Mills 236
Punches, Tinners' 531
HOLLOWS and Rounds..... 319
HONES, Knife 504, 507
Pocket 510
Hood Covers 725, 726
HOODS, Chimney Top..... 694
Letter Drop 1060T
Salamander 1237T
Hoof Nippers 203, 204
Parers 204
Hookaroon Picks 172
Hook-On Tire Sleeve 704
Hook and Eye Hinges..... 1097T
And Strap Hinges..... 1097T
Bolts 601
Dogging Devices 1076T
Plates 128
Rules 453
Sash Lifts 1129T
HOOKS and Eyes 1169T
And Staples 1167T
Bath Room 1224T
Belt ..... 83 to 85
Box 293

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

H

PAGE

HOOKS—Continued.
Cant 171, 172
Carded, Belt 85
Ceiling 1164T
Chain 150
Clothes Line 1166T
Coat and Hat .....1161T to 1164T
Conductor Pipe 691
Cotton 293
Cup, Brass 1168T
Cup, Wire 1173T
Desk 1168T
Door, Cabin 1169T
Garage 1165T
Gate 1167T
Hammock 1166T
Harness 1165T
Hasps and Staples 1100T
Hay 293
Hotel 1164T
Ice 579
Kitchen 1168T, 1224T
Loading 173
Lug 171
Meat 1167T
Mud 709
Picture, Hang-Up 1224T
Pipe 128
Sash, Extension 1123T
Schoolhouse 1164T
Screw, Brass 1168T, 1172T
Screw, Wire .....1170T to 1172T
Seat 168
Sign 1165T
Singletree 165
Stable 1165T
Store 1165T
Store Rack 1165T
Swamp 173
Swivel, Lumbering 172
Telegraph 1168T
Wall 1224T
Hoop Fasteners 44
Iron 6
Nails, Steel 39
Shaves 315
Staples 44
Steel 6
Steel, Weights of 14
HOOPS, Repair 1232T
Horizontal Check Valves 139
Horn Bulbs 766
Reeds 766
HORNS, Automobile 765, 766
Motorcycle 766
Horse Rasps 186
Shoe Calks 24
Shoe Iron 1
Shoe Nails 25
Shoes 22, 23
Horseshoeing Pincers 203
HOSE, Air, Auto 751
Air Drill 108
Band Pliers 112
Bands 112
Bibbs .....143 to 146
Carts 117
Charging 751
Clamps 112
Couplings 113
Deck 107
Fire 109
Garden, Cotton 105
Garden, Rubber 104, 105
Gasoline 752
Menders 114
Mill 109
Nipples 114
Nozzles 110

H

PAGE

HOSE—Continued.
Pipes 110
Pneumatic 108
Racks 118
Radiator 752
Reels .....116 to 118
Spray 107
Steam 107
Suction 106
Washers 115
Water Conducting 106
Wire Wound 105, 108
Hot Air Outfit, Rayfield..... 770
Air Tubing 752
Chisels 281
House Pulleys 1212T
Pressed Nuts 73
Shot Batteries 832
Hotel Checks 1055T
Hooks 1164T
Trucks 576
House Bells, Gong 951T
Brooms 637
Door Hangers ....1182T to 1185T
Lamps, Electric 839
Household Finishes 648, 649
Grinders 496
Scales 573
Hubbell Flush Receptacles..... 863
Receptacle Caps 863
Hub Caps 777
Hungarian Nails 40
Hunters' Axe Sheaths 300
Axes 300
Hydrant Cocks 142
Hydraulic Packings 95
HYDROMETERS, Battery 761
Gasoline 761
Hylo Electric Lamps 845

I

Ice Axes 579
Balances 575
Bars 579
Box Fasteners 1137T
Chisels, Bar 579
Creepers 175
Hooks 579
Plows 579
Run Iron 579
Saws 580
Shavers 579
Tongs 580
Tools 579, 580
Igneto Coil Files 795
Files 179
Ignition Cables 824
Locks 813
Outfits 825
Switches 814
Systems 816
Illustrations of Files 176
Of Rasps 176
Imprint Rollers, Cement Workers' 542
Improved Bevels 464
Scribers 470
Incased Pulleys 1213T, 1214T
India Oil Stones .....505 to 508
Indicator Bolts, Lavatory.....1149T
INDICATORS, Current 762
Speed 473
Test 469
Inflating Valves, Auto Tire 718
Ingot Iron Ceilings 677
Iron Roofings 676, 677
Iron Siding 677

I

PAGE

INJECTORS, Automatic 142
Penberthy 142
INK, Stencil 418
Inner Tube Patches 704
Tubes, Automobile 702, 703
INSERTS, Concrete 66
Inside Door Locks .....960T to 985T
Gauges 464
Micrometers 464
INSIDES, Valve, Auto 719
Inspectors' Torches 921T
INSTRUMENTS, Drawing ..480, 481
Engineering 436
Surveying 436
Insulated Screw Drivers.....352, 353
Staples 900
Insulating Joints 900
Paper 663
Pliers 339
Sleeves 339
Tapes 901
Wire 882
INSULATORS, Porcelain 899
Interchangeable Caps 865
Interior Finish .....652 to 653
Varnish .....651 to 653
Invisible Hinges, Soss.....1101T
Involute Gear Cutters 232
IRON Band 1
Bar 1
Bar, Weights of.....12 to 14
Body Valves 140
Box Bells 903
Box Buzzers 903
Cap Screws 65
Cement 1237T
Cocks 141
Cut Nails 27
Cutters ..... 517 to 519
Drive Screws 61
Folding Machines 527
Hoop 6
Horse Shoe 1
Ice Run 579
Levels, Machinists' 433
Machine Screws 63
Norway 6
Pipe Bushings 133
Pipe Couplings 133
Pipe Extensions 945T
Pipe Fittings .....129 to 134
Pipe Plugs 133
Planes 320, 322, 323
Planished 16
Punches 520
Riveting Burs 82
Rivets 78
Sap Pan 18
Set Screws 64
Sheet .....16 to 18
Sheet, Gauge of 18
Sheet, Ingot 17
Swedish 6
Tackle Blocks 591
Tire 7
Wagon Box 1
Wagon Box, Weights of..... 14
Wood Screws 60
Ironed Plow Doubletrees..... 161
Plow Singletrees 161
Wagon Doubletree Sets..... 162
Wagon Doubletrees 161, 162
Wagon Neckyokes 162
Wagon Singletrees 161, 162
IRONS, Bow 168
Corner, Malleable 167
Corner, Wrought Steel 167
End, Neckyoke 164
Malleable .....165 to 168

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

I

PAGE

IRONS—Continued.
Neckyoke Center 164
Plane 332
Rub, Malleable 167
Sash Cord 1205T
Soldering, Electric 820, 911T
Stake 168
Tuyere 198, 199
Wear, Malleable 167
Irregular Curves 480
Ivory Rules 448

J

Jack Chain 151
Planes .....318 to 323
Screws 269
Screws, Starrett 468
JACKS, Automobile.267, 268, 712, 713
Car 268
Emergency 269
Garage 267, 713
Pole 269
Pump 946T
Tire Saver 267, 712
Track 268
Truck 268, 713
Weed Chain 267, 712
Jamb Nuts 74
Jap Spar Varnish 650, 651
JAPALAC Aluminum 650
Floor Sets 650
Gold 650
Household Finishes 648, 649
Model Floor Sets 650
Porch and Floor Paint 649
Screen Enamel 650
Stove Pipe Enamel 650
Japan Dryer .....651 to 653
JAWS, Vise 195
Wrench 258
Jersey Vises 190
Jewelers' Nippers 346
Pliers 342
JIGS, Doweling 327
JOBS, Odd 429
Johnson's Automobile Specialties 744
Cleaner 640
Joint Cement 654
Jointer Gauges 429
Planes .....318 to 323
JOINTERS, Brick 549
Cement Workers' 542
Sidewalk 544
JOINTS, Ball Socket 755
Insulating 900
Joist Hangers 1176T, 1177T
Tools 368
Junior Battery Switches 875
Jute Twine 604

K

Kalsomine Brushes 627
Keen Kleener 641
Kerosene Pumps 736
Tanks 736, 738
Torches 538
Kester Solder 776
Kettle Ears 1247T
Key Blanks 1054T, 1055T
Chains 1228T, 1229T
Checks 1055T
Holders, Safety 1229T
Levers, Switch 795
Plates .....964T to 980T
Plates, Cabinet 1056T
Rings 1229T

K

PAGE

Key Seat Clamps 453
Seat Rules 453
Sockets 847
Sockets, Porcelain 855
Sockets, S. P. 850
Keyhole Saws 382
Keyless Sockets 847
Sockets, New Wrinkle 849
Sockets, Porcelain 857
KEYS, Center 217
Spring, Flat 76
KEYWAYS for Cutters..... 231
Kit Pipe Vises 195
Kitchen Brushes 633
Cans 1239T
Hooks 1168T, 1224T
Saws 399
Stones 510
KITS, Tool 414, 415
Tool Auto 793
Klaxon Auto Horns 765
KLEENER, Keen 641
Knife Bastard Files 183
Blade Type Fuses 880, 881
Hones 504, 507
Sharpeners 510
Switches .....873 to 876
KNIVES, Beet Topping 938T
Corn 938T
Drawing 315
Knob Chisels, Ice 579
Latches, Mono 959T
Latches, Mortise 1005T
Latches, Rim 1008T
Locks, Mortise ....1002T to 1004T
Locks, Rim 1006T, 1007T
Roses 1052T
Screws 1053T
Spindles 1053T
Washers 1053T
KNOBS, Base 1117T
Door 1051T
Door, Malaga 964T
Door, Yuma 968T
Drawer 1134T
Repair 1247T
Shutter 1134T
Knurling Tools 242
Kraft Wrapping Paper 662

L

Label Plates 1150T
Lace Cutters 85
Leather 91
LACERS, Belt 85
LACING, Belt, Leather 91
Belt, Steel 84
Wire Belt 85
LACKLUSTRE 653
Ladder Chain 152
LADDERS, Extension 615
Fruit 615
Step 616
Store 613, 614
Straight 615
LADLES, Melting 536
Lamp Adapters, Electric 821
Black 657
Burners 924T
Cord 883
Cord, Armored 885
Cord Connectors, Flexsteel.. 887
Enamel 743
Fillers 931T
Guard Handles 907
Guards, Portable 906

L

PAGE

Lamp Guards, Wire 906, 907
Reflectors 908
Sockets, Electrical ....847 to 860
Wicks 924T
LAMPS, Boiler 921T
Dash 822
Dash and Trouble 822
Driving 919T
Electric 845, 846
Electric, Auto 843, 844
Electric, Wallace 923T
Flashlight 842
Gasoline 922T
Hand, Electric 839
Side 920T
Side, Auto 835
Street 920T
Tail, Auto 835
Trouble 838
Wall 922T
Lantern Burners 924T
Chisels 532
Globes 925T
Wicks 924T
LANTERNS, Air-O-Lite 919T
Cadet 919T
Dash .....918T to 920T
Driving 919T, 920T
Electric 839
Railroad 919T
Tubular .....917T to 920T
Vehicle 919T
Lap Robes, Automobile..... 726
Lariat Swivels 168
LATCHES, Barn Door...997T to 1001T
Barn Door, Sliding..999T to 1001T
Factory Door .....996T to 998T
Fire Door 997T
Fire Exit .....1074T to 1076T
Garage Door .....996T to 1001T
Knob, Mono 959T
Mortise Knob 1005T
Night Mortise 1008T, 1009T
Night Rim .....1009T to 1014T
Night, Sliding Door.....1002T
Office Gate, Secret.....1015T
Rim Knob 1008T
Schoolhouse Door 996T
Sliding Door 986T
Swing, Lavatory 1149T
Thumb .....995T to 998T
Warehouse Door 997T, 998T
Lath Nails 28, 31
Lathe Chucks 238, 239
Dogs 242
Tongs 203
Tool Holders 247
Tools 240
Lathing Hatchets .....306 to 308
Steel 683
Laundry Dippers 1241T
Lavatory Door Bolts.....1149T
Strikes 1149T
Lawn Cleaners 941T
Fence 49
Gates 50
Mowers 940T
Rollers 939T
Sprinklers 111
LEAD, Bar 21
Headed Nails 670
Pencils .....422 to 426
Pig 21
Pipe 947T
Washers 670
White 657
Leaf Spreaders, Spring 791

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

L

PAGE

Leather Axle Washers..... 160
Belting .....88 to 91
Dressing 743, 745
Fillet 93
Lace 91
LENSES, Headlight 835
LePage's Glue 482
Photo Paste 482
Letter Drop Hoods 1060T
Drop Plates .....964T to 971T
LETTERS, Steel 418
Stencil 418
Level Boards, Step 271
Cases 435
Glasses 435
Sights 435
Leveling Stands 437
LEVELS, Bit and Square..... 435
Builders' 437
Carpenters' .....431 to 433
Farm 437
Iron, Machinists' 433
Machinists' 433
Masons' 434
Metallic 432
Pocket 433
Lever Handle Roses 1052T
Ice Box Fasteners 1137T
Punches 520
Shears, Iron 519
LEVERS, Switch Key 795
Liberty Chain Cow Ties 157
Coil Chain 153
Halter Chains 155
Machine Chain 152
License Pad Clips 709
LIFTERS, Transom 1119T
Valve 796
Lifting Trucks 577
LIFTS, Sash .....964T to 986T
Sash, Bar 1128T
Sash, Hook 1129T
LIGHTERS, Cigar 838
Lighting Cables 824, 825
Outfits, Electric 817, 818
Switches 815
Lightning Braces 358
LIGHTS, Curtain Ford..... 724
Electric, Auto 835
Flash 840, 841
Search 840
Search, Windshield 837
Spot 836, 837
Line Cleats 1215T
Linemen's Pliers 339
Tools 349
Linen Fire Hose 109
LINERS, Brick 626
LINES, Chalk 604
Masons' 604
Mooring, Galvanized 599
Small 1205T
Tow, Automobile 711
Trot 603
LINING Bars 270
Brake Band 749
Carpet 664
Cement, Stove 1237T
Nails 27, 41
Transmission 750
Transmission, Chatterless .. 750
LINKS, Clevis 168
Fusible 1200T
Missing 150
Open 150
Renewal, Fuse 880, 881
Repair 150
Linoleum Varnish 651
Linseed Oil 657

L

PAGE

Liquid Asphalt Cement 654
Bronzing .....651 to 653
Gaskets, Tenox 775
Glue 482
Granite 652, 653
Measures 1244T
Veneer 640
Veneer, Auto 744
Wood Filler .....651 to 653
Little Beauty Finials 685
Load Binders 150
Loading Block Sheaves..... 174
Blocks 174
Chain 149
Hooks 173
Lock Chains, Tire 812
Cylinders 1054T
Cylinders, in Detail 952T
Joint Calipers 476
Link Coil Chain 154
Nuts, Malleable Iron..... 132
Oil Bibbs 148
Spindles, in Detail 956T
Spring Steel 1053T
Stitch Sewing Awls 379
Strikes 1052T
Strikes, Rim, in Detail..... 956T
Washers 75
Washers, Auto 799
Locker Locks 1031T
LOCKERS, Steel 611
LOCKNUTS, Conduit 888
LOCKS, Automobile.....810 to 812
Barn Door, Sliding..999T to 1001T
Cabinet .....1020T to 1033T
Cash Box 1032T
Chamber Door .....962T to 982T
Chest .....1027T to 1029T
Closet Door, Mono..... 959T
Communicating Door.....
.....959T to 982T, 1004T
Corridor Door 960T, 961T
Cupboard 1024T, 1026T
Dead Mortise .....1015T to 1017T
Dead Rim 1018T, 1019T
Desk 1027T, 1030T
Drawer .....1020T to 1024T
Elevator Door, Mono...960T, 961T
Elevator Door, Sliding.....1000T
French Window 1002T
Front Door .....958T to 985T
Hasp 1100T
Ignition 813
In Sets .....958T to 985T
Inside Door .....960T to 985T
Locker 1031T
Master Keyed .....953T to 955T
Mono .....958T to 960T
Mortise Knob .....1002T to 1004T
Motor Car .....1034T to 1036T
Oar 170
Office Door, Mono....959T to 961T
Pad .....1037T to 1050T
Pad, Automobile 810, 811
Rim Knob 1006T, 1007T
Row 170
Sash .....1130T to 1132T
Ship 1007T
Show Case 1032T
Sliding Door .....963T to 985T
Stable Door, Sliding..1000T, 1001T
Steering Wheel 812
Store Door, in Sets...988T to 994T
Sub-Treasury 1031T
Suit Case 1032T
Switch 813
Transmission 812
Trunk 1032T, 1033T
Vestibule Door .....958T to 981T

L

PAGE

LOCKS—Continued.
Wardrobe 1025T
Window Ventilating 1129T
Locomotive Jack Screws..... 269
Log Chain 149
Rules 445
Long Handles 935T
Ladders 615
Ternes 696
Loom Boxes, Ceiling..... 895
Fasteners 887
Loose Joint Butts 1089T
Pin Butts .....1081T to 1087T
LUBRICANTS, Automobile.739 to 741
Spring 791
Lubricating Oil, Auto.....739 to 741
Oil Outfits 736
Lug Hooks 171
Luggage Carriers, Auto..... 709
Lumbering Tools .....171 to 174
Lumber Chains 157
Crayons 421
Pencils 421
Lump Chalk 419
Luther Tool Grinders .....496 to 498
Luxeberry Spar Varnish 652, 653
Wood Finishes 652, 653
Lynite Pistons 802
Lyon Auto Bumpers 782, 783

M

Machine Augers 369, 371
Bits 371
Bolts 69
Chain, Liberty 152
Nut Taps 244
Punches 274
Saws, Milling 393
Screw Nuts 74
Screw Taps 245
Screws, Brass 63
Screws, Iron 63
Standards, Tinners' 532
Machinery Steel 7
MACHINES, Beading 524, 525
Boring 368
Burring 521
Crimping 525
Double Seaming 523
Edging, Elbow 522
Folding 527, 528
Forming 524
Grinding .....491 to 494
Grooving 526
Gutter 528
Hack Saw 394
Miter 381
Notching 518
Painting 942T
Riveting 82
Setting Down 523
Turning 521, 522
Valve Reseating 495
Whitewashing 942T
Wiring 522
Machinists' Aprons 419
Hammer Handles 408
Hammers 283
Hand Taps 243
Levels 433
Pliers 342
Punches 274
Rules .....451 to 453
Screw Drivers 352, 353
Special Stones.....507, 510
Squares .....454 to 456
Tool Cases 417

Digitized by UNIVERSITY OF MICHIGAN
Digitized by UNIVERSITY OF MICHIGAN

M

PAGE

Machinists' Tool Chests 417
Tool Chests 417
Tools .....451 to 476
Vises 193, 194
Magazine Screw Drivers 355, 471
Magic Pattern Rules 450
Magneto Mountings 816
Mahogany Triangles 479
Malleable D Tops 936T
Iron Clevises 169
Iron Crosses 131
Iron Fittings .....130 to 134
Iron Oilers 928T
Irons .....165 to 16[illegible]8
MALLETS, Carpenters' 413
Rawhide 413
Sheet Metal Workers' 413
Stone Cutters' 413
Tinners' 413
MANDRELS, Steel 413
Stove Pipe 225
MANGERS, Corne[illegible]r 534
Manila Rope 950T
MANTLES, C[illegible]as 602
Manure Fo[illegible]k Handles 935T, 936T
MARKE[illegible]S, Siding 923T
Ti[illegible]e and Brick 428
Mar[illegible]ket Wire 549
M[illegible]arking Brushes 57
Gauges 427, 428
Pots 1244T
Masons' Hammers 625
Lines 282
Plumbs and Levels 604
Mast-Arm Rope 434
Master Carburetors 600
Keyed Locks .....953T to 955T
Vibrators 772
Match Planes 319, 326, 328
MATS, Circular 816
Door, Cocoa 101
Door, Folding 647
Drain Board 647
Perforated 103
Rubber 101
Running Board 647, 760
MATTING, Corrugated 101
Mattock Handles 410
MATTOCKS 272
Pick 272
Maul Wedges 278
MAULS, Post 568
Railroad 281
Ship 281
Top 281
Wood Choppers' 279
Mazda Lamps 846
MEASURES, Liquid 1244T
Measuring Faucets 148
Pumps 148
Tapes .....441 to 444
Meat Hooks 1167T
Mechanical Starters 818
Mechanics' Snips 514
Melting Ladles 536
Pots 536
MENDERS, Hose 114
Mercury Rectifiers 819
Metal Box Strapping 53
Corner Beads 683
Countersinks 376
Ceilings .....678 to 682
Molding 896
Molding Fittings .....896 to 898
Molding Punches 898
Molding Shears 898
Paint 655

M

PAGE

Metal Polish 743
Punches 642, 520
Roofing 677
Saws .....670 to 393
Slitting S[illegible] 230
Tread, [illegible]aws 1118T
Work[illegible]Anti-Slip 421
Wo[illegible]ers' Crayons 413
Meta[illegible]kers' Mallets 433
M[illegible]ic Plumbs and Levels..432, 433
M[illegible]ETALS, Babbitt 20
Miscellaneous 21
METERS, Gasoline 761
Moto 762
Micrometer Attachments 461
Sets 462, 463
MICROMETERS .....458 to 463
Inside 464
Middle Brass Butts 1092T
Midget Push Buttons 902
Milk Can Brushes 631
Cans 1238T
Scales 574
Mill Bastard Files 180, 181
Board, Asbestos 665
Brooms 638
Cutters, Spiral 228
Door Hangers 1193T
Hose 109
Milliners' Pliers 343
Milling Cutters 226, 227
Machine Saws 393
MILLS, Ends .....233 to 236
End, Fluted 233, 234
Hollow 236
Mineral Wool 94
Miners' Pick Handles 410
Miniature Screw Drivers 355
Sockets 858
Mining Machine Cables 884
Mirror Clamps 764
Screws 1147T
MIRRORS, Auto 764
Miscellaneous Sockets 859
Wire Nails 37
Missing Links 150
MISTOKLEEN 748
MISTOKLOTH 748
Miter Box Saws 381
Boxes 380
Machines 381
Squares 440
MITERS, Eave Trough 687, 693
MIXERS, Mortar 934T
Model Floor Sets 650
Mogul Sockets 860
Molasses Gates 147
Molders' Bellows 550
Shovels 561
Tools 540, 541
Molding Connectors, Paiste 898
Cross-Overs, Paiste 898
Fittings, Metal .....896 to 898
Metal 896
Punches, Metal 898
Shears, Metal 898
Taplets, Paiste 898
Wood 898
Mole Traps 1233T
Money Drawers 605
Monkey Wrenches 257, 258
Mono Locks .....958T to 960T
Mooring Lines, Galvanized 599
Mop Heads, Cotton 643
Heads, Dustless 643
Sticks 644
Wringers 644

M

PAGE

MOPS, Dish 643
Dusting 639, 643
Dusting, O-Cedar 639
Handled 643
O-Cedar 639
Polishing 639, 643
Mortar Barrows 552
Hods 549
Hoes 934T
Mixers 934T
Pails 1245T
Tubs 549
Mortise Bolts, Lavatory 1149T
Cupboard Locks 1024T
Dead Locks .....1015T to 1017T
Door Bolts 987T
Flush Bolts 1072T
Gauges 427, 428
Knob Latches 1005T
Knob Locks .....1002T to 1004T
Locks, In Sets .....963T to 985T
Night Latches 1008T, 1009T
Window Bolts 987T
Mosquito Bar Eyes 1173T
Mossberg Wrenches 794
MOTO-METERS 762
Motor Car Locks .....1034T to 1036T
Generators 819
Graphite 739
Grease 739, 740
Oil 740, 741
Starting Switches 814, 875
Tire Valves and Parts ..718, 719
Valve Caps 718
Motorcycle Chains 705
Horns 766
MOTORS, Electric .....914T to 916T
Sewing Machine 914T
Mounted Grindstones 499, 500
Oil Stones 503
MOUNTINGS, Magneto 816
Mouse Traps 1233T
MOVERS, Car 270
MOWERS, Lawn 940T
Mowing Machine Oilers 928T
Mud Hooks 709
Muffler Cut-Outs 804
Multiple Batteries, Columbia 832
Music Wire 58
Myers Gate Hangers 1203T
Store Ladders 613

N

Nail Bags 662
Bins 62
Chisels 277
Claws 293
Gimlets 376
Hammers .....285 to 289
Pullers 292
Sets 377
NAILS, Barrel 27, 28, 32
Basket 37
Berry-Box 32
Boat 27, 28, 33
Box 27, 28, 30
Car 27
Car, Barbed 28, 32
Casing 27, 30
Cement, Coated 34
Cement, Cut 27
Cigar Box 32
Clinch 27, 28, 31
Clout 39
Clout, Copper 39
Clout, Wire 32
Common .....27 to 29
Coopers' 27

Digitized by Google UNIVERSITY OF MICHIGAN Digitized by Google UNIVERSITY OF MICHIGAN

N

PAGE

NAILS—Continued.
Fence 27, 28
Fine 27, 28, 32
Finishing 27, 28, 30
Foundry 32
Furniture 1223T
Heel 39
Hinge 28, 33
Hob 40
Hoop, Steel 39
Horse Shoe 25
Hungarian 40
Iron Cut 27
Lath 28, 31
Lead Headed 670
Lining 27, 41
Plaster Board 31
Roofing 35
Shade 36
Sheathing 27
Shingle 27, 28, 31
Shoe 39, 40
Slating 27, 28, 31
Steel, Cut 27
Tobacco 27
Trunk 39
Wire ....28 to 37
Wire, Galvanized 28, 31
Wire, Miscellaneous 37
Name Plates 1151T
Narrow Brass Butts 1092T
Loose Pin Butts 1086T
Riveted Pin Butts 1087T
Rules 453
National Shaft Hangers ...124 to 125A
Neck Bolts 1064T
Neckyoke Center Irons 164
End Irons 164
Woods 162
NECKYOKES, Wagon, Ironed... 162
Needle Nose Pliers 342, 343
NEEDLES, Glovers' 379
Harness 379
Packing 379
Sacking 379
NESTS, Duck 198
Hens' 45
Of Saws 382
NETTING, Poultry 46, 47
NEUTRALOCKS 812
NEVER-BURN 745
Neverslip Horse Shoe Calks.... 24
Horse Shoes 23
Night Latches, Mortise ..1008T, 1009T
Latches, Rim ....1009T to 1014T
Latches, Sliding Door 1002T
NIPPERS, Cutting 347
End Cutting 346
Hoof 203, 204
Jewelers' 346
Shoemakers' 346
NIPPLES, Auto Tubing 758
Hose 114
Soldering 135
Wrought 137
NITROJECTORS 837
Non-Arching Enclosed Fuses ... 879
Non-Flowing Oil 740
Non-Stall Differentials 777
Norway Iron 6
Norwesco Automobile Specialties 745
Nosing Planes 319
Notching Machines 518
NOZZLES, Fire Hose 110
Hose 110
Spray 944T, 945T
NUMBERS, Screen 1060T
Nursery Hoes 934T
Scales 573

N

PAGE

Nut Auger Handles 408
Augers, Carpenters' 369
Eye Bolts 601
Hook Bolts 601
Taps, Machines 244
Wrenches ....257 to 266
NUTS, Blank 73
Castellated, Assorted 800
Hexagon 73
Hexagon, Assorted 800
Hexagon, Semi-Finished 74
Hot Pressed 73
Jam 74
Lock, Malleable Iron 132
Machine Screw 74
Square 73
Stove Bolt 74
Tapped 73, 74
Threaded 73, 74
Thumb 166
Union, Auto 757

O

OAKUM 94
Oar Locks 170
Oat Cleaners 950T
O-Cedar Dust Cloths 639
Dusters 639
Dusting Mops 639
Mops 639
Polish 639
Polish, Auto 744
Odd Jobs 429
Off-And-On Tire Tools 710
Office Door Locks, Mono 959T to 961T
Gate Latches, Secret 1015T
Offset Screw Drivers 355
Ogee Box Gutters 686, 693
Eave Trough Miters 687
Oil and Grease Guns 931T
Automobile ....739 to 741
Barrels 738
Bibbs, Lock 148
Can Faucets 146
Can Fillers 931T
Can Holders 755
Cans 738, 926T, 927T
Cedar 640
Cloth Varnish 651
Cups 753, 754
Cylinder 741
Gates 147
Gauges 761
Gears ....739 to 741
Guns 732, 733
Linseed 657
Lubricating, Auto ....739 to 741
Non-Flowing 740
Pumps 736
Pumps, Auto 733
Pumps, Tin 1244T
Pumps, Rothweiler 733
Stains 653
Stone Boxes 508
Stone Slips 506
Stones ....503 to 510
Stop-Squeak 744
Stove Wicks 924T
Tanks 736, 738, 927T
Torches 921T
Transmission 741
OILERS ....928T to 930T
Oily Waste Cans 1240T
Old Dutch Cleanser 641
O-My Hand Soap 641
One Man Cross Cut Saws....390, 391
Open Links 150
Rings 168

O

PAGE

OPENERS, Box and Crate ..292, 293
Crate 292, 293
Door, Electric 1052T
OPERATORS, Sash 1121T, 1122T
Skylight 1120T
Transom 1120T
Orange Shellac 653
Orcutt Pipe Hangers 128
Ornamental Flap Hinges .....
....1090T to 1095T
Globe Finials 685
Hinges ....1093T to 1095T
ORNAMENTS, Auto Radiator... 792
Orona Cleaner 641
Outdoor Thermometers 1226T
OUTFITS, Auto Spray 744
Hot Air, Rayfield 770
Electric Lighting 817, 818
Free Air 732
Ignition 825
Lubricating Oil 736
Spraying 942T, 943T
Starting, Eveready 818
Outlet Box Covers 895
Boxes 895
OUTLETS, Eave Trough 687
Oval Head Carriage Rivets..... 79
Slide Bench Vises 190
Varnish Brushes 620
Oven Thermometers 1227T
Overhead Carrying Systems ....
....1197T, 1198T
Pulleys, Grant 1209T

P

PACKING, Diagonal 97
Gum Core 98
Hemp 100
House Cord 883
Miscellaneous ....95 to 99
Needles 379
Rod 96
Sheet 99, 100
Wick 100
Pad Clips, License 709
Padlock Eyes 997T
PADLOCKS, ...1037T to 1050T
Automobile 810, 811
PADS, Pedal, Rubber 807
PAILS, Cement 1245T
Fire 1245T
Flaring 1245T
Folding 760
Mortar 1245T
Stable 1232T
Stock 1245T
Water 1232T
Water, Galvanized 1245T
PAINT, Aluminum 743
Automobile 742, 743
Barn and Metal 655
Brushes ....617 to 625
Floor 649
Porch 649
Remover 653
Roof 655, 656
Tire 745
Painters' Brushes ....617 to 626
Duster Brushes 627
Dusters 627, 629
Scratch Brushes 629
Scrub Brushes 629
Painting Machines 942T
Paiste Molding Connectors 898
Molding Cross-Overs 898
Molding Taplets 898
Rosettes 898

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

P

PAGE

Panel Connectors, Flexsteel 886
Cut-Outs 877
Saws .....384 to 386
Switches, Perkins 876
Panic Bolts 1075T
PANS, Dust 1244T
PAPER, Asbestos 665
Balers, Waste 53
Baskets, Waste 1232T
Building .....663 to 666
Clips 605
Cutters, Roll 662
Emery 484
Files 605
Finishing 484
Flint 484
Garnet 484
Hangers' Smoothing Brushes 627
Insulating 663
Presses 53
Sand 484, 485
Sheathing 663, 664
Wrapping 662
Parabola Reflectors 908
Parallel Clamps 467
PARALLELS, Adjustable 468
Parcel Post Scales 572
PARERS, Hoof 204
Park Reels 117
Parliament Butts 1090T
Parlor Bellows 550
Door Hangers .....1182T to 1185T
PARTS, Carburetor, Rayfield 771
Plane .....333 to 335
PASTE, Cold Water 654
Photo 482
Soldering 205, 905
Wood Filler 653
PATCHES, Auto 717
Blowout 704
Cementless 704
Fabric 704
Inner Tube 704
Patching Cement 747
Pattern Makers' Dowel Pins 93
Makers' Hammers 290
Rules 450
Peavey Handles 171
PEAVIES 171
Pedal Pads, Rubber 807
PEDALS, Cut-Out 804
Pegging Awls 379
Pen and Pencil Assortments 425
Clips 426
Penberthy Injectors 142
Pencil Clasps 478
Clips 426
Holders 478
Pointers 426
PENCILS, Carpenters' 425
Checking 420
Copying 421
Lead .....422 to 426
Lumber 421
Propelling 426
Pendent Caps 848
Switches 872
Perfection Door Springs.....1114T
Perforated Mats 101
Tin 606
Pet Cock Wrenches 795
Petroleum Faucets 148
Philadelphia Casters 1219T
Photo Paste 482
Piano Casters 1222T
Pick Handles 410
Handles, Coal Miners' 410
Mattocks 272
PICKAROONS 172

P

PAGE

Picket Chains 156
Pins 156
PICKS, Coal 273
Concrete 273
Drifting 273
Hookaroon 172
Poll 273
Railroad 272
Stone 273
Pick-Up Tongs 203
Picture Frame Vises 381
Hooks, Hang-Up 1224T
Pig Lead 21
Pike Poles 172
Pillar Files, XF.....187, 188
Pillow Blocks .....125 to 125B
Pin Hinges 1092T
Vises 472
PINCERS, Carpenters' 347
Horseshoeing 203
Pinch Bars 270
PINS, Belt Lacing 85
Dowel, Barbed 28, 34
Dowel, Pattern Makers' 93
Escutcheon 38
Picket 156
Sash 1127T
Taper 77
Taper, Assorted 800
PIPE Burring Reamers 246
Conductor, Galvanized ..688, 692
Cutters 255
Enamel, Japalac 650
Extensions, Spray Pump 945T
Fittings, Brass, Auto 758
Fittings, Iron .....129 to 134
Gas 127
Hangers 128
Hooks 128
Hooks, Conductor 691
Lead 947T
Lighter Tips 838
Reamers 246
Stocks and Dies 252, 253
Straps, Tinned 128
Taps 244
Threading Devices 254
Vises 195
Wrenches 256, 257
Wrenches, Chain 255
Wrought 127
PIPES Hose 110
Piston Rings 801, 803
PISTONS, Automobile 802
Pitch Gauges 466
Roofing 654
Pitcher Spout Pumps 941T
Plain Ridge Roll 684
Plane Handles 408
Irons 332
Parts .....333 to 335
Planer Tools 240
PLANES, Beading 326
Bed Rock 323
Belt Makers' 325
Bench .....318 to 323
Block 321, 324, 325
Bull Nose 325
Butcher Block 330
Cabinet Makers 325
Carriage Makers' 325
Circular 328
Combination 326
Corrugated Bottom..320, 322, 323
Dado 328
Door Trim 329
Dovetail 327
Edge 325
Fancy .....318 to 330

P

PAGE

PLANES—Continued.
Fifty Five 326
Filletster 327, 328
Flat Bottom 320, 322, 323
Fore .....318 to 323
Forty Five 326
Hollows and Rounds 319
Iron 320, 322, 323
Jack .....318 to 323
Jointer .....318 to 323
Low Angle 323
Match 319, 326, 328
Nosing 319
Plow 326, 328
Rabbet 318, 325, 327
Router 329
Scraper 330
Scrub 323
Side 325
Smooth .....318 to 323
Tongue and Groove 327
Wood .....318 to 323
Woodworkers' 329
Planished Iron 16
Plaster Board 665
Board Nails 31
Plastering Trowels 546, 547
PLATE Casters .....1218T to 1221T
Scrapers 634
Tin, Bright 697
Tin, Fire Door 696
Tin, Roofing 695
PLATES, Accelerator 760
Bench 532
Bolster 164
Ceiling 678, 679
Flush, Heater Control..... 868
Flush Receptacle 863
Hanger 1147T
Heel, Accelerator 807
Heel, Neverslip 175
Hook 128
Key .....964T to 980T
Key, Cabinet 1056T
Label 1150T
Letter Drop .....964T to 971T
Name 1151T
Push .....965T to 986T
Receptacle 861
Safety Step 760
Screw .....249 to 252
Wall 679, 680
Welding 205
Whiffletree 166
PLATFORM Scales 570, 571
PLIERS .....336 to 348
Auto 345
Belt Punch 350
Bernard 347
Burner 348
Button 340
Chain Nose 341, 342
Combination 340, 343, 344
Concave and Convex 342
Cronk 340
Curved Needle Nose 343
Cutting .....339 to 347
Expanding 346
Fence 348
Flat Nose 341
Gas and Burner 348
Heat Coil 343
Hose Band 112
Insulating Sleeves For 339
Jewelers' 342
Linemen's 339
Long Reach 341
Machinists' 342
Milliners' 343

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

P

PAGE

PLIERS—Continued.
Needle Nose 342, 343
Round Nose 343
Side Cutting .....338 to 340
Slip Joint 345
Splicing 338
Weed 705
Plow Bolts 72
Clevises 170
Doubletrees, Ironed 161
Planes 326, 328
Singletrees, Ironed 161
PLOWS, Ice 579
Snow 566
Plug Bases, Attachment 866
Caps, Attachment 866
Clusters 867
Cut-Outs 877
Flush Receptacles, Screw ... 864
Fuses 879, 880
PLUGS, Attachment .....864 to 867
Auto Tubing 758
Conduit 888
Iron Pipe 133
Socket, Self-Flashing 860
Spark .....826 to 831
Spartan 862, 865
Plumb Bobs 430
Plumbers' Chain 151
Force Cups 103
Scrapers 532
Plumbs and Levels .....431 to 434
Pneumatic Charging Hose 751
Hose 108
Pocket Ammeters 762
Axes 300
Chisels, Socket 312
Hones 510
Knife Hones 504, 507
Levels 433
Measuring Tapes 443
Rules, Steel 450
Screw Drivers 355
Screw Drivers, Starrett 470
Scribers 470
Stones 507
Voltammeters 762
Pointed Fruit Ladders..... 615
POINTERS, Pencil 426
Spoke 369
Pointing Trowels 547
POINTS, Ball 476
Chuck and Drill 358
Drill 360
Drill, Rapid Fire 365
Glaziers' 44
Trammel 478
POISON, Rat 1233T
Polarized Caps, Composition 863
Pole Caps 163
Jacks 269
POLES, Pike 172
Towing, Auto 711
Window Brush 635
POLISH, Aluminum 641
Automobile 743, 744
Floor 639, 640
Furniture 639, 640
Metal 642, 743
O-Cedar 639
O-Cedar, Auto 744
Shoe 634
POLISHERS, Shoe 634
Polishing Cream 642
Mops 639, 643
Poll Pick Handles 410
Picks 273
Polygon Conductor Elbows ..690, 693
Conductor Pipe 688, 692

P

PAGE

PONCHO and Auto Robe 724
Pond Ice Saws 580
Pony Fuseless Rosettes 861
Popes Eye Window Brushes 635
Porcelain Cleats 899
Drawer Knobs 1134T
Insulators 899
Shutter Knobs 1134T
Tubes 900
Porch Paint 649
Swing Chains 152
Portable Bench Dogs 406
Cranes 587
Forges 201, 202
Hoists 587
Lamp Guards 906
Platform Scales 570, 571
Post Bases 1178T
Boxes, Rigid 125B
Caps 1178T
Hangers 125
Hole Augers 567
Hole Diggers 567, 568
Mauls 568
Postage Indicator Scales 572
Postal Scales 572
POSTS, Drilling 206
Potato Scoops 562
POTS, Fire, Gasoline 539
Glue 482
Glue, Electric 911T
Marking 1244T
Melting 536
Tallow 931T
Poultry Fence 47
Netting 46, 47
Netting Staples 46
Powersteel Autowlocks 812
Prepared Wax 640, 744
PRESERVATIVE, Belt 92
PRESERVERS, Gauge Glass 115
Pressed Brick Siding 672
Standing Seam Roofing 671
PRESSES, Drill 207, 208
Paper 53
Pressure Blowers 200
Gauges, Tire 719
Prick Punches 274
PRIMERS, Dash 756
Priming Cups 756
Produce Hatchets 309
Propeller Fans 200
Propelling Pencils 426
Protection Fire Door Stock 696
PROTRACTORS 465
Bevel 454, 465
PRUNERS, Tree 939T
Pruning Saws 383
PRUSSIAN BLUE 745
Pry Bars, Auto Tire 710
Pull Ceiling Switches—
New Wrinkle 854
Pull Sockets, New Wrinkle..... 851
Sockets, Porcelain 856
Sockets, Twin, New Wrinkle 852
Switch Rosettes 848
Switch Rosettes,
New Wrinkle 853
Switches 847
Switches, Ceiling, Perkins.. 872
PULLERS, Nail 292
Spike 271
Tack 292
Wheel 778
Pulley Blocks .....581 to 584
PULLEYS, Awning 1214T, 1215T
Cast Iron 123
Ceiling 1212T
Clothes Line 1214T

P

PAGE

PULLEYS—Continued.
Cone 120
Cone, Step 120
Door, Heavy 1206T
Dumb Waiter 1212T
Flange 123
Frame 1210T, 1211T
Hot House 1212T
Overhead, Grant 1209T
Sash 1210T, 1211T
Sash, Heavy 1206T
Screw 1213T
Show Case 1212T
Side 1213T
Split, Steel 122
Swivel Eye 1214T
Tight and Loose 123
Upright 1213T
Window 1212T
Wood Split 120, 121
PULLS, Box 1146T
Door.965T to 984T, 1056T to 1058T
Drawer .....1151T to 1155T
Drawer, Drop .....971T to 980T
Drawer, Druggists' 1151T
Flush 1156T
PULL-U-OUT 587, 711
Cranes 587
Pump Chain 157
Connections, Auto Tire 718
Jacks 946T
Oilers 929T, 930T
Pump Rod Couplings 133
Rods 7
Valve Reseating Machines .. 495
Valves, Rubber 101
PUMPS, Force, Horizontal 946T
Garage, Electric 731
Gasoline 736
Kerosene 736
Measuring 148
Oil 736
Oil and Grease 733
Oil, Rothweiler 733
Oil, Tin 1244T
Pitcher Spout 941T
Spray 941T, 942T
Tank 946T
Tire, Automobile 730, 731
PUNCHES and Shears 520
Assortment of 275
Belt 350
Butcher Saw 399
Calk, Boot 174
Center 274, 275
Center, Starrett 470
Conductors' 351
Drift 274
Drive, Calk 25
Drive, Pin 275
Hand 520
Hollow, Tinners' 531
Iron 520
Machine 274
Machinists' 274
Metal 520
Metal Molding 898
Prick 274
Saddlers' 350
Slaters' 535
Spring 350
Ticket 351
Pure Putty 656
Push Bars 1059T
Braces 358
Brooms 638
Button Catches 1138T
Button Escutcheons 902
Button Switches 815

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

P

PAGE

Push Button Switches, Flush... 868
Buttons 902
Buttons, Automobile 814
Buttons, Electric ....965T to 984T
Plates .....965T to 986T
PUTTY, Pure 656
Stove 1237T
Pyrene Fire Extinguishers..119, 760
Pyrotite Plug Fuses 879

Q

Quick Acting Vises 191
Clamps 404
Repair Tires 101
Shift Anti-Rattlers 159
Quilt Frame Clamps 404

R

Rabbet Gauges 428
Planes 318, 325, 327
Rack Hooks, Store 1165T
Racking Cocks 146
RACKS, Hay, Corner 950T
Hose 118
Radiator Anti-Freeze 744, 745
Brushes 631
Caps 777
Cement 745
Cleaner 745
Covers 725, 726
Emblems, Auto 792
Heaters 726
Hose 752
Ornaments, Auto 792
Scratch Brushes 629
Seal 747
RADIATORS 777
Radius Gauges 466
Rods, Front 805
Rafter Squares 439
RAGS, Wiping 94
RAIL, Barn Door 1203T
Brackets, Hand 1158T
Door 1203T
Forks 271
Sash 1203T
Screws, Hand 1158T
Shutter 1203T
Tongs 271
Railroad Adzes 301
Chalk Crayons 419
Lanterns 919T
Mauls 281
Oilers 930T
Picks 272
Scuffle Hoes 934T
Shovels 557
Spikes 26
Track Tools 270, 271
Wrenches 258
RAILS, T, Steel 7
Rain Water Cut-Offs 690
Raising Hammers 284
Rake Ferrules 936T
Handles 935T
RAKES, Asphalt 933T
Garden 933T
Road 933T
Tar 933T
Range Casters 1221T
Rapid Fire Drill Points 365
Fire Drills 365
RASPS and Files .....176 to 188
Cabinet 185
Horse 186
Illustrations of 176

R

PAGE

RASPS—Continued.
Shoe 185
Wood 185
Rat Poison 1233T
Traps 1233T
Ratchet Braces 366, 367
Drill Braces 367
Drills 206
Drills, Twist 209
Screw Drivers 356
[illegible] 361
Wrenches 262
Wrenches, Mossberg 794
RATCHETS, Boiler 206
Sleeve 206
Rayfield Carburetor Parts 771
Carburetors .....768 to 770
Hot Air Outfits 770
Rawhide Faced Hammers 413
Mallets 413
Reamer Wrenches 247
REAMERS, Burring 246
Center 223
Chucking .....220 to 222
Expansion 224
Hand 220
Pipe 246
Shell 222
Square 377
Taper 223
Taper, Bit Stock 224
Taper Pin 223
Receptacle Caps, Hubbell 863
Flush Plates 863
Plates 861
RECEPTACLES, Ceiling 859
Cleat 860
Flush, Door 861
Flush, Duplex 864
Flush, Hubbell 863
Flush, Screw Plug 864
Metal Molding 897
Sign 860
Spartan 862
Unilet 890, 893
Reciprocating Drills 358
RECTIFIERS, Mercury 819
Red Seal Batteries 833
REDUCERS, Conduit 888
Malleable Iron 132
Reducing Elbows 129
Tees 129
REEDS, Horn 766
REELS, Chalk Line 604
Hose .....116 to 118
Park 117
REFLECTORS, Electric Lamp .. 908
Refrigerator Fasteners 1136T to 1138T
Hinges 1095T
REINFORCEMENT, Concrete ... 52
REMOVER, Carbon 744
Paint and Varnish 653
Renewal Links, Fuse 880, 881
Repair Gum, Auto Tire 714
Hoops 1232T
Knobs 1247T
Links 150
Rivets, Easy 82
Tool Kits, Auto 793
Tools, Auto Valve 719
REPAIRS, Plane .....333 to 335
Reseating Machines, Valve 495
RESIN 483
RESTS, Foot, Accelerator 806
Return Bends 131
Reversible Broad Loose Pin Butts 1087T
Sash Centers 1123T, 1125T
Revolution Counters 473
Reynold's Trucks 578

R

PAGE

Rhinos Inner Tubes 703
Ribbed Clamp Couplings 125D
RIBBON, Sash 1207T
RIDDLES, Sand 550
Ridge Roll 684, 693
Rigid Conduit Fittings 888, 889
Pillow Blocks 125A, 125B
Post Hangers .....125 to 125B
[illegible] 888
Rim Bolts, Lavatory 1149T
Dead Locks 1018T, 1019T
Knob Latches 1008T
Knob Locks 1006T, 1007T
Lock Strikes, In Detail 956T
Night Latches .....1009T to 1014T
Shellac 745
Ring Couplings, Expansion 113
Gaskets 98
RINGS and Clips, Wire 1246T
And Staples 1167T
Clinch 33
Cylinder 1054T
Ferrules and 164
Key 1229T
Open 168
Piston 801, 803
Toe, Cant Hook 172
Trap Door, Flush 1157T
Rip Saws .....384 to 386
RIPPERS, Slaters' 535
Rivet Sets 531
Riveted Pin Butts .....1087T to 1089T
Riveting Burs, Iron 82
Hammers 284
Hammer Handles 408
Machines 84
RIVETS, Any Style Head 78
Boiler 80
Button Head 80
Carriage 79
Cone Head 80
Coopers' 80
Cooper, Auto 800
Copper Belt 81
Coppered Iron, Belt 81
Countersunk Head 79
Easy Repair 82
Flat Head 80
Iron 78
Round Head 78
Slotted Clinch 82
Steel 79
Structural 80
Tinners' 81
Transmission 751
Tubular Harness 82
Wagon Box Head 79
Road Rakes 933T
Scrapers 556
ROBES, Automobile 724, 726
Drivers', Ford 724
Lap, Automobile 726
Rock Face Brick Siding 672
Face Stone Siding 672
Surface Roofings 667, 669
Surface Shingles 669
Rod Couplings, Pump 133
Packing 96
RODS, Buck Saw 388
Gauging 445
Pump 7
Radius, Front 805
Stair 1222T
Wagon Box 163
Wantage 445
Welding 205
Wood Saw 388

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

R

PAGE

Roll and Cap Roofing 671
And Sheet Brass 700
Board, Asbestos 665
Paper Cutters 662
Ridge 684, 693
Roofing, Composition ..667 to 669
Roofing, Rock Surface ..667, 669
~~Roofing, Self Capping~~ 671
Valley 685
ROLLERS, Imprint, Cement Workers' 542
Lawn 939T
Sash 1202T
Sidewalk, Cement Workers'.. 542
Stay, Barn Door 1204T
Trunk 1202T
ROLLS, Auger Bit 373
Edging, Elbow 522
Tool Auto..... 797
Roof Brackets 1160T
Brushes 626
Cement 654
Coating 655, 656
Gutters 686, 693
Paint 655, 656
Roofing Canvas 668
Caps, Tin 666
Deck Tight 668
Double Seamers 534
Duck 668
Folders 534
Ingot Iron 676, 677
Nails 35
Pitch 654
Pressed Standing, Seam.... 671
Roll and Cap 671
Roll, Composition .....667 to 669
Roll, Rock Surface..... 669
Roll, Self Capping..... 671
Sand Top 668
Seamers 534
Scrapers 532
Sheet Metal .....670 to 677
Steel .....670 to 675
Steel, Corrugated 670
Tar, Alto 666
Tin Plate 695
Tongs 534, 535
V-Crimp 671
ROOFINGS, Rock Surface...667, 669
Rubber 667, 668
ROPE, Arc Light 600
Braided 1205T
Clips 601
Guy Wire 598
Hand Wire 598
Haulage 594
Hoisting, Wire .....595 to 597
Hoists 588
Manila 602
Mast-Arm 600
Rigging 598
Running, Galvanized 599
Sisal 602
Thimbles 601
Tiller, Wire 598
Transmission 594
Wire .....593 to 600
Rose Chucking Reamers 221, 222
Countersinks 376
ROSES, Knob 1052T
Lever Handle 1052T
Sprinkler 1247T
ROSETTES, Cord, Unilet..... 889
Fusible 861
Metal Molding 898
Paiste 898
Pony Fuseless 861
Pull Switch 848
Pull Switch, New Wrinkle... 853

R

PAGE

ROSIN 483
Rotary Switches 876
Rough Stops 141
Round Bumpers 103
Die Sets .....249 to 252
Dies, Adjustable 248
Edge Slips 504
Edge Slips, Carborundum... 509
Edge Tire 7
Files 183
Head Rivets 78
Nose Cape Chisels 276
Nose Pliers 343
Router Planes 329
Row Locks 170
Rub Irons, Malleable..... 167
Rubber Belting 87
Bumpers 781
Bumpers, Plumbers' 103
Cement 704
Covered Wire 882
Hose .....104 to 108
Lined Fire Hose..... 109
Lined Mill Hose, Cotton.... 109
Mats 101
Pedal Pads 807
Pump Valves 101
Roofings 667, 668
Seal 747
Sleeves for Insulating Pliers. 339
Splicing Compound 748
Tubing 751
Weather Strip 609
Rubbing Bricks 490
Rubbish Consumers 1232T
RUBS, Chamois 646
Rule Assortments 444
Clamps 453
Gauges 429
Tools, Three-Angle 429
RULES, Blacksmiths' 450
Board 445
Boxwood .....446 to 448
Caliper 447
Circumference 450
Extension 448
Flexible .....450 to 453
Hook 453
Ivory 448
Key Seat 453
Log 445
Machinists' .....451 to 453
Narrow 453
Pattern 450
Rustless 449
Shrinkage 451, 452
Slide 448
Slide Caliper 457
Steel .....450 to 453
Steel Pocket 450
Tinners' 450
Zigzag 449
Run Iron, Ice 579
Running Board Mats.....647, 760
Rope, Galvanized 599
Rustless Rules 449

S

S Wrenches, Adjustable 260
S Wrenches, Malleable 170
Sacking Needles 379
Saddlers' Punches 350
Safety Axes 300
Chain 151
Gate Hooks 1167T
Key Holders 1229T
Set Collars 125D
Set Screw Wrenches..... 64

S

PAGE

Safety Set Screws..... 64
Step Plates 760
Straps 349
Tread 1118T
Salamander Covers 1237T
Grates 1237T
Hoods 1237T
SALAMANDERS 1237T
SALESMAN, Silent, Diamond... 703
Sand Paper 484, 485
Riddles 550
Scoops 561
Screens 550
Shovels 561
Top Rubber Roofing 668
Sanitary Brushes 631
Sap Pan Iron 18
Sash Balances 1209T
Brushes 624
Centers ....1120T, 1123T to 1125T
Chain 1206T, 1207T
Cord 1205T
Cord Irons 1205T
Cord, Wire 600
Fasteners 1126T
Hangers 1126T
Hooks, Extension 1123T
Lifts .....964T to 986T
Lifts, Bar 1128T
Lifts, Hook 1129T
Locks .....1130T to 1132T
Operators 1121T, 1122T
Pins 1127T
Pulleys, ...1210T, 1211T
Pulleys, Heavy 1206T
Rail 1203T
Ribbon 1207T
Rollers 1202T
Sheaves 1202T
Tools 624
Weights 1208T
Weights of 1208T
Saw Blades, Butcher 399
Blades, Hack .....396 to 398
Blades, Wood 388
Bucks 388
Clamps 403
Filers 403
Frames, Wood 388
Handles 406, 407
Punches, Butcher 399
Rods, Wood 388
Sets 400, 402
Screws 406
Swages 402
Tools 401, 402
Tooth Gauges 402
Vises 403
Wedges 278
SAWS, Back 381
Band 393
Beef Splitting 399
Buck 387
Butcher 399
Circular 392
Compass 382
Coping 398
Cross Cut .....389 to 391
Dehorning 399
Flooring 381
Hack .....395 to 398
Hack, Handy 381
Hand .....384 to 386
Ice 580
Keyhole 382
Kitchen 399
Metal 393
Metal Slitting 230

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

S

PAGE

SAWS—Continued.
Milling Machine 393
Miter Box 381
Nests of 382
One Man Cross Cut.....390, 391
Panel .....384 to 386
Pruning 383
Rip .....384 to 386
Ship 385, 386
Stair Builders' 381
Wood 387
Scaffold Brackets, Folding.....1160T
Scale Beams 575
Scoops 573
SCALES, Bath 573
Counter .....571 to 573
Dairy 574
Family 571, 572
Grocers' 571
Household 573
Ice 575
Milk 574
Nursery 573
Parcel Post 572
Platform 570, 571
Postage Indicator 572
Postal 572
Union 571, 572
Wagon 569
School Crayons 419
House Door Latches 996T
House Hooks 1164T
Scoop Forks 932T
Handles 936T
SCOOPS, Coal 563
Crushed Stone 561
Furnace 564
Grain 563
Gravel 561
Grocers' 1244T
Potato 562
Sand 561
Scale 573
Scotch Gauge Glasses 135
Scraper Planes 330
SCRAPERS, Bearing 797
Box 293
Cabinet 330, 331
Carbon 797
Ditching 556
Floor 331
Flue 630
Foot 647
Plate 634
Plumbers' 532
Road 556
Roofing 532
Sidewalk 566
Snow 566
Tinners' 293
Wood 331
Scratch Awls 378
Brushes, Painters' 629
Brushes, Radiator 629
Screen Door Braces 1114T
Door Catches—
.....1114T, 1143T to 1145T
Door Checks and Springs—
.....1112T, 1113T
Door Fixtures .....1103T to 1105T
Door Guards 1059T
Door Hinges .....1102T to 1105T
Doors 603
Enamel, Japalac 650
Frames, Window 607
Hinges 1102T
Numbers 1160T
Springs, Window 1115T

S

PAGE

Screen Window Guards.....1059T
Wire Cloth 606
SCREENS, Custom 607
Sand 550
Ventilator 607
Window Extension 607
Screw Anchors 67
Cases 62
Screw Driver Assortments..... 355
Bits 377
SCREW DRIVERS .....352 to 358
All Steel 352
Auto 354
Baby 353
Cabinet 353, 355
Champion 355
Electricians' 353, 354
Handy 353
Insulated 352, 353
Machinists' 352, 353
Magazine 355, 471
Miniature 355
Offset 355
Pocket 355
Ratchet 356, 357
Rubber Covered 352
Sewing Machine 355
Square Shank 354
Starrett 470
Triple Lever 352
Yankee 356, 357
Screw Eyes, Wire 1174T, 1175T
Hook and Eye Hinges 1097T
Hook and Strap Hinges....1097T
Hooks, Brass 1168T, 1172T
Hooks, Wire .....1170T to 1172T
Slotting Cutters 229
Pitch Gauges 466
Plates .....249 to 252
Plug Flush Receptacles 864
Pulleys 1213T
Socket Bolts 1132T
Taps, Machine 245
SCREWS and Washers, Stop...1127T
Bench 405
Can 1246T
Cap, Assorted 66, 800
Coach 70
Coffee Flask 1246T
Dry 61
Hand 405
Hard Rail 1158T
Iron Cap 65
Jack 269
Jack, Starrett 468
Knob 1053T
Machine, Brass 63
Machine, Iron 63
Mirror 1147T
Saw 406
Set, Assorted 66, 800
Set, Iron 64
Set, Safety 64
Wood 60, 61
SCRIBERS, Gem 477
Improved 470
Pocket 470
Sleeve 470
Scroll Shears 517
Snips 512
Scrub Brushes 632, 633
Brushes, Painters' 629
Planes 323
SCRUBBERS, Floor 645
Scrubbing Brushes 632, 633
Scuffle Hoes 934T
Scythe Snaths 938T
Stones 501, 502

S

PAGE

SCYTHES 937T, 938T
SEAL, Radiator 747
Rubber 747
Tire 746
SEALERS, Tape 605
Sealing Tape 605
SEAL-TITE 704
SEAMERS, Double, Roofing..... 534
Hand, Roofing 534
Handy 534
Seaming Brushes 626
Seamless Brass Ferrules 412
SEARCHLIGHTS 840
Windshield 837
Seat Back Covers 724
Covers, Auto 722, 723
Hooks 168
Springs 164
SEATS, Chair 646
Third, Steel 798
Sebco Concrete Inserts 66
Drill Heads 365
Expansion Shields 67
Screw Anchors 67
Secret Office Gate Latches.....1015T
Seine Twine 603
Self-Capping Roll Roofing..... 671
Self-Fluxing Solder 905
SE-MENT-OL 745
Semi-Finished Hexagon Nuts.... 74
Separable Attachment Plugs—
.....864 to 867
Separator Brushes 631
Service Cocks, Gas..... 141
Entrance Unilets 889
Set Collars, Safety 125D
Hammers 280
Screw Wrenches 64, 265
Screws, Assorted 66, 800
Screws, Iron 64
Screws, Safety 64
SETS, Auger Bit 373, 374
Awl and Tool 378
Basement Window 1133T
Brick 549
Calk 174
Chisel .....309 to 312
Die, Round .....249 to 252
Doubletree, Wagon 162
Drill 218
Electric Bell 904
Floor, Japalac 650
Garage Door .....1078T to 1080T
Lock .....958T to 985T
Lock, Store Door ....988T to 994T
Micrometer 462, 463
Nail 377
Punch, Center 275
Punch, Drive Pin..... 275
Rivet 531
Saw 400, 402
Socket Wrench 262
Soldering 536
Tool, Carving 314
Wheel, Demountable 708
Wrench, Mossberg 794
Setting Down Machines..... 523
Hammers 284
Sew-E-Z Motors 914T
Sewing Awls 379
Awls, Lock Stitch 379
Machine Motors 914T
Machine Oilers 928T
Machine Screw Drivers.....355
Shackle Clevises 169
Shade Nails 36
Holders 909

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

S

Shaft, Bolts, T Head — PAGE
Couplings 71
Hangers, Furnished 159
Hangers ..... 124 to 125A
Tips 160
Shafting Steel 8, 9
Shank Tacks 39
SHARPENERS, Knife 510
Sharpening Stones ..... 503 to 510
SHAVERS, Ice 579
SHAVES, Heading 315
Hoop 315
Spoke 316, 317
SHEARS and Punches 520
Bench, Compound Lever 514
Bench, Iron 519
Bench, Tinners' 514
Brake Lining 519
Circular, Tinners' ..... 511 to 513, 517
Lever, Iron 519
Metal Molding 898
Scroll 517
Slitting ..... 517 to 519
Squaring 515, 516
Tinners' ..... 511 to 514
Sheathing Nails 27
Paper 663, 664
SHEATHS, Axe 300
SHEAVES, Loading Block 174
Sash 1202T
Show Case 1202T
Shutter 1202T
Snatch Block, Lumbering 174
Tackle Block 592
Sheet Brass 700
Copper 698, 699
Iron ..... 16 to 18
Iron Folders 527, 528
Iron, Gauge of 18
Iron, Ingot 17
Metal Roofing ..... 670 to 677
Metal Workers' Mallets 413
Packing 99, 100
Steel ..... 15 to 18
Steel, Sizes and Weights of— ..... 15 to 18
Zinc 21
SHEETS, Corrugated ..... 670 to 675
Galvanized 18
Gasket, Cork 775
Shelf Brackets 1159T
Supports 1157T
Shell Reamer Arbors 225
Reamers 222
SHELLAC 653
Gasket, Dutch Brand 748
Rim and Gasket 745
SHELVING, Store 612
Sherarduct Conduit 888
SHIELDS, Expansion 67
Shifting Attachments 125C
Shim Stock 775
Shingle Brackets 1160T
Gauges 429
Nails 27, 28, 31
Roof Gutters 686, 693
Starters, Hip 684
SHINGLES, Asphalt 669
Composition 669
Hip 684
Rock Surface 669
Tin 684
SHINGLETINT 653
Shingling Hatchet Handles 408
Hatchets 303
Ship Adzes 301
Auger Bits 370
Augers 370
Axes 301
Bolts 1071T

S

PAGE
Ship Carpenters' Bevels 448
Locks 1007T
Mauls 281
Saws 385, 386
Shipping Crayons 420
Shock Absorbers 780, 781
Shoe Brushes 634
Calk Taps 25
Daubers 634
Hammers 290
Nails 39, 40
Nails, Horse 25
Polish 634
Polishers 634
Rasps 185
Shoemakers' Nippers 346
SHOES, Brake 806
Conductor Pipe 693
Cutter 9
Horse 22, 23
Shop Boxes 1240T
Shovel Handles 935T, 936T
SHOVELS and Spades ..... 557 to 560
Boy Scout 559
Coal 561
Concrete 561
Dirt ..... 557 to 559
Fire 1236T
Molders' 561
Railroad 557
Sand 561
Snow ..... 564 to 566
Stove 1236T
Telegraph 562
Show Case Catches 1141T
Case Hinges 1102T
Case Locks 1032T
Case Pulleys 1212T
Case Sheaves 1202T
Shrinkage Rules 451, 452
Shut-Off Cocks, Auto Tubing 759
SHUTS, Cold 150
Shutter Bars 1127T
Butts 1092T
Butts, Broad 1088T
Knobs 1134T
Rail 1203T
Sheaves 1202T
Side Cutting Pliers ..... 338 to 340
Lamps 920T
Lamps, Auto 835
Lights, Auto 835
Milling Cutters 227
Planes 325
Pulleys 1213T
Sash Locks 1132T
Tools 241
Wall Flashing 683
Sidewalk Edgers 543, 544
Jointers 544
Rollers, Cement Workers' 542
Scrapers 566
SIDING, Beaded 672
Brick 672
Gauges 428
Ingot Iron 677
Markers 428
Steel ..... 672 to 675
Steel, Corrugated 670
Stone 672
SIGHTS, Level 435
Sign Hooks 1165T
Receptacles 860
Writers' Brushes 625
Silent Salesmen, Diamond 703
Silicate Wheels 486
Sill Borer or Joist Tool 368
Cocks 142

S

PAGE
Single Bitted Axes ..... 294 to 298
Throw Switches ..... 873 to 876
Trellis 51
Unions, Auto 757
Singletree Clips 164
Ferrules 165
Hooks 165
Straps 165
Woods 162
SINGLETREES, Plow, Ironed 161
Wagon, Ironed 161, 162
Sink Board Mats 103
Bolts 71
Brackets 1159T
Brushes 633
Cleaners 634
Frames 947T
Gaskets 102
Traps 136
Sisal Rope 602
SIZE, Wall 652, 653
SIZES, Wire 54
SKALEX 745
Skidding Tongs 173
SKIDS 578
SKINS, Chamois 646
Skylight Operators 1120T
Slaters' Felt 666
Tools 535
Slating Nails 27, 28, 31
Sledge Handles 410
SLEDGES, Blacksmiths' 282
Sleeve Clamps, Wire and 349
Ratchets 206
Scribers 470
SLEEVES, Drill 218, 219
For Insulating Pliers 339
Tire 704
Sleigh Shoe Bolts 72
Shoe Steel 9
SLICKS, Carpenters' 314
Slide Bolts, Lavatory 1149T
Caliper Rules 457
Rules 448
SLIDES, Chair 1216T
Desk 1136T
Sliding Barn Door Latches— ..... 999T to 1001T
Sliding Barn Door Locks— ..... 999T to 1001T
Elevator Door Locks 1000T
Door Guides and Stops 1197T
Door Hangers ..... 1182T to 1200T
Door Latches 986T
Door Locks ..... 963T to 985T
Door Night Latches 1002T
Stable Door Locks 1000T, 1001T
T Bevels 440
Window Screen Springs 1115T
Slip Top Covers 724
SLIPS, Gouge 506
Oil Stone 506
Round Edge 504, 509
Slitting Saws, Metal 230
Shears ..... 517 to 519
Slow Burning Cables 884
Slotted Clinch Rivets 82
Slotting Cutters 229, 230
Small Lines 1205T
SMOOTH-ON 1237T
Smooth Planes ..... 318 to 323
Surface Roofings 667
Smoothing Brushes, Paper Hangers' 627
Snap Switches 897
Switches, Metal Molding 897
Snatch Blocks, Lumbering 174
Block Sheaves, Lumbering 174
Blocks 592

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

S

PAGE

SNATHS, Scythe 938T
SNIPS, Circular Hand.....511 to 513
Combination, Tinners' 514
Mechanics 514
Scroll 512
Tinners' .....511 to 514
Snover Loom Fasteners 887
Snow Plows 566
Scrapers 566
Shovels .....564 to 566
SOAP, Hand, O-My 641
Whiz 746
SOAPSTONE 747
Foot Warmers 728
Socket Bases 848
Bolts, Screw 1132T
Bushings 900
Butt Chisels 312
Caps 848
Corner Chisels 314
Firmer Chisels 310, 311
Firmer Gouges 313
Framing Chisels 313
Joints, Ball 755
Plugs, Self-Flashing 860
Pocket Chisels 312
Wrench Handles 262
Wrenches 262, 263
Wrenches, Mossberg 794
SOCKETS, Bayonet 859
Bolt 1067T
Bolt, Window Spring 1132T
Candelabra 858
Dim-A-Lite 860
Drill 218, 219
Key 847
Key, Porcelain 855
Key, S. P. 850
Keyless 847
Keyless, New Wrinkle..... 849
Keyless, Porcelain 857
Lamp, Electrical .....847 to 860
Miniature 858
Miscellaneous 859
Mogul 860
Pull, New Wrinkle 851
Pull, Porcelain 856
Twin Pull, New Wrinkle.... 852
Sod Tampers 545
SOLDER, Bar 19
Self-Fluxing 905
Aluminum 19
Universal 483
Wire 19, 905
Wire, Self-Fluxing 776
Soldering Copper Handles..... 412
Coppers 536
Flux, Electricians' 905
Furnaces 538
Irons, Electric 820, 911T
Nipples 135
Paste 205, 906
Unions 135
Sets 536
Sticks 905
Solderless Compression Couplings 757
Soss Invisible Hinges 1101T
Spade Handles 935T, 936T
Steps 560
SPADES and Shovels .....557 to 560
Boy Scout 559
Ditching 560
Drain 560
Garden 560
Hedge 560
Stump 560
Vaterland 560
Spalling Hammers 282
Spar Varnish .....651 to 653

S

PAGE

Spark Plug Cleaners..... 831
Plug Tools 831
Plug Wrenches 263
Plugs .....826 to 831
Spartan Plugs 862, 865
Receptacles 862
Speaking Tube 1060T
Tube Elbows 1060T
Tube Terminals 1060T
Tube Whistles 1060T
SPECIALTIES, Automobile.744 to 748
Speed Counters 473
Indicators 473
SPEEDOMETERS 763, 764
SPELTER 21
Spike Pullers 271
SPIKES, Bolt 26
Cut 27
Railroad 26
Wire 28, 33
SPINDLES, Knob 1053T
Lock, in Detail 956T
Spiral Fluted End Mills..... 234
Mill Cutters 228
Shell End Mills 235
Spirit Stains 653
SPITTOONS 1243T
Splicing Clamps 349
Compound 748
Pliers 338
Tapes 901
Split Pulleys, Steel 122
Pulleys, Wood 120, 121
Splitting Saws, Beef 399
Spoke Pointers 369
Shaves 316, 317
SPONGES 645
Spool Cord Adjusters 907
Spooled Wire 59
SPOONS, Telegraph 562
Sportsmen's Combination Stones. 509
Pocket Stones 507
Spot Lights 836, 837
Spout Brushes 631
Guards 690
SPREADERS, Spring Leaf 791
Sprinkler Roses 1247T
SPRINKLERS 1246T
Lawn 111
Spray Hose 107
Nozzles 944T, 945T
Pump Fittings 945T
Pump Outfits 942T, 943T
Pumps 941T, 942T
Spraying Outfits 942T, 943T
Spring Balances 574, 575
Bolt Sockets, Window 1132T
Bolts, Square 1064T
Bolts, Window 1132T
Bottom Bolts 1065T
Brass Wire 58, 59
Butts .....1105T to 1108T
Calipers 474
Catches, Forg's 1135T
Clips, Auto 790
Cotters 76
Cotters, Auto 799
Dividers 474, 475
Door Bottoms 609
Flat Bolts 1065T
Floor Hinges 1107T, 1108T
Hinges .....1102T to 1108T
Keys, Flat 76
Leaf Spreaders 791
Lubricants 791
Punches 350
Steel 9
Steel, Lock 1053T
Top Bolts 1065T

S

PAGE

Spring Wire 58
Wire, Coppered Steel 58
Wire, Music 58
SPRINGS, Automobile..779, 788, 789
Auxiliary 1052T
Coil 779
Coil, Tuck Steel 1115T
Door .....1112T to 1115T
Seat 164
Tuck 779
Window Screen 1115T
Sprocket Chain 126
Wheels 126
SPUDS, Bark 317
Cedar 317
Square Attachments 454
Cased Bolts 1063T
Files 183
Nuts 73
Reamers 377
Shank Screw Drivers..... 354
Spring Bolts 1064T
SQUARES, Caliper 457
Combination 454, 455
Die Makers' 456
Double 455
Machinists' .....454 to 456
Miter 440
Rafter 439
Steel 438, 439
Steel, Starrett 456
T, Draftsmen's 479
Try 440
Try, Starrett 456
Squaring Shears 515, 516
Squeezing Tongs, Roofing..... 534
Stable Door Locks, Sliding—
.....1000T, 1001T
Fittings 950T
Hooks 1165T
Pails 1232T
Staging Twine 603
Stain Finishes 652, 653
STAINS, Oil 653
Spirit 653
Water 653
Wood 652, 653
Stair Builders' Saws..... 381
Corners 1222T
Gauge Fixtures 471
Gauges 471
Rods 1222T
Stake Irons 168
STAKES, Slaters' 535
Tinners' 533
Standard Countersinks 217
STANDARDS, Machine, Tinners' 532
Standing Seam Roofing 671
STANDS, Leveling 437
Tire, Auto 709
Water Cooler 1231T
Stanley Planes .....323 to 330
STAPLES, Barrel 44
Bed Spring 44
Blind 44
Box 168
Clamp 44
Electricians' 44
Evener 172
Fence 56
Hasps and 1100T
Hooks and 1167T
Hoop 44
Insulated 900
Poultry Netting 46
Rings and 1167T
Steel, Wrought 1167T
Wire Cloth 44

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

S

PAGE

Star Drills 365
Expansion Shields 67
Ventilators 694
Starrett Tools .....452 to 476
STARTERS, Automobile 818
Hip Shingle 684
Starting Cables 824, 825
Outfits, Eveready 818
Switches, Motor 814, 875
STATIONS, Gasoline Filling 734, 735
Stay Rollers, Barn Door 1204T
Steam Cocks 141
Hose 107
Hose Couplings 113
Pipe, Wrought 127
STEEL, Angle, Bar Sizes..... 3
Angle, Structural 3
Angle, Weights of 11
Balls 77
Band 2
Bar 2
Bar, Weights of .....12 to 14
Barrels 738, 927T
Baskets 948T
Belt Lacing 84
Cant Hook 9
Ceiling 672
Ceilings .....678 to 682
Chairs, Folding 798
Channel, Bar Sizes 4
Channel, Structural 4
Channel, Weights of 11
Clamps 467
Clevises 169
Coil Springs, Tuck 1115T
Cold Rolled 8, 9
Conduit, Rigid 888
Coulter 9
Cut Nails 27
Figures 418
Hoop 6
Hoop, Weights of 14
I Beam, Structural 5
Lathing 683
Letters 418
Lock Spring 1053T
Lockers 611
Machinery 7
Mandrels 225
Measuring Tapes .....441 to 443
Oilers 929T
Pocket Rules 450
Post Caps and Bases 1178T
Rivets 79
Roofing .....670 to 675
Roofing, Corrugated 670
Rules .....450 to 453
Shafting 8, 9
Sheet .....15 to 18
Sheet, Sizes and Weights of .....15 to 18
Siding .....672 to 675
Siding, Corrugated 670
Sleigh Shoe 9
Split Pulleys 122
Spring 9
Squares 438, 439
Squares, Starrett 456
Staples, Wrought 1167T
T Rails 7
Tackle Blocks 590
Tee, Bar Sizes 4
Tee, Structural 4
Third Seats 798
Tire 7
Toe Calk 9
Tool 10
Tubing, Flexible 772
Wire Brushes 629, 630

S

PAGE

STEEL—Continued.
Wire Strand 600
Wool 485
Steering Wheel Locks 812
Wheels 778
STEMS, Tank Ball 102
Stencil Brushes 626
Ink 418
Letters 418
Step Bolts 71
Cone Pulleys 120
Plates, Safety 760
Ladders 616
Level Boards 271
STEPS, Spade 560
Sterilized Lath Nails 28, 31
Stewart Handy Workers..... 191
STICKS, Finishing 490
Mop 644
Soldering 905
Yard 446
Stillson Wrenches 256
Stitched Canvas Belting 86
STOCK, Fire Door..... 696
Pails 1245T
Shim 775
STOCKS and Dies .....249 to 253
Die 248
Stone Cutters Mallets 413
Drills 365
Forks 933T
Pick Handles 410
Picks 273
Scoops 561
Siding 672
Wire 57
STONES, Axe 503, 505, 508
Bench 503, 505, 509
Carborundum .....508 to 510
Combination .....503 to 509
Combination, Sportsmen's .. 509
Die 507
Kitchen 510
Machinists' Special 507, 510
Oil .....503 to 510
Oil, Miscellaneous 507
Pocket 507
Scythe 501, 502
Sharpening .....503 to 510
Stop Adjusters, Window 1127T
Screws and Washers 1127T
Stop-Squeak Oil 744
STOPPERS, Basin 102
Bath 102
STOPS, Bench 406
Binder, Wall 1204T
Center 1191T
Check and Waste 141
Door 1117T
Rough 141
Sliding Door 1197T
Store Door Dead Locks 1016T, 1019T
Door Lock Sets .....988T to 994T
Fixtures 612
Hooks 1166T
Ladders 613, 614
Rack Hooks 1165T
Truck Casters 1222T
Trucks 576, 577
Storm Glasses 1226T
Stove Bolt Nuts 74
Bolt Taps 244
Bolts 71
Brushes 632
Casters 1221T
Lining Cement 1237T
Pipe Enamel, Japalac 650
Pipe Mandrels 534
Pipe Wire 57

S

PAGE

Stove Putty 1237T
Shovels 1236T
Trucks 577
Wicks, Oil 924T
Straight Shank Drills .....212 to 215
Shank Drills, In Sets 218
Edge, Tinners' 532
Ladders 615
Straightening and Cutting Wire. 57
Strainer Cloth 606
STRAINERS, Conductor 690
STRAND, Wire 600
Strap Bolts, Wagon Box 163
Hinges 1095T
STRAPPING, Metal Box 53
STRAPS, Climbers' 349
Hammer 163
Pipe, Tinned 128
Safety 349
Singletree 165
Street Elbows 130
Elbows, Auto Tubing 758
Hoes 934T
Lamp Globes 935T
Lamps 920T
Push Brooms 638
STRETCHERS, Wire 568
Wire, Tackle Block 588
STRIKES, Lavatory 1149T
Lock 1052T
Rim Lock, In Detail 956T
Striking Hammers 282
STRIP, Fuse 882
Weather 609, 610
STRIPERS, Dagger 624
Striping Brushes 624, 625
STRIPS, Ford Weather 724
Gang, Metal Molding 897
Structural Rivets 80
Steel Angles 3
Steel Channels 4
Steel Channels, Weights of.. 11
Steel "I" Beams 5
Steel Tees 4
Wrenches 263
Stucco Brushes 618
STUDS, Belt 83
Metal Molding 898
Stump Spades 560
Sub Treasury Locks 1031T
Suction Hose 106
Suit Case Catches 1032T
Case Locks 1032T
Sunderman Carburetors 773
SUNDRIES, Automobile ..702 to 844
Superior White Enamel 651
SUPPLIES, Electrical ....847 to 909
SUPPORTS, Shelf 1157T
Surface Bolts 1062T
Door Butts 1084T
Gauges 469
Grinders 492
Switches .....869 to 871
Surveying Instruments 436
SWAGES, Bottom 280
Saw 402
Top 280
Swamp Hooks 173
Swedish Iron 6
Sweeping Compound 643
Swing Chains, Porch 152
Check Valves 139
Chimney Tops 694
Latches, Lavatory 1149T
SWINGS, Barrel 577
Swiss Files 187, 188
Switch Bases, Porcelain 900
Box Adapters 897

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

S

PAGE

Switch Boxes 896, 897
Brooms 638
Locks 813
Key Levers 795
Rosettes, Pull, New Wrinkle. 853
Unilets 893
SWITCHES and Connectors 821
Autolock 813
Battery 815, 875
Ceiling 848
Ceiling, Pull, New Wrinkle. 854
Combination 876
Dimming 815
Double Throw .....873 to 876
Electrolier 868
Gang 868
Heater 872
Heater Control 868
Ignition 814
Knife .....873 to 876
Lighting 815
Panel, Perkins 876
Pendent 872
Pull 847
Pull, Ceiling, Perkins 872
Push Button 815
Push Button, Flush 868
Rotary 876
Single Throw .....873 to 876
Snap, Metal Molding 897
Starting, Motor 814, 875
Surface .....869 to 871
Telephone 875
Swivel Clevises 169
Eye Pulleys 1214T
Hooks, Lumbering 172
SWIVELS, Lariat 168
Syringe Hydrometers, Battery.. 761
SYSTEMS, Carrying, Overhead 1197T, 1198T
Vacuum, Gasoline 773

T

"T" Head Shaft Bolts..... 71
"T" Hinges 1096T
"T" Rails, Steel 7
"T" Squares, Draftsmen's 479
Table Hinges 1091T
Push Buttons 902
Tack Bumpers 103
Claws 292
Hammers 290, 291
Pullers 292
Tackle Awning Pulleys.. 1214T, 1215T
Block Sheaves 592
Block Wire Stretchers 588
Blocks Steel 590
Blocks, Wire Rope 591
Blocks, Wood 589
TACKS, Bill Posters' 41
Carpet 43
Copper 41
Cut 42
Double Pointed 44
Gimp 41
Shank 39
Thumb 1224T
Trimmers' 42
Upholsterers' 42
Wire 41, 42
Tail Lamps, Auto 835
Tallow Pots 931T
Tally Counters 473
TAMPERS, Dirt and Sod 545
Tamping Bars 270

T

PAGE

Tanged Firmer Chisels 312
Firmer Gouges 313
Turning Chisels 314
Turning Gouges 314
Tank Ball Stems 102
Balls 102
Pumps 946T
TANKS, Gasoline 736, 738, 927T
Kerosene 736, 738
Oil 736, 738, 927T
Tap Wrenches.....246, 247
TAPE Sealers 605
Sealing 605
Tire 748
Taper Cone Pulleys 120
Files 179, 180
Pin Reamers 223
Pins 77
Pins, Assorted 800
Reamers 223, 377
Reamers, Bit Stock 224
Shank Drills 210, 211
TAPES, Friction 901
Insulating 901
Measuring .....441 to 444
Splicing 901
TAPLETS, Molding Paiste 898
Tapped Nuts 73, 74
TAPS and Dies .....249 to 253
Current .....865 to 867
Hand 243
Machine Screw 245
Nut 244
Pipe 244
Shoe Calk 25
Stove Bolt 244
TAR, Coal 654
Rakes 933T
Roofing, Alto 666
Tarred Felt 666
Tee Bevels 440
Steel, Bar Sizes 4
Steel, Structural 4
TEES, Auto Tubing 758
Cast Iron 129
Drop 131
Malleable Iron 130
Metal Molding 898
Reducing 129
Steel, Bar Sizes 4
Steel, Structural 4
Three Way, Auto Tubing ... 757
TEETH, Harrow 26
Telegraph Hooks 1168T
Shovel Handles 935T
Shovels 562
Spoon Handles 935T
Spoons 562
Telephone Switches 875
Wire 56
Telescoping Gauges 464
Tenox Liquid Gaskets 775
Tenso Coil Chain 153
Halter Chains 155
TERMINALS, Flexible 1060T
Speaking Tube 1060T
Terne Roofing Tin Plate 695
TERNES, Long 696
Test Clips, Battery 834
Indicators 469
Tester Attachments 719
TESTERS, Battery 842
Bulb 842
THERMITE 745
THERMOMETERS ....1225T to 1228T
THERMOSOL 641
Thickness Feelers 467
Gauges 467
THIMBLES, Wire Rope 601

T

PAGE

Third Seats, Steel 798
Thread Calipers 474, 475
Threaded Nuts 73, 74
Thumb Nuts 166
Threading Devices, Pipe..... 254
Tools 242
Three Angle Tools 429
Way Tees, Auto Tubing 757
Thresher Belts, Canvas 86
Thumb Latches .....995T to 998T
Nuts 166
Tacks 1224T
Ticket Punches 351
Tie-Out Chains 156
TIES, Axle Clip 166
Bale 53
Cow, Chain 157
Wall 683
Tiger Rubber Roofing 667
Tight and Loose Pulleys 123
Tile Markers 549
Tiller Rope, Wire 598
TILLS, Alarm 605
Timber Dollies 578
Grapples 171
TIMERS, Auto 813
TIN, Bar 19
Block 21
Can Screws 1246T
Folding Machines 527
Perforated 606
Plate, Bright 697
Plate, Fire Door 696
Plate, Roofing 695
Roll Valley 685
Roofing Caps 666
Shingles 684
Tinned Pipe Straps 128
Tinners' Bench Plates..... 532
Circumference Rules 450
Fire Pots 539
Hammers 284
Hand Groovers 531
Hollow Punches 531
Machine Standards 532
Machines .....521 to 530
Mallets 413
Rivet Sets 531
Rivets 81
Scrapers 293
Scratch Awls 378
Shears .....511 to 514
Snips .....511 to 514
Stakes 533
Straight Edges 532
Tools .....511 to 539
TINNINGS, Sheet Copper..... 699
TIPS, Cigar Lighter 838
Pipe Lighter 838
Shaft 160
TIRE-DOH 746
TIRE-LAC 745
TIRE Accessories 703, 704
Bolts 68
Chain Tools 710
Chains, Anti-Skid 707
Chains, Weed 705, 706
Covers 720, 721
Holders 787
Iron 7
Lock Chains 812
Paint 745
Pressure Gauges 719
Pry Bars, Auto 710
Pumps, Automobile 730, 731
Round Edge 7
Saver Jacks 267, 712
Seal 746
Sleeve 704

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

T

PAGE

TIRE—Continued.
Stands, Auto 709
Steel 7
Tape 748
Tools, Auto 710
Valves, Auto 718, 719
TIRES, Automobile 702
Diamond 702
Quick Repair 101
Tobacco Nails 27
Toe Calk Steel 9
Calk Wrenches 25
Calks 24
Rings, Cant Hook 172
Toggle Bolts 66
Toilet Bowl Brushes 631
TONGS, Blacksmiths' 203
Bolt 203
Edging 534, 535
Gutter 535
Ice 580
Lathe 203
Rail 271
Pick-Up 203
Roofing 534, 535
Skidding 173
Squeezing 534
Tongue and Groove Planes 327
Tool Belts 349
Boxes, Auto 778
Cabinets 415
Cabinets, Carpenters' 416
Cases, Carpenters' 416
Cases, Machinists' 417
Chests .....414 to 417
Chests, Machinists' 417
Grinders, Luther .....496 to 498
Handles, Farm 962, 963
Handles, Mechanics' ..408 to 410
Holders 240
Holders, Lathe 247
Kits 414, 415
Kits, Auto 793
Rolls, Auto 797
Sets, Awl and 378
Steel 10
Toolmakers' Clamps 467
TOOLS, Anvil 280
Beading, Brick and Tile 549
Blacksmiths' 280, 281
Blind Nail 329
Boring 240, 241
Carving 314
Cement Workers' .....542 to 545
Contractors' 272, 273
Cornering 329
Cutting-Off 241
Drawing 479, 480
Ice 579, 580
Knurling 242
Lathe 240
Linemen's 349
Lumbering .....171 to 174
Machinists' .....451 to 476
Molders' 540, 541
Planer 240
Railroad Track 270, 271
Sash 624
Saw 401, 402
Side 241
Sill Borer or Joist 368
Slaters' 535
Spark Plug 831
Starrett .....452 to 476
Threading 242
Three-Angle Rule 429
Tinners' .....511 to 539
Tire, Auto 710

T

PAGE

TOOLS—Continued.
Tire Chain 710
Track 270, 271
Valve Repair 719
Tooth Gauges, Saw 402
Top Bolts, Spring 1065T
Dressing 743
Dressing, Auto 653
Dressing, Carriage 652, 653
Dressing, Norwesco 745
Fullers 280
Mauls 281
Slip Covers 724
Swages 280
TOPS, Chimney, Swing 694
D 936T
TORCHES, Fishing 921T
Gas Brazing, Electric 820
Gasoline 537, 538, 820
Gasoline, Wall 921T
Inspectors' 921T
Kerosene 538
Oil 921T
Tote Cans 1239T
Tow Lines, Automobile 711
Towing Cables 711
Chains 711
Hawsers 600
Poles, Auto 711
Trace Chains 158
Holders 160
TRACK, Barn Door ....1187T to 1203T
Brackets, Trolley ...1195T, 1196T
Cannon Ball 1187T, 1188T
Chisels 281
Fire Door 1199T, 1200T
Gauges 271
Jacks 268
Tools 270, 271
Trolley .....1183T to 1194T
Weatherproof 1189T
Wrenches 271
TRAILERS, Automobile 798
Trammel Points 478
TRANSFORMERS, Bell Ringing 904
Transmission Lining 750
Locks 812
Oil 741
Rivets 751
Rope 594
Transom Butts 1088T
Catches 1139T, 1140T
Centers 1120T
Lifters 1119T
Operators 1120T
Transparent Triangles 479
Trap Door Rings, Flush 1157T
TRAPS, Bell 947T
Cess Pool 947T
Mole 1233T
Mouse 1233T
Rat 1233T
Sink 136
Tray Handles 1155T
Tread Filler 748
Metal, Anti-Slip 1118T
Safety 1118T
Tree Guards 51
Pruners 939T
TRELLIS, Single 51
TRIANGLES, Mahogany 479
Transparent 479
Triangular Box Trucks 576
Trimmers' Hammers 290
Tacks 42
TRIMMINGS, Box ....1146T to 1148T
Trip Gong Bells 951T
Triple Lever Screw Drivers 352

T

PAGE

Trolley Hangers .....1183T to 1194T
Track .....1183T to 1194T
Track Brackets 1195T, 1196T
TROLLEYS, Chain Hoist 586
Trot Line 603
Trouble and Dash Lamps 822
Lamps 838
TROUGH—Eave, Galvanized.686, 692
End Formers, Eave..... 535
Hangers, Eave 691
Miters, Eave 687, 693
TROWELS, Brick 548
Browning 546
Cement Workers' 546
Corner 547
Finishing 546, 547
Finishing, Cement Workers'. 542
Plastering 546, 547
Pointing 547
Truck Casters 1222T
Jacks 268, 713
Tire Chains 706, 707
TRUCKS, Bag 576
Barrel 577
Box 576
Hotel 576
Lifting 577
Reynold's 578
Store 576, 577
Stove 577
Warehouse 576
Trunk Hinges 1089T
Locks 1032T, 1033T
Nails 39
Rollers 1202T
Try Squares 440
Squares, Starrett 456
Tube Fittings, Auto 757
Speaking 1060T
TUBES, Inner, Automobile..702, 703
Porcelain 900
TUBING, Brass, Brazed 701
Brass, Seamless 757
Copper, Seamless 757
Hot Air 752
Rubber 751
Steel, Flexible 772
TUBS, Mortar 549
Tubular Barrows 552, 553
Gaskets 99
Harness Rivets 82
Lanterns .....917T to 920T
Street Lamps 920T
Tuck Steel Coil Springs....779, 1115T
Turkish Emery 485
TURNBUCKLES, Wire Rope 601
Wrought Iron 70
Turning Chisels, Tanged 314
Gouges, Tanged 314
Machines 521, 522
TURNS, Cupboard 1141T, 1142T
TURPENTINE 657
Tuyere Irons 198, 199
Twin Pull Sockets, New Wrinkle 852
TWINE, Binder 603
Boxes 605
Flax 604
Hemp 604
Jute 604
Seine 603
Staging 603
Wool 603
Wrapping 604
Two V-Crimp Roofing 671

U

UNDERCOAT, White Enamel .. 651
Underground Gasoline Tanks... 736
Underwriters' Fire Hose..... 109

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

U

PAGE

Unilet Cord Rosettes 889
Covers 890, 892, 894
Gaskets 894
Receptacles 890, 893
UNILETS .....891 to 894
Service Entrance 889
Switch 893
Union Bushings, Conduit 887
Enclosed Fuse Cut-Outs 878
Nuts, Auto 757
Plug Fuses 879
Scales 571, 572
Washers 115
UNIONS, Auto Tubing 758
Conduit 888
Dart 132
Double, Auto Tubing 757
Flange 132
Malleable Iron 132
Single Auto 757
Soldering 135
UNITS, Coil 813
Universal Bevels 464
Clamps 404
Dividers 476
Grip Wrenches 259
Safety Tread 1118T
Solder 483
Test Indicators 469
Wrench Braces 795
Wrenches 795
Unmounted Grindstones 500
Upholsterers' Hammers 290
Tacks 42
Upholstering Dressing 745
Upright Pulleys 1213T
Use-Em-Up Drill Sockets 218, 219
Utility Wrenches 795

V

V-Crimp Roofing 671
Vacuum Cleaners 910T
Gasoline Systems 773
VALLEY—
Formed, Galvanized 685, 693
Roll, Galvanized 685
Roll, Tin 685
Valve Caps, Motor 718
Discs, Anchorite 98
Discs, Jenkins' Bros. 138
Grinders 796
Grinding Bits 796
Grinding Compound 483, 796
Insides, Auto 719
Lifters 796
Repair Tools 719
Reseating Machines 495
VALVES, Air, Automatic..... 719
Angle 138, 140
Ball Check, Auto Tubing ... 757
Brass 138, 140
Check 139
Gate 140
Globe 138, 140
Inflating, Auto Tire 718
Iron Body 140
Pump, Rubber 101
Tire, Auto 718, 719
VanDorn Joist Hangers 1176T
VANES, Chimney Top 694
VARNI-BRITE 747
VARNISH, Auto-Lak 744
Automobile 743
Brushes .....620 to 623
Jap Spar 650
Remover 653
VARNISHES—
Berry Brothers' 652, 653
Glidden 651

V

PAGE

VARNISHES—Continued.
Jap Spar 650, 651
Vaterland Spades 560
Vegetable Forks 932T
Vehicle Lanterns 919T
Velvet Cedar Oil 640
White Enamel 651
VENEER, Liquid 640
Liquid, Auto 744
Veneered Chair Seats 646
Ventilating Bolts, Window 1129T
Locks, Window 1129T
Ventilator Grates 1235T
Screens 607
VENTILATORS, Star 694
Vernier Calipers 457
Vertical Check Valves 139
Vestibule Door Locks ....958T to 981T
VIBRATORS, Master 816
Victor Gaskets .....773 to 775
Vises 190, 192, 194
Vise Jaws 195
VISES, Anvils and 196
Auto 197
Bench .....190 to 197
Blacksmiths' 197
Bonney 189
Carpenters' 192
Coachmakers' 192
Combination 195, 196
Hand 189
Handy Worker 191
Jersey 190
Machinists' 193, 194
Picture Frame 381
Pin 472
Pipe 195
Quick Acting 191
Saw 403
Victor 190, 192, 194
Woodworkers' 191, 192
Yankee 191
VOLTAMMETERS, Pocket 762
Von Duprin Fire Door Devices .....1074T to 1076T
VULCANIZERS .....714 to 717
Electric 716, 717
Vulcanizing Cement 747

W

Wagon Axes 579
Box Head Rivets 79
Box Iron 1
Box Iron, Weights of 14
Box Rods 163
Box Strap Bolts 163
Doubletree Sets 162
Doubletrees, Ironed 161, 162
Ice Saws 580
Neckyokes, Ironed 162
Scales 569
Singletrees, Ironed 161, 162
WAITERS, Dumb 1179T, 1180T
Wall Binder Stops 1204T
Brushes .....617 to 619
Chisels 276
Flashing 683
Hangers 1177T
Hooks 1224T
Lamps 922T
Paper Cleaner 641
Plates 679, 680
Size 652, 653
Ties 683
Wantage Rods 445
Warding Files 184
Wardrobe Locks 1025T
Warehouse Balances 574
Brooms 638
Door Latches 997T, 998T

W

PAGE

Warehouse Trucks 576
WARMERS, Foot, Soapstone.... 728
Wash Aprons 724
Bowls 1241T
Washer Cutters 93
WASHERS, Auto 729
Axle, Leather 160
Bibb 115
Brass 75
Cast 75
Chassis 729
Gauge Glass 115
Hose 115
Knob 1053T
Lead 670
Lock 75
Lock, Auto 799
Stop Screws and 1127T
Union 115
Wire Wheel 729
Wrought 75
WASTE, Cotton 94
Cans, Oily 1240T
Check and 141
Paper Balers 53
Paper Baskets 1232T
Water Conducting Hose 106
Cooler Stands 1231T
Coolers 1231T
Dippers 1241T
Filters 1230T
Hose Couplings 113
Pails 1232T
Pails, Galvanized 1245T
Paste, Cold 654
Pipe, Wrought 127
Stains 653
WAX, Prepared 640, 744
Wearing Body Varnish 652, 653
Weather Strip 609, 610
Strips, Ford 724
Weatherproof Cables 884
Weaver Towing Poles 711
WEDGES, Axe 278
Hammer 278
Hatchet 278
Maul 278
Saw 278
Wood Choppers' 279
Weed Chain Adjusters 705
Chain Jacks 267, 712
Cross Chains 705, 706
Pliers 705
Tire Chains 705, 706
WEIGHTS, Sash 1208T
Of Bar Iron .....12 to 14
Of Bar Steel .....12 to 14
Of Hoop Steel 14
Of Sash 1208T
Of Sheet Steel .....15 to 18
Of Tin Plate 697
Of Wagon Box Iron 14
Of Wire 54, 55
Welding Compounds 205
Plates 205
Rods 205
Westcott Drill Chucks 237
Lathe Chucks 238, 239
Wheel Barrows .....551 to 553
Barrows, Tubular 553
Brushes, Wire 630
Locks, Steering 812
Pullers 778
Sets, Demountable 708
Washers, Wire 729
WHEELS, Abrasive .....486 to 489
Automobile 708
Disc 200
Grinding .....486 to 489

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

W

PAGE

WHEELS—Continued.
Sprocket 126
Steering 778
Whiffletree Clevises 169
Cockeyes 166
Couplings 166
Ferrules 166
Plates 166
WHIFFLETREES, Ironed...161, 162
Whisk Brooms 637
WHISTLES, Speaking Tube ...1060T
White Enamel, Glidden 651
Enamel, Undercoat 651
Enamel, Velvet 651
Lead 657
Shellac 653
Whitewash Brushes 628
Whitewashing Machines 942T
Whiz Soap 746
Wick Packing 100
WICKING, Candle 100
WICKS, Lamp 924T
Lantern 924T
Oil Stove 924T
Winding Hose, Wire 105, 108
Window Bolts, Mortise 987T
Brush Poles 635
Brushes 635
Catches, French 1140T
Cleaners 645
Fasteners, Car 1130T
Glass 658, 659
Guards, Screen 1059T
Locks, French 1002T
Pulleys 1212T
Screen Frames 607
Screen Springs 1115T
Screens, Extension 607
Sets, Basement 1133T
Spring Bolt Sockets 1132T
Spring Bolts 1132T
Stop Adjusters 1127T
Thermometers 1226T
Ventilating Locks 1129T
Ventilator Screens 607
Windshield Cleaners 729
Search Lights 837
Wing Dividers 477
Wiping Rags 94
WIRE and Sleeve Clamps 349
Annealed Fence 56
Annunciator 904
Barbed 55
Belt Lacing 85
Benders 519
Brace 56
Brads, Steel 28, 36
Brass, Spring 58, 59
Brushes, Steel 629, 630
Carpet Tacks 43
Chisels 532
Cloth 606
Cloth, Hardware Grade 606
Cloth, Screen 606
Cloth Staples 44
Copper, Soft 58, 59
Cup Hooks 1173T
Cutters, Acme 347
Cutters, Carew 347
Cutters, Pexto 204, 519
Cutters, VanBramers' 519
Cutting Nippers 347
Fence 55, 56
Fencing 48, 49
Fishing 905
Fuse 882
Gate Hooks and Eyes 1169T
Gates 50, 51
Gauge Drills 215

W

PAGE

WIRE—Continued.
Gauges 471, 472
Grips 349
Hair 59
Hoop Staples 44
In Bundles .....56 to 58
Insulating 882
Lamp Guards 906, 907
Market 57
Mosquito Bar Eyes 1173T
Music 58
Nails .....28 to 37
Nails, Cement Coated..... 34
Nails, Galvanized 28, 31
Nails, Miscellaneous 37
Netting 46, 47
Rings and Clips 1246T
Rope .....593 to 600
Rope Clips 601
Rope Sheaves 592
Rope Tackle Blocks 591
Rope Thimbles 601
Rope Turnbuckles 601
Rubber Covered 882
Sash Cord 600
Screw Eyes 1174T, 1175T
Screw Hooks ....1170T to 1172T
Sizes and Comparative Gauges 54
Solder 19, 905
Solder, Self-Fluxing 776
Spooled 59
Spring 58
Stone 57
Stove Pipe 57
Straightening and Cutting.. 57
Strand, Steel 600
Stretchers 568
Stretchers, Tackle Block .. 588
Tacks 41, 42
Telephone 56
Weights of 54, 55
Wheel Brushes 630
Wheel Washers 729
Wound Hose 105, 108
Wiring Machines 522
Wood Boring Drills 216
Bushings 120
Chisels 277
Choppers' Mauls 279
Choppers' Wedges 279
Countersinks 376
Filler, Liquid .....651 to 653
Filler, Paste 653
Molding 898
Planes .....318 to 323
Push Buttons 902
Rasps 185
Rim Cement 704
Saw Blades 388
Saw Frames 388
Saw Rods 388
Saws 387
Scrapers 331
Screws 60, 61
Split Pulleys 120, 121
Stains 652, 653
Tackle Blocks 589
WOODS, Doubletree 162
Neckyoke 162
Singletree 162
Wolf's Head Lubricants, Auto 740, 741
Woodworkers' Planes 329
Vises 191, 192
Wool Deadening Felt 664
Dusters 637
Felt 664
Mineral 94
Steel 485

W

PAGE

Wool Twine 603
WORKERS, Handy 191
Wrapping Papers 662
Twine 604
Wrench Braces, Universal..... 795
Jaws 258
Sets, Mossberg 794
WRENCHES, Adjustable 259, 260
Agricultural 257, 258
Alligator 258, 259
Always Ready 259
Automobile 261
Bicycle 261
Bit Brace 261
Cap Screw 266
Car Builders' 263
Carriage 170
Combination 257
Connecting Rod 262, 794
Construction 263
Crescent 260
Drop Forged .....264 to 266
Engineers' 264
General Purpose 266
Knife Handle 257
Monkey 257, 258
Nut .....257 to 266
Offset Socket 794
Pet Cock 795
Pipe 256, 257
Pipe, Chain 255
Railroad 258
Ratchet 262
Ratchet, Mossberg 794
Reamer 247
Rear Axle, Housing 262, 794
S, Adjustable 260
S, Double End..... 266
S, Double End, Malleable.... 170
Safety Set Screw 64
Set Screw 265
Socket 262, 263
Spark Plug 263
Stillson 256
Structural 263
Tap 246, 247
Toe Calk 25
Track 271
Universal 795
Universal Grip 259
Utility 795
WRINGERS, Mop 644
Wrought Brass Butts 1092T
Iron Couplings 133
Nipples 137
Pipe 127
Steel Staples 1167T
Washers 75
Wyandotte Cleanser 641

X

XF Files 187, 188

Y

Yacht Rope 598
Yale Casters 1221T
Yankee Calipers 474
Countersinks 358
Drill Points 358, 360
Drills .....358 to 364
Push Braces 358
Screw Drivers 356, 357
Vises 191
Yard Sticks 446
YOKES, Auto Clip 791
Axle Clip 166

Z

Zigzag Rules 449
ZINC Can Screws 1246T
Sheet 21

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

MERCHANT BAR IRON

We manufacture all our Iron from Lake Superior Iron Ore.

National Classification Adopted December 3rd, 1895.

Extra Sizes advance per 100 pounds as noted below.

Rounds and Squares

1 to 1⅞ inch	Base Price, $	
2 to 2⅞ inch	Advance,	$0.20
3 to 3½ inch	Advance,	.50
3⅝ to 4 inch	Advance,	.80
4⅛ to 4½ inch	Advance,	1.00
4⅝ to 5 inch	Advance,	1.30
5⅛ to 6 inch	Advance,	1.80
6⅛ to 6½ inch	Advance,	2.20
6⅝ to 7¼ inch	Advance,	2.50
¾ to ⅞ inch	Advance,	.10
⅝ to 11/16 inch	Advance,	.20
½ to 9/16 inch	Advance,	.30
7/16 to 15/32 inch	Advance,	.40
⅜ to 13/32 inch	Advance,	.50
5/16 to 11/32 inch	Advance,	.70
¼ to 9/32 inch	Advance,	.90
7/32 inch	Advance,	1.40
3/16 inch	Advance,	2.50

Flats

1½ to 4 x ⅜ to 1 inch	Base	
4¼ to 6 x ⅜ to 1 inch	Advance,	$0.10
4¼ to 6 x 1 1/16 to 1½ inch	Advance,	.40
6¼ to 8 x ⅜ to 1 inch	Advance,	.60
6¼ to 8 x 1 1/16 to 1½ inch	Advance,	.60
8¼ to 10 x ⅜ to 1 inch	Advance,	.80
1⅜ to 4 x 1⅛ to 1½ inch	Advance,	.30
2 to 4 x 1⅝ to 2 inch	Advance,	.50
4¼ to 6 x 1⅝ to 2 inch	Advance,	.60
6¼ to 8 x 1⅝ to 2 inch	Advance,	.80
8¼ to 10 x 1 1/16 to 1½ inch	Advance,	.90
8¼ to 10 x 1⅝ to 2 inch	Advance,	1.00
2 to 4 x 2⅛ to 3 inch	Advance,	.60
4¼ to 6 x 2⅛ to 3 inch	Advance,	.80
6¼ to 8 x 2⅛ to 3 inch	Advance,	1.00
1⅛ to 1⅜ x ⅜ to 1 inch	Advance,	.10
1 to 1 1/16 x ⅜ to ⅞ inch	Advance,	.20
¾ to 15/16 x ⅜ to ¾ inch	Advance,	.40
⅝ to 11/16 x ⅜ to ⅝ inch	Advance,	.50
½ to 9/16 x ⅜ to ½ inch	Advance,	.90

Heavy Bands

8¼ to 10 x ¼ to 5/16 inch	Advance,	$0.70
7 to 8 x ¼ to 5/16 inch	Advance,	.70
6¼ to 6¾ x ¼ to 5/16 inch	Advance,	.50
4¼ to 6 x ¼ to 5/16 inch	Advance,	.30
1½ to 4 x ¼ to 5/16 inch	Advance,	.20
1 to 1⅜ x ¼ to 5/16 inch	Advance,	.30
¾ to 15/16 x ¼ to 5/16 inch	Advance,	.50
⅝ to 11/16 x ¼ to 5/16 inch	Advance,	.80
½ to 9/16 x ¼ to 5/16 inch	Advance,	1.00
⅜ to 7/16 x ¼ to 5/16 inch	Advance,	1.50

Heavy Bands, 7/32 inch thick, 10c higher than ¼ to 5/16 inch.

Light Bands

7 to 8 inch x No. 9 to 3/16 inch	Advance,	$0.90
7 to 8 inch x Nos. 10, 11, and 12	Advance,	1.00
6¼ to 6¾ inch x No. 9 to 3/16 inch	Advance,	.70
6¼ to 6¾ inch x Nos. 10, 11, and 12	Advance,	.80
4¼ to 6 inch x No. 9 to 3/16 inch	Advance,	.50
4¼ to 6 inch x Nos. 10, 11, and 12	Advance,	.60
1¼ to 4 inch x No. 9 to 3/16 inch	Advance,	.40
1¼ to 4 inch x Nos. 10, 11, and 12	Advance,	.50
1 to 1 3/16 inch x No. 9 to 3/16 inch	Advance,	.50
1 to 1 3/16 inch x Nos. 10, 11, and 12	Advance,	.60
13/16 to ⅞ inch x No. 9 to 3/16 inch	Advance,	.60
13/16 to ⅞ inch x Nos. 10, 11, and 12	Advance,	.70
11/16 to ¾ inch x No. 9 to 3/16 inch	Advance,	.80
11/16 to ¾ inch x Nos. 10, 11, and 12	Advance,	.90
9/16 to ⅝ inch x No. 9 to 3/16 inch	Advance,	1.00
9/16 to ⅝ inch x Nos. 10, 11, and 12	Advance,	1.10
7/16 to ½ inch x No. 9 to 3/16 inch	Advance,	1.30
7/16 to ½ inch x Nos. 10, 11, and 12	Advance,	1.40
⅜ inch x No. 9 to 3/16 inch	Advance,	1.50
⅜ inch x Nos. 10, 11, and 12	Advance,	1.60

Box Iron, Bevel Edge, same as Light Bands of same sizes.

Ovals

⅞ to 1½ inch	Advance,	$0.40
¾ to 13/16 inch	Advance,	.50
⅝ to 11/16 inch	Advance,	.60
½ to 9/16 inch	Advance,	.80
⅜ to 7/16 inch	Advance,	1.10
½ to 9/16 x 3/16 inch	Advance,	1.00
⅝ to 11/16 x ⅛ inch	Advance,	1.20

Half Ovals and Half Rounds

2¼ to 3 inch	Advance,	$0.60
⅞ to 2 inch	Advance,	.50
¾ to 13/16 inch	Advance,	.70
⅝ to 11/16 inch	Advance,	.90
½ to 9/16 inch	Advance,	1.20
⅜ to 7/16 inch	Advance,	2.50
5/16 inch	Advance,	3.50
¼ inch	Advance,	4.50

Half Ovals less than one-fourth their width in thickness, extra price.

Horse Shoe Iron

All Sizes	Advance,	$1.00

Extras for Cutting to Specified Lengths

Hot Sawing or Shearing, 24 inches and longer	10c extra
Hot Sawing or Shearing, 12 to 24 inches	20c extra
Hot Shearing, under 12 inches	30c extra
Machine Cutting, specified lengths over 24 in.	20c extra
Machine Cutting, specified lengths 12 to 24 in.	40c extra

Machine Cutting, to specified lengths, less than 12 inches, according to contract, but not less than 60c on each size.

Exceptions

No charge will be made for Shear Cutting to multiple lengths of 12 inches and under.

No extra charge for Hot Sawing or Shearing to lengths of 5 feet and over.

Extras for Machine Straightening and Centering

Machine Straightening, for ordinary sizes	20c extra
Machine Straightening and Centering	40c extra

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MERCHANT BAR STEEL

Standard Classification of Extras, Adopted July 1st, 1916.

Extra Sizes advance per 100 pounds as noted below.

Rounds and Squares

¾ to 3 1/16	inches.....Base, $.....	
⅝ to 11/16	inch.....Advance,	$0.05
½ to 9/16	inch.....Advance,	.10
7/16	inch.....Advance,	.20
⅜	inch.....Advance,	.25
11/32	inch.....Advance,	.30
5/16	inch.....Advance,	.35
9/32	inch.....Advance,	.40
¼	inch.....Advance,	.50
15/64	inch.....Advance,	.75
7/32	inch.....Advance,	1.00
3/16	inch.....Advance,	1.25
3 ⅛ to 3 9/16	inches.....Advance,	.075
3 ⅝ to 4 1/16	inches.....Advance,	.125
4 ⅛ to 4 9/16	inches.....Advance,	.15
4 ⅝ to 5 1/16	inches.....Advance,	.20
5 ⅛ to 5 9/16	inches.....Advance,	.25
5 ⅝ to 6 1/16	inches.....Advance,	.375
6 ⅛ to 6 9/16	inches.....Advance,	.50
6 ⅝ to 7 ¼	inches.....Advance,	.625

For intermediate sizes, the next higher extra to be charged in all cases.

Flats

1 to 6	inches x ⅜ to 1 inch.....Base	
1 to 6	inches x ¼ to 5/16 inch..Advance,	$0.10
11/16 to 15/16	inch x ⅜ to ¾ inch..Advance,	.20
11/16 to 15/16	inch x ¼ to 5/16 inch..Advance,	.25
9/16 to ⅝	inch x ⅜ to ½ inch..Advance,	.25
9/16 to ⅝	inch x ¼ to 5/16 inch..Advance,	.35
½	inch x ⅜ to 7/16 inch..Advance,	.50
½	inch x ¼ to 5/16 inch..Advance,	.60
7/16	inch x ⅜ inch..Advance,	.70
7/16	inch x ¼ to 5/16 inch..Advance,	.80
⅜	inch x ¼ to 5/16 inch..Advance,	1.00
1 ⅛ to 6	inches x 1 1/16 to 1 3/16 inches Advance,	.05
1 ⅛ to 6	inches x 1 ¼ to 1 ½ inches Advance,	.10
1 ¾ to 6	inches x 1 ⅝ to 2 ¾ inches Advance,	.15
3 ⅛ to 6	inches x 3 to 4 inches Advance,	.20

For intermediate sizes, the next higher extra to be charged in all cases.

Half Rounds

1 to 3	inches.....Advance,	$0.20
¾ to 15/16	inch.....Advance,	.35
⅝ to 11/16	inch.....Advance,	.50
½ to 9/16	inch.....Advance,	.70
⅜ to 7/16	inch.....Advance,	1.10

For intermediate sizes, the next higher extra to be charged in all cases.

Bands

Gauges shown are Birmingham Wire Gauge

1 ½ to 6	in. x Nos. 7, 8, 9 and 3/16 in....Advance,	$0.20
1 ½ to 6	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.30
1 to 1 7/16	in. x Nos. 7, 8, 9, and 3/16 in....Advance,	.25
1 to 1 7/16	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.35
1 3/16 to 1 5/16	in. x Nos. 7, 8, 9 and 3/16 in....Advance,	.35
1 3/16 to 1 5/16	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.40
1 1/16 to ¾	in. x Nos. 7, 8, 9 and 3/16 in....Advance,	.50
1 1/16 to ¾	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.60
9/16 to ⅝	in. x Nos. 7, 8, 9 and 3/16 in....Advance,	.60
9/16 to ⅝	in. x Nos. 10, 11, 12 and ⅛ in..Advance,	.65
½	in. x Nos. 7, 8, 9 and 3/16 in.....Advance,	.65
½	in. x Nos. 10, 11, 12 and ⅛ in.....Advance,	.75
7/16	in. x Nos. 7, 8, 9 and 3/16 in.....Advance,	.90
7/16	in. x Nos. 10, 11, 12 and ⅛ in.....Advance,	1.05
⅜	in. x Nos. 7, 8, 9 and 3/16 in.....Advance,	.95
⅜	in. x Nos. 10, 11, 12 and ⅛ in.....Advance,	1.20

For intermediate sizes, the next higher extra to be charged in all cases.

Ovals

¾ to 2 ½	inches x ⅜ inch and thicker...Advance,	$0.20
¾ to 2 ½	inches x ¼ inch to 5/16 inch....Advance,	.30
¾ to 2 ½	inches x 5/32 inch to 3/16 inch....Advance,	.45
⅝ to 1 1/16	inch x 5/16 inch and thicker.....Advance,	.35
⅝ to 1 1/16	inch x 3/16 inch to ¼ inch.....Advance,	.50
⅝ to 1 1/16	inch x ⅛ inch to 5/32 inch.....Advance,	.65
½ to 9/16	inch x ¼ inch and thicker.....Advance,	.55
½ to 9/16	inch x ⅛ inch to 3/16 inch.....Advance,	.70
½ to 9/16	inch x 3/32 inch.....Advance,	.95
⅜ to 7/16	inch x 3/16 inch and thicker.....Advance,	.95
⅜ to 7/16	inch x ⅛ inch to 5/32 inch.....Advance,	1.20
⅜ to 7/16	inch x 3/32 inch.....Advance,	1.45

For intermediate sizes, the next higher extra to be charged in all cases.

Half Ovals

Gauges shown are Birmingham Wire Gauge

1 to 4	in. x ¼ in. and thicker.....Advance,	$0.25
1 to 4	in. x Nos. 7, 8, 9 and 3/16 in...Advance,	.35
1 to 4	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.50
¾ to 15/16	in. x 3/16 in. and thicker.....Advance,	.50
¾ to 15/16	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.65
¾ to 15/16	in. x Nos. 13, 14, and 15.....Advance,	.80
⅝ to 1 1/16	in. x 5/32 in. and thicker.....Advance,	.60
⅝ to 1 1/16	in. x Nos. 10, 11, 12 and ⅛ in.Advance,	.75
⅝ to 1 1/16	in. x Nos. 13, 14 and 15.....Advance,	.90
½ to 9/16	in. x ⅛ in. and thicker.....Advance,	.80
½ to 9/16	in. x Nos. 13, 14 and 15.....Advance,	1.05
⅜ to 7/16	in. x 3/32 in. and thicker.....Advance,	1.35
⅜ to 7/16	in. x Nos. 14 and 15.....Advance,	1.60

For intermediate sizes, the next higher extra to be charged in all cases.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL BANDS

New Classification of Extras Effective May 21st, 1918.

Cancel Extras on Steel Bands as printed on page 2 of our Catalogue and use the following Revised Extras instead:

17/16 to 6	in. x 3/16 in., No. 7, 8, 9	**Base, $**
17/16 to 4	in. x No. 10, 1/8 in., 11, 12	Advance, .05
41/16 to 6	in. x No. 10, 1/8 in., 11, 12	Advance, .10
1 to 1 3/8	in. x 3/16 in., No. 7, 8, 9	Advance, .05
1 1/16 to 1 3/8	in. x No. 10, 1/8 in., 11, 12	Advance, .10
1	in. x No. 10, 1/8 in., 11, 12	Advance, .15
15/16	in. x 3/16 in., No. 7, 8, 9	Advance, .10
15/16	in. x No. 10, 1/8 in., 11, 12	Advance, .15
7/8	in. x 3/16 in., No. 7, 8, 9	Advance, .15
7/8	in. x No. 10, 1/8 in., 11, 12	Advance, .25
13/16	in. x 3/16 in., No. 7, 8, 9	Advance, .20
13/16	in. x No. 10, 1/8 in., 11, 12	Advance, .30
3/4	in. x 3/16 in. No. 7, 8, 9	Advance, .30
3/4	in. x No. 10, 1/8 in., 11, 12	Advance, .35
11/16	in. x 3/16 in., No. 7, 8, 9	Advance, .30
11/16	in. x No. 10, 1/8 in., 11, 12	Advance, .40
9/16 and 5/8	in. x 3/16 in., No. 7, 8, 9	Advance, .40
9/16 and 5/8	in. x No. 10, 1/8 in., 11, 12	Advance, .45
1/2	in. x 3/16 in., No. 7, 8, 9	Advance, .45
1/2	in. x No. 10, 1/8 in., 11, 12	Advance, .55
7/16	in. x 3/16 in., No. 7, 8, 9	Advance, .70
7/16	in. x No. 10, 1/8 in., 11, 12	Advance, .85
3/8	in. x 3/16 in., No. 7, 8, 9	Advance, .75
3/8	in. x No. 10, 1/8 in., 11, 12	Advance, 1.00

Note.—Steel Bands are now subject to the same Base Price as Steel Hoops on page 6.

BUHL SONS COMPANY.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

STEEL HOOPS

New Classification of Extras on the Following Sizes. Effective May 21st, 1918.

Width, Inches.	Thickness Gauge Nos.	Thickness Decimal	Extra for Size Per 100 lbs.
4 1/16 to 5	18	.049	$1.00
	19	.042	1.20
	20	.035	1.40
5 1/8 to 6	13	.095	.20
	14	.083	.30
	15	.072	.40
	16	.065	.70
	17	.058	.90
	18	.049	1.00
	19	.042	1.20
6 1/16 to 8	13	.095	.30
	14	.083	.45
	15	.072	.60
	16	.065	.80
	17	.058	1.00
	18	.049	1.20
8 1/16 to 10	13	.095	.40
	14	.083	.55
	15	.072	.80
	16	.065	1.05
	17	.058	1.25
	18	.049	1.45

"Additional Extras" for Cutting to Specified Lengths.

For 60 inches and over.....No charge
Over 48 to 59 inches inclusive.....$0.05 Extra
Over 24 to 48 inches inclusive..... .10 Extra
Over 12 to 24 inches inclusive..... .20 Extra

For 12 inches and less, extra will be furnished on application, but will not be less than 30 cents.

Note.—Substitute the above schedule of Extras for those now printed in our Catalog covering the same specifications.

BUHL SONS COMPANY.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

MACHINERY STEEL

High Grade, Smooth Finish

Classification of Machinery Steel.

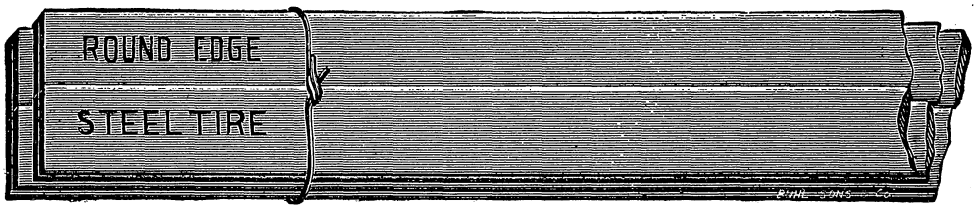
Extra Sizes advance per 100 pounds as noted below.

Round

¾ to 2½ inch	Base Price, Per 100 Pounds, $.....
⅝ to 1 1/16 inch	Advance, $0.10
½ to 9/16 inch	Advance, .20
7/16 inch	Advance, .40
⅜ inch	Advance, .50
5/16 inch	Advance, .70
¼ inch	Advance, 1.00

Note.—We stock only ¼ to 2½ inch Round.

ROUND EDGE TIRE



Round Edge Steel Tire, "Planished and Straightened"

Front—12 feet, 6 inches. **Hind**—13 feet, 6 inches.

1, 1⅛ and 1¼x¼ inch 1x5/16 inch	Base Price, Per 100 Pounds, $.....
1x3/16 inch	Advance, $0.30
⅞x¼ inch	Advance, .30
¾x¼ inch	Advance, .30
⅞x3/16 inch	Advance, .50
¾x3/16 inch	Advance, .80

Packed—One Set in a Bundle.

Round Edge Iron Tire

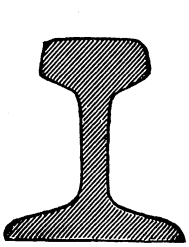
For Low Wheel Trucks.

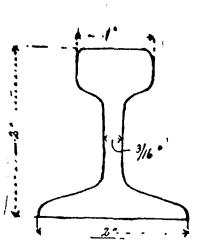
3x½ inch.	Front—11 feet.	Hind—12 feet.	Per 100 Pounds, $.....
3x⅜ inch.	Front—11 feet.	Hind—12 feet.	Per 100 Pounds, ...

PUMP RODS

Galvanized Steel Pump Rods	⅜ inch, in 14 foot bars.....Per Pound, $.....
	7/16 inch, in 14 foot bars.....Per Pound, ...

STEEL T RAILS





T Rails, 12 pounds to the yard.....Per 100 Pounds, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COLD ROLLED STEEL SHAFTING

Cold Rolled Steel Shafting, Homogeneous Steel, perfectly true, highly polished, of uniform quality and accuracy of gauge, accurately straightened, Lathe cut ends. Special requirements not enumerated below promptly met.

Prices quoted are for Shafts 5 to 24 feet, inclusive. **List** Adopted March 17, 1915.

ROUND

Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound
3/16	.095	$0.07 1/2	1 1/4	4.17	$0.05 1/2	2 5/16	14.35	$0.05	3 3/8	30.43	$0.05 1/2
1/4	.168	.06 1/2	1 5/16	4.61	.05 1/2	2 3/8	15.07	.05	3 7/16	31.58	.05 1/2
5/16	.260	.06 1/2	1 3/8	5.05	.05 1/2	2 7/16	15.90	.05	3 1/2	32.73	.05 3/4
3/8	.375	.06 1/2	1 7/16	5.52	.05 1/2	2 1/2	16.70	.05	3 9/16	33.96	.05 3/4
7/16	.511	.06	1 1/2	6.01	.05 1/4	2 9/16	17.55	.05	3 5/8	35.20	.05 3/4
1/2	.667	.06	1 9/16	6.52	.05 1/4	2 5/8	18.41	.05	3 11/16	36.40	.05 3/4
9/16	.845	.06	1 5/8	7.06	.05 1/4	2 11/16	19.31	.05	3 3/4	37.57	.05 3/4
5/8	1.05	.05 3/4	1 11/16	7.61	.05 1/4	2 3/4	20.21	.05	3 7/8	39.95	.05 3/4
11/16	1.26	.05 3/4	1 3/4	8.18	.05 1/4	2 13/16	21.15	.05	3 15/16	41.40	.05 3/4
3/4	1.50	.05 1/2	1 13/16	8.78	.05 1/4	2 7/8	22.10	.05	4	42.75	.06
13/16	1.77	.05 1/2	1 7/8	9.39	.05 1/4	2 15/16	23.06	.05	4 1/4	48.26	.06
7/8	2.05	.05 1/2	1 15/16	10.03	.05 1/4	3	24.05	.05	4 7/16	52.62	.06
15/16	2.35	.05 1/2	2	10.70	.05	3 1/16	25.07	.05 1/2	4 1/2	54.07	.06 1/2
1	2.68	.05 1/2	2 1/16	11.35	.05	3 1/8	26.10	.05 1/2	4 3/4	60.25	.06 1/2
1 1/16	3.02	.05 1/2	2 1/8	12.07	.05	3 3/16	27.16	.05 1/2	4 15/16	65.10	.06 1/2
1 1/8	3.38	.05 1/2	2 3/16	12.80	.05	3 1/4	28.22	.05 1/2	5	66.76	.07
1 3/16	3.77	.05 1/2	2 1/4	13.52	.05	3 5/16	29.40	.05 1/2	.....	.....	.....

HEXAGON COLD ROLLED STEEL

Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound
1/4	.183	$0.10	11/16	1.40	$0.07 3/4	1 5/16	5.07	$0.07	2 1/8	13.27	$0.08
9/32	.23	.10	23/32	1.52	.07 3/4	1 3/8	5.57	.07	2 3/16	14.08	.08
5/16	.29	.10	3/4	1.66	.07 3/4	1 7/16	6.07	.07	2 1/4	14.87	.08
11/32	.36	.10	13/16	1.91	.07 3/4	1 1/2	6.62	.07	2 5/16	15.78	.08
3/8	.41	.09	7/8	2.25	.07	1 9/16	7.17	.07	2 3/8	16.57	.08
13/32	.50	.09	29/32	2.40	.07	1 5/8	7.76	.07	2 7/16	17.49	.08
7/16	.56	.09	15/16	2.58	.07	1 11/16	8.37	.07	2 1/2	18.37	.08 1/2
15/32	.64	.09	1	2.94	.07	1 3/4	9.00	.07	2 5/8	20.25	.08 1/2
1/2	.74	.08 1/2	1 1/16	3.32	.07	1 13/16	9.67	.07	2 3/4	22.23	.08 1/2
17/32	.82	.08 1/2	1 3/32	3.52	.07	1 7/8	10.32	.07	2 7/8	24.31	.08 1/2
9/16	.93	.08 1/2	1 1/8	3.73	.07	1 15/16	11.02	.07	3	26.45	.08 1/2
19/32	1.10	.08 1/2	1 3/16	4.15	.07	2	11.73	.07	.....	.....	.....
5/8	1.15	.08 1/2	1 1/4	4.60	.07	2 1/16	12.48	.08	.....	.....	.....

SQUARE COLD ROLLED STEEL

Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound	Diam., Inches	Weight Per Foot, Pounds	Per Pound
1/4	.213	$0.10	1	3.40	$0.07	1 3/4	10.41	$0.07	2 1/2	21.26	$0.08 1/2
5/16	.332	.10	1 1/16	3.85	.07	1 13/16	11.11	.07	2 5/8	23.59	.08 1/2
3/8	.479	.09	1 1/8	4.30	.07	1 7/8	11.90	.07	2 3/4	25.72	.08 1/2
7/16	.652	.09	1 3/16	4.78	.07	1 15/16	12.70	.07	2 15/16	29.18	.08 1/2
1/2	.850	.08 1/2	1 1/4	5.31	.07	2	13.60	.07	3	30.61	.08 1/2
9/16	1.08	.08 1/2	1 5/16	5.84	.07	2 1/16	14.39	.08	3 1/4	35.93	.09
5/8	1.34	.08 1/2	1 3/8	6.43	.07	2 1/8	15.26	.08	3 1/2	41.67	.09
11/16	1.61	.07 3/4	1 7/16	6.99	.07	2 3/16	16.18	.08	3 3/4	47.84	.09
3/4	1.92	.07 3/4	1 1/2	7.66	.07	2 1/4	17.25	.08	4	54.42	.09
13/16	2.25	.07 3/4	1 9/16	8.26	.07	2 5/16	18.09	.08	.....	.....	.....
7/8	2.60	.07	1 5/8	8.98	.07	2 3/8	19.07	.08	.....	.....	.....
15/16	2.99	.07	1 11/16	9.63	.07	2 7/16	20.09	.08			

FLAT COLD ROLLED STEEL

Thickness in Inches	1/4	5/16 to 1/2	9/16 to 23/32	3/4 to 1	1 1/16 to 1 1/2	1 9/16 to 3	Wider than 3
1/8 and 5/32 in.	$0.20	.18	.18	.14	.12	.10	.10
3/16 to 5/16 in.	.18	.16	.16	.12	.10	.08	.10
3/8 to 7/16 in.	...	.14	.14	.10	.10	.08	.10
1/2 to 9/16 in.	...	...	.10	.08	.08	.08	.10
5/8 to 11/16 in.	...	...	.10	.08	.08	.08	.10

Thickness in Inches	3/4 to 1	1 1/16 to 1 1/2	1 9/16 to 3	Wider than 3
3/4 to 15/16 in.	$0.08	.08	.08	.10
1 to 1 7/16 in.	...	.08	.08	.10
1 1/2 to 1 11/16 in.	...	...	.08	.10
1 3/4 to 1 15/16 in.	...	...	.08	.10
2 to 2 15/16 in.	...	...	.08	.10

Continued on the following page.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COLD ROLLED STEEL SHAFTING—Continued

EXTRAS FOR LONG AND SHORT LENGTHS

	Rounds Per 100 lbs. net	Hexagons Per 100 lbs. net	Squares Per 100 lbs. net	Flats Per 100 lbs. net
3 to 5 15/16 inches..	$1.00	$1.00	$1.00	$2.00
6 to 11 15/16 inches..	.50	.50	.50	1.00
12 to 23 15/16 inches..	.25	.25	.50	.50
24 to 59 15/16 inches..	.10	.10	.25	.25

	Per 100 lbs. net
Longer than 24 ft. and less than 30 ft.....	$0.50
30 ft. and less than 35 ft.	1.00
35 ft. and less than 40 ft.	1.50
40 ft. and less than 45 ft.	2.00
45 ft. and longer.....	2.50

Extras for long lengths apply on Rounds, Squares, Hexagons and Flats.

QUANTITY DIFFERENTIALS

All specifications for less than 1,000 pounds of a size will be subject to the following extras, the total weight of a size ordered to determine the extra regardless of length and regardless of the exact quantity actually shipped.

500 to 999 lbs.....	Per 100 Pounds Net,	$0.05
100 to 499 lbs.....	Per 100 Pounds Net,	.10
Less than 100 lbs.....	Per 100 Pounds Net,	.20

EXTRA FOR ACCURACY

For accuracy from exact size to .0015 inch under, sizes 3 inch diameter and smaller..... Per 100 Pounds Net, $0.25

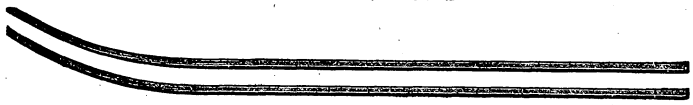
For accuracy from exact size to .001 inch under, sizes 2½ inch diameter and smaller..... Per 100 Pounds Net, .50

For accuracy within .0005 inch either way of a specified size or from exact size to .001 inch over, sizes 2 inch diameter and smaller..... Per 100 Pounds Net, 1.00

Note—Boxing charged at cost.

MISCELLANEOUS STEEL

CUTTER SHOES



Tapered and Bent.

3/8 x 3/4, 7/8, and 1 inch..... Per 100 Pounds, $.....

7/16 x 7/8 and 1 inch..... Per 100 Pounds, $.....

1/2 x 7/8 and 1 inch..... Per 100 Pounds, $.....

Stock Sizes are all 6½ feet long.

COULTER STEEL

5/8 x 2 1/4 and 2½ inches..... Per 100 Pounds, $.....

FLAT SLEIGH SHOE STEEL

1, 1¼, 1½, 1¾, 2, 2½, 3, 3½, and 4 x 3/8 and ½ inch..... Per 100 Pounds, $.....

Stock Lengths are in 14 and 16 foot Bars.

CONVEX SLEIGH SHOE STEEL

2½, 3, 3½, and 4 inches wide..... Per 100 Pounds, $.....

Stock Sizes.—2½, 3 and 3½ x 5/8 inch in 14 foot Bars. 4 x 3/4 inch in 14 foot Bars.

FLAT SPRING STEEL

1¼ to 4 x ¼ to ½ inch..... Per 100 Pounds, $.....

¾ to 1½ x 1/8 inch..... Per 100 Pounds, $.....

5/8 x 1/8 inch..... Per 100 Pounds, $.....

Stock Sizes.—1½, 2, 2½ x ¼ inch; 2½, 3 x 5/16 inch; 2½, 3, 3½, 4 x 3/8 inch; 5/8, ¾, 7/8 and 1 x 1/8 inch.

CANT HOOK STEEL

1 x ½ and 1 1/8 x ½ inch Flat..... Per 100 Pounds, $.....

1, 1 1/8, and 1¼ inch Octagon..... Per 100 Pounds, $.....

TOE CALK STEEL

List of Extras Adopted November 10, 1899.

1/2 x 3/8 inch and over..... **Base** Price, $.....

3/16 x 1/4 to 1/2 inch.....	Advance, 2 cents	5/16 x 1/2 to 1 inch.....	Advance, ½ cent
3/16 x 5/8 to 1 inch.....	Advance, 1 cent	3/8 x 7/16 inch.....	Advance, ¾ cent
1/4 x 5/16 to 3/8 inch.....	Advance, 1½ cents	3/8 inch square.....	Advance, ¾ cent
1/4 x 7/16 to 1 inch.....	Advance, ¾ cent	5/16 inch square.....	Advance, 1 cent
5/16 x 3/8 to 7/16 inch.....	Advance, ¾ cent	1/4 inch square.....	Advance, 2 cents

Sizes not enumerated subject to special arrangement.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TOOL STEEL

Classification of Best Refined Cast Steel for Tools.

Extra Sizes advance per pound as noted below.

Black Diamond Grade.....**Base** Price, per Pound, $.....
Sanderson Extra.....**Base** Price, per Pound, ...
Sanderson Special.....**Base** Price, per Pound, ...

Round, Square, and Octagon

5/8 inch to 2 inches diameter		**Base**	
2 1/8 to 3 inch	Advance,	$0.01	
3 1/8 to 4 inch	Advance,	.01 1/2	
4 1/8 to 5 inch	Advance,	.02	
5 1/8 to 6 inch	Advance,	.02 1/2	
6 1/8 to 7 inch	Advance,	.03	
7 1/8 to 8 inch	Advance,	.03 1/2	
9/16 to 1/2 inch	Advance,	.00 1/2	
7/16 to 3/8 inch	Advance,	$0.01	
5/16 to 11/32 inch	Advance,	.02	
1/4 to 9/32 inch	Advance,	.03	
3/16 inch	Advance,	.05	
5/32 inch	Advance,	.10	
1/8 inch	Advance,	.18	

Flat

5/8 inch to 2 inches wide by 9/16 to 2 inches thick		**Base**	
1/8 x 3/16 inch	Advance,	$0.20	
1/8 x 1/4 inch	Advance,	.15	
1/8 x 5/16 inch	Advance,	.08	
1/8 x 3/8 inch	Advance,	.04	
1/8 x 7/16 to 1/2 inch	Advance,	.03	
1/8 x 9/16 to 7 inch	Advance,	.02	
1/8 x 7 1/8 to 8 inch	Advance,	.03	
3/16 x 1/4 inch	Advance,	.05	
3/16 x 5/16 inch	Advance,	.04	
3/16 x 6/8 inch	Advance,	.03	
3/16 x 7/16 to 5/8 inch	Advance,	.02	
3/16 x 11/16 to 2 inch	Advance,	.01 1/2	
3/16 x 2 1/8 to 7 inch	Advance,	.01	
3/16 x 7 1/8 to 8 inch	Advance,	.02	
1/4 x 5/16 to 3/8 inch	Advance,	.02	
1/4 x 7/16 to 5/8 inch	Advance,	.01 1/2	
1/4 x 11/16 to 2 inch	Advance,	.01 1/2	
1/4 x 2 1/8 to 7 inch	Advance,	.01	
1/4 x 7 1/8 to 8 inch	Advance,	.02	
5/16 x 3/8 to 5/8 inch	Advance,	$0.01 1/2	
5/16 x 11/16 to 8 inch	Advance,	.01	
3/8 x 7/16 to 8 inch	Advance,	.01	
7/16 x 1/2 to 8 inch	Advance,	.01	
1/2 x 9/16 to 8 inch	Advance,	.01	
9/16 x 2 1/8 to 8 inch	Advance,	.01	
9/16 to 2 x 5/8 to 2 inch	Base Sizes, no advance		
5/8 to 2 x 2 1/8 to 7 inch	Advance,	.01	
5/8 to 1 3/4 x 7 1/8 to 8 inch	Advance,	.01	
1 7/8 to 2 x 7 1/8 to 8 inch	Advance,	.01 1/2	
2 1/8 to 3 x 2 1/8 to 5 inch	Advance,	.01	
2 1/8 to 3 x 5 1/8 to 8 inch	Advance,	.01 1/2	
3 1/8 to 4 x 3 1/8 to 6 inch	Advance,	.01 1/2	
3 1/8 to 4 x 6 1/8 to 8 inch	Advance,	.02	
4 1/8 to 5 x 4 1/8 to 7 inch	Advance,	.02	
4 1/8 to 5 x 7 1/8 to 8 inch	Advance,	.02 1/2	
5 1/8 to 6 x 5 1/8 to 8 inch	Advance,	.02 1/2	
6 1/8 to 7 x 6 1/8 to 7 inch	Advance,	.03	
6 1/8 to 8 x 7 1/8 to 8 inch	Advance,	.03 1/2	

Net Extras for Cutting to Specified Single and Multiple Lengths

24 inches or over	Advance per Pound,	$0.00 1/2
18 to 24 inches	Advance per Pound,	.01
12 to 18 inches	Advance per Pound,	.01 1/2
6 to 12 inches	Advance per Pound,	.02

Note.—Less than 6 inches long—Special Price.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL CHANNELS—BAR SIZES

Weight per Lineal Foot.												
Size, inches	½	½	⅝	⅝	¾	¾	⅞	⅞	⅞	1	1	1⅛
Flange, inches	7/32	⅛	9/32	5/16	5/16	⅜	¼	⅜	7/16	⅜	½	7/16
Thickness, inch	3/32	⅛	3/32	⅛	7/64	⅛	⅛	⅛	⅛	⅛	⅛	9/64
Pounds per Foot	.25	.30	.34	.41	.47	.56	.51	.63	.70	.67	.78	.87
Size, inches	1⅛	1¼	1¼	1¼	1¼	1¼	1½	1½	1½	1½	1½	1¾
Flange, inches	½	7/16	½	½	½	½	½	½	9/16	9/16	9/16	7/16
Thickness, inch	3/16	3/16	⅛	9/64	5/32	3/16	⅛	3/16	11/64	3/16	¼	3/16
Pounds per Foot	1.10	1.12	.91	1.02	1.07	1.20	1.04	1.32	1.29	1.36	1.64	1.41
Size, inches	1¾	1¾	2	2	2	2	2	2⅛	25/16	2½	2½	2½
Flange, inches	½	9/16	9/16	9/16	9/16	⅝	⅝	7/16	7/16	½	9/16	11/16
Thickness, inch	3/16	¼	⅛	3/16	13/64	3/16	¼	3/16	3/16	⅛	3/16	No. 8
Pounds per Foot	1.55	1.92	1.41	1.72	1.96	1.83	2.10	1.65	1.77	1.43	1.96	2.02

STRUCTURAL STEEL CHANNELS

Size, inches	3	3	3	4	4	4	5	5	5	6	6	6	6
Flange, inches	113/32	1½	139/64	137/64	121/31	123/32	1¾	157/64	21/32	159/64	21/32	25/32	29/32
Thickness, inch	11/64	17/64	23/64	3/16	¼	21/64	3/16	21/64	31/64	13/64	5/16	7/16	9/16
Pounds per Foot	4.0	5.0	6.0	5.25	6.25	7.25	6.5	9.0	11.5	8.0	10.5	13.0	15.5
Size, inches	7	7	7	7	8	8	8	8	8	9	9	9	10
Flange, inches	23/32	213/64	219/64	213/32	217/64	211/32	27/16	217/32	2⅝	27/16	231/64	221/32	219/32
Thickness, inch	13/64	5/16	27/64	17/32	7/32	5/16	13/32	31/64	37/64	15/64	9/32	29/64	15/64
Pounds per Foot	9.75	12.25	14.75	17.25	11.25	13.75	16.25	18.75	21.25	13.25	15.0	20.0	15.0
Size, inches	10	10	10	12	12	12	12	13	15	15	15	15	15
Flange, inches	247/64	257/64	31/32	215/16	33/64	311/64	327/64	4	313/32	317/32	3⅝	323/32	313/16
Thickness, inch	⅜	17/32	43/64	9/32	25/64	33/64	49/64	⅜	13/32	17/32	⅝	23/32	13/16
Pounds per Foot	20.0	25.0	30.0	20.5	25.0	30.0	40.0	32.0	33.0	40.0	45.0	50.0	55.0

STEEL ANGLES, FILLET—EQUAL LEGS

Size, inches	½x½	½x½	⅝x⅝	⅝x⅝	¾x¾	¾x¾	⅞x⅞	⅞x⅞	1x1	1x1
Thickness, inch	3/32	⅛	3/32	⅛	⅛	3/16	⅛	3/16	⅛	3/16
Pounds per Foot	0.3	0.4	0.4	0.5	0.6	0.9	0.7	1.0	0.8	1.2
Size, inches	1x1	1¼x1¼	1¼x1¼	1¼x1¼	1¼x1¼	1¼x1¼	1½x1½	1½x1½	1½x1½	1½x1½
Thickness, inch	¼	⅛	3/16	¼	5/16	⅜	⅛	3/16	¼	5/16
Pounds per Foot	1.5	1.1	1.5	2.0	2.4	2.7	1.3	1.8	2.4	2.9
Size, inches	1½x1½	1¾x1¾	1¾x1¾	1¾x1¾	1¾x1¾	1¾x1¾	2x2	2x2	2x2	2x2
Thickness, inch	⅜	⅛	3/16	¼	5/16	⅜	⅛	3/16	¼	5/16
Pounds per Foot	3.4	1.4	2.2	2.8	3.4	4.0	1.6	2.5	3.2	4.0
Size, inches	2x2	2¼x2¼	2¼x2¼	2¼x2¼	2¼x2¼	2¼x2¼	2½x2½	2½x2½	2½x2½	2½x2½
Thickness, inch	⅜	⅛	3/16	¼	5/16	⅜	⅛	3/16	¼	5/16
Pounds per Foot	4.7	1.9	2.8	3.7	4.5	5.3	2.1	3.1	4.1	5.0
Size, inches	2½x2½	2½x2½	2½x2½	2¾x2¾	2¾x2¾	2¾x2¾	2¾x2¾	2¾x2¾	2¾x2¾	2¾x2¾
Thickness, inch	⅜	7/16	½	⅛	3/16	¼	5/16	⅜	7/16	½
Pounds per Foot	5.9	6.8	7.7	2.3	3.3	4.5	5.6	6.6	7.6	8.5
Size, inches	3x3	3x3	3x3	3x3	3x3	3x3	3x3	3½x3½	3½x3½	3½x3½
Thickness, inch	⅛	3/16	¼	5/16	⅜	7/16	½	5/16	⅜	7/16
Pounds per Foot	2.5	3.7	4.9	6.1	7.2	8.3	9.4	7.2	8.5	9.8
Size, inches	3½x3½	4x4	4x4	4x4	5x5	5x5	5x5	6x6	6x6	6x6
Thickness, inch	½	⅜	7/16	½	⅜	7/16	½	⅜	7/16	½
Pounds per Foot	11.1	9.8	11.3	12.8	12.3	14.3	16.2	14.9	17.2	19.2

STEEL ANGLES, FILLET—UNEQUAL LEGS

Size, inches	⅞x⅝	1x⅝	1x⅝	1⅜x13/16	1⅜x13/16	1⅜x⅞	1⅜x⅞	1½x¾	1½x¾	1¾x1¼	1¾x1¼
Thickness, inch	⅛	⅛	3/16	⅛	3/16	⅛	3/16	⅛	3/16	⅛	3/16
Pounds per Foot	0.58	0.7	0.9	0.9	1.2	0.9	1.3	0.9	1.3	1.2	1.8
Size, inches	1¾x1¼	1¾x1½	1¾x1½	1¾x1½	2x1½	2x1½	2x1½	2x1½	2x1½	2¼x1½	2¼x1¼
Thickness, inch	¼	3/16	¼	5/16	⅛	3/16	¼	5/16	⅜	3/16	¼
Pounds per Foot	2.3	1.9	2.6	3.1	1.5	2.2	2.8	3.4	4.0	2.3	3.0
Size, inches	2¼x1½	2¼x1½	2¼x⅝	2¼x⅝	2¼x⅝	2½x1½	2½x1½	2½x1½	2½x1½	2½x1½	2½x1¾
Thickness, inch	5/16	⅜	⅜	7/16	½	⅛	3/16	¼	5/16	⅜	⅛
Pounds per Foot	3.7	4.4	4.5	5.1	5.7	1.6	2.5	3.2	4.0	4.7	1.8
Size, inches	2½x1¾	2½x1¾	2½x1¾	2½x2	2½x2	2½x2	2½x2	2½x2	2½x2	3x1½	3x1½
Thickness, inch	3/16	¼	5/16	3/16	¼	5/16	⅜	7/16	½	⅛	3/16
Pounds per Foot	2.6	3.4	4.2	2.8	3.7	4.5	5.3	6.1	6.8	1.8	2.7
Size, inches	3x1½	3x2	3x2	3x2	3x2	3x2	3x2	3x2½	3x2½	3x2½	3x2½
Thickness, inch	¼	3/16	¼	5/16	⅜	7/16	½	¼	5/16	⅜	7/16
Pounds per Foot	3.6	3.1	4.1	5.0	5.9	6.8	7.7	4.5	5.6	6.6	7.6
Size, inches	3x2½	3½x3	3½x3	3½x3	3½x3	4x3	4x3	4x3	4x3	4x3½	4x3½
Thickness, inch	½	5/16	⅜	7/16	½	5/16	⅜	7/16	½	5/16	⅜
Pounds per Foot	8.5	6.6	7.9	9.1	10.2	7.2	8.5	9.8	11.1	7.7	9.1
Size, inches	4x3½	4x3½	5x3	5x3	5x3	5x3	5x3½	5x3½	5x3½	5x3½	5x4
Thickness, inch	7/16	½	5/16	⅜	7/16	½	5/16	⅜	7/16	½	⅜
Pounds per Foot	10.6	11.9	8.2	9.8	11.3	12.8	8.7	10.4	12.0	13.6	11.0
Size, inches	5x4	5x4	6x3½	6x3½	6x3½	6x4	6x4	.....	.....	.....	.....
Thickness, inch	7/16	½	⅜	7/16	½	⅜	½	.....	.....	.....	.....
Pounds per Foot	12.8	14.5	11.7	13.5	15.3	12.3	16.2	.....	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WEIGHTS OF ROUND AND SQUARE BAR IRON AND STEEL

One Cubic Foot of Iron Weighing 480 Pounds. One Cubic Foot of Steel Weighing 490 Pounds.

Thickness or Diameter, Inches	Square Bar Iron One Foot Long	Square Bar Steel One Foot Long	Round Bar Iron One Foot Long	Round Bar Steel One Foot Long	Thickness or Diameter, Inches
3/16	.117	.120	.092	.094	3/16
1/4	.208	.213	.164	.167	1/4
5/16	.326	.332	.256	.261	5/16
3/8	.469	.478	.368	.375	3/8
7/16	.638	.651	.501	.511	7/16
1/2	.833	.851	.654	.668	1/2
9/16	1.055	1.076	.828	.845	9/16
5/8	1.302	1.329	1.023	1.044	5/8
3/4	1.875	1.914	1.473	1.503	3/4
7/8	2.552	2.605	2.004	2.046	7/8
1	3.333	3.402	2.618	2.672	1
1 1/8	4.219	4.306	3.313	3.382	1 1/8
1 1/4	5.208	5.316	4.091	4.175	1 1/4
1 3/8	6.302	6.432	4.950	5.052	1 3/8
1 1/2	7.500	7.655	5.890	6.012	1 1/2
1 5/8	8.802	8.984	6.913	7.056	1 5/8
1 3/4	10.21	10.419	8.018	8.183	1 3/4
1 7/8	11.72	11.961	9.204	9.394	1 7/8
2	13.33	13.61	10.47	10.69	2
2 1/8	15.05	15.36	11.82	12.06	2 1/8
2 1/4	16.88	17.22	13.25	13.52	2 1/4
2 3/8	18.80	19.19	14.77	15.07	2 3/8
2 1/2	20.83	21.26	16.36	16.70	2 1/2
2 5/8	22.97	23.44	18.04	18.41	2 5/8
2 3/4	25.21	25.73	19.80	20.21	2 3/4
2 7/8	27.55	28.12	21.64	22.09	2 7/8
3	30.00	30.62	23.56	24.05	3
3 1/8	32.55	33.23	25.57	26.10	3 1/8
3 1/4	35.21	35.94	27.65	28.23	3 1/4
3 3/8	37.97	38.75	29.82	30.43	3 3/8
3 1/2	40.83	41.68	32.07	32.74	3 1/2
3 5/8	43.80	44.71	34.40	35.12	3 5/8
3 3/4	46.88	47.84	36.82	37.57	3 3/4
3 7/8	50.05	51.09	39.31	40.13	3 7/8
4	53.33	54.45	41.89	42.77	4
4 1/8	56.72	57.90	44.55	45.47	4 1/8
4 1/4	60.21	61.47	47.29	48.28	4 1/4
4 3/8	63.80	65.13	50.11	51.15	4 3/8
4 1/2	67.50	69.81	53.01	54.12	4 1/2
4 5/8	71.30	72.79	56.00	57.17	4 5/8
4 3/4	75.21	76.78	59.07	60.30	4 3/4
4 7/8	79.22	80.87	62.22	63.52	4 7/8
5	83.33	85.08	65.45	66.82	5
5 1/8	87.55	89.38	68.76	70.20	5 1/8
5 1/4	91.88	93.80	72.16	73.67	5 1/4
5 3/8	96.30	98.31	75.64	77.21	5 3/8
5 1/2	100.8	102.94	79.19	80.85	5 1/2
5 5/8	105.5	107.67	82.83	84.56	5 5/8
5 3/4	110.2	112.52	86.56	88.37	5 3/4
5 7/8	115.1	117.45	90.36	92.25	5 7/8
6	120.0	122.51	94.25	96.22	6
6 1/8	125.1	127.66	98.22	100.26	6 1/8
6 1/4	130.2	132.94	102.3	104.41	6 1/4
6 3/8	135.5	138.30	106.4	108.62	6 3/8
6 1/2	140.8	143.78	110.6	112.92	6 1/2
6 5/8	146.3	149.35	114.9	117.30	6 5/8
6 3/4	151.9	155.05	119.3	121.78	6 3/4
6 7/8	157.6	160.84	123.7	125.32	6 7/8
7	163.3	166.75	128.3	130.97	7
7 1/8	169.2	172.75	132.9	135.67	7 1/8
7 1/4	175.2	178.86	137.6	140.48	7 1/4
7 3/8	181.3	185.08	142.4	145.36	7 3/8
7 1/2	187.5	191.41	147.3	150.33	7 1/2
7 5/8	193.8	197.84	152.2	155.38	7 5/8
7 3/4	200.2	204.38	157.2	160.52	7 3/4
7 7/8	206.7	211.03	162.4	165.74	7 7/8
8	213.3	217.78	167.6	171.04	8

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WEIGHTS OF FLAT BAR IRON

Per Lineal Foot

Width, Inches	THICKNESS IN INCHES														
	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
1/2	.105	.211	.361	.422	.491	.634	....	.....	.....	.....	.....	.....	.....	.....	.....
5/8	.130	.260	.420	.510	.640	.784	.840	.90	.....	.....	.....	.....	.....	.....	.....
3/4	.158	.316	.471	.633	.790	.950	.990	1.26	1.58	.....	.....	.....	.....	.....	.....
7/8	.185	.370	.551	.730	.915	1.09	1.25	1.46	1.82	2.19	.....	.....	.....	.....	.....
1	.208	.417	.625	.833	1.04	1.25	1.46	1.67	2.08	2.50	2.92	3.33	3.75	4.17	5.00
1 1/8	.234	.469	.703	.938	1.17	1.41	1.64	1.87	2.34	2.81	3.28	3.75	4.22	4.69	5.63
1 1/4	.260	.521	.781	1.04	1.30	1.56	1.82	2.08	2.60	3.13	3.65	4.17	4.69	5.21	6.25
1 3/8	.286	.573	.859	1.15	1.43	1.72	2.09	2.29	2.86	3.44	4.01	4.58	5.16	5.73	6.88
1 1/2	.313	.625	.938	1.25	1.56	1.88	2.19	2.50	3.13	3.75	4.38	5.00	5.63	6.25	7.50
1 5/8	.339	.677	1.02	1.36	1.69	2.08	2.37	2.71	3.39	4.06	4.74	5.42	6.09	6.77	8.13
1 3/4	.365	.729	1.09	1.46	1.82	2.19	2.55	2.92	3.65	4.38	5.10	5.83	6.56	7.29	8.75
1 7/8	.391	.781	1.17	1.56	1.95	2.34	2.73	3.12	3.91	4.69	5.47	6.25	7.03	7.81	9.38
2	.417	.833	1.25	1.67	2.08	2.50	2.92	3.33	4.17	5.00	5.83	6.67	7.50	8.33	10.00
2 1/8	.443	.886	1.33	1.77	2.21	2.65	3.10	3.54	4.43	5.31	6.20	7.08	7.97	8.85	10.63
2 1/4	.469	.938	1.41	1.88	2.34	2.81	3.28	3.75	4.69	5.63	6.56	7.50	8.44	9.38	11.25
2 3/8	.495	.990	1.48	1.98	2.47	2.97	3.46	3.96	4.95	5.94	6.93	7.92	8.91	9.90	11.88
2 1/2	.521	1.04	1.56	2.08	2.60	3.13	3.65	4.17	5.21	6.25	7.29	8.33	9.38	10.42	12.50
2 5/8	.547	1.09	1.64	2.19	2.73	3.28	3.83	4.38	5.47	6.56	7.66	8.75	9.84	10.94	13.13
2 3/4	.573	1.15	1.72	2.29	2.86	3.44	4.01	4.58	5.73	6.88	8.02	9.17	10.31	11.46	13.75
2 7/8	.599	1.20	1.80	2.40	3.00	3.60	4.20	4.79	5.99	7.19	8.39	9.58	10.78	11.98	14.38
3	.625	1.25	1.88	2.50	3.13	3.75	4.38	5.00	6.25	7.50	8.75	10.00	11.25	12.50	15.00
3 1/4	.677	1.35	2.03	2.71	3.39	4.06	4.74	5.42	6.77	8.13	9.48	10.83	12.19	13.54	16.25
3 1/2	.729	1.46	2.19	2.92	3.65	4.38	5.10	5.83	7.29	8.75	10.21	11.67	13.13	14.58	17.50
3 3/4	.781	1.56	2.34	3.13	3.91	4.69	5.47	6.25	7.81	9.38	10.94	12.50	14.06	15.63	18.75
4	.833	1.67	2.50	3.33	4.17	5.00	5.83	6.67	8.33	10.00	11.67	13.33	15.00	16.67	20.00
4 1/4	.885	1.77	2.66	3.54	4.43	5.31	6.20	7.08	8.85	10.63	12.40	14.17	15.94	17.71	21.25
4 1/2	.938	1.88	2.81	3.75	4.69	5.63	6.56	7.50	9.38	11.25	13.13	15.00	16.88	18.75	22.50
4 3/4	.990	1.98	2.97	3.96	4.95	5.94	6.93	7.92	9.90	11.88	13.85	15.83	17.81	19.79	23.75
5	1.04	2.08	3.13	4.17	5.21	6.25	7.29	8.33	10.42	12.50	14.58	16.67	18.75	20.83	25.00
5 1/4	1.09	2.19	3.28	4.38	5.47	6.56	7.66	8.75	10.94	13.13	15.31	17.50	19.69	21.88	26.25
5 1/2	1.15	2.29	3.44	4.58	5.73	6.88	8.02	9.17	11.46	13.75	16.04	18.33	20.63	22.92	27.50
5 3/4	1.20	2.40	3.59	4.79	5.99	7.19	8.39	9.58	11.98	14.38	16.77	19.17	21.56	23.96	28.75
6	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	12.50	15.00	17.50	20.00	22.50	25.00	30.00
6 1/4	1.30	2.60	3.91	5.21	6.51	7.81	9.11	10.42	13.02	15.63	18.23	20.83	23.44	26.04	31.25
6 1/2	1.35	2.71	4.06	5.42	6.77	8.13	9.48	10.83	13.54	16.25	18.96	21.67	24.38	27.08	32.50
6 3/4	1.41	2.81	4.22	5.63	7.03	8.44	9.84	11.25	14.06	16.88	19.69	22.50	25.31	28.13	33.75
7	1.46	2.92	4.38	5.83	7.29	8.75	10.21	11.67	14.58	17.50	20.42	23.33	26.25	29.17	35.00
7 1/2	1.56	3.13	4.69	6.25	7.81	9.38	10.94	12.50	15.63	18.75	21.88	25.00	28.13	31.25	37.50
8	1.67	3.33	5.00	6.67	8.33	10.00	11.67	13.33	16.67	20.00	23.33	26.67	30.00	33.33	40.00

WEIGHTS OF FLAT BAR STEEL

Per Lineal Foot

Width, Inches	THICKNESS IN INCHES														
	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
1/2	.1060	.2125	.319	.425	.531	.638	.744	.850	1.06	1.28	.....	.....	.....	.....	.....
5/8	.1381	.2656	.399	.531	.664	.797	.929	1.06	1.33	1.60	.....	.....	.....	.....	.....
3/4	.1594	.3188	.478	.636	.797	.957	1.116	1.275	1.594	1.913	.....	.....	.....	.....	.....
7/8	.1859	.3720	.558	.743	.929	1.116	1.302	1.487	1.859	2.232	.....	.....	.....	.....	.....
1	.212	.425	.638	.850	1.06	1.28	1.49	1.70	2.12	2.55	2.98	3.40	3.83	4.25	5.10
1 1/8	.2391	.4782	.717	.959	1.20	1.43	1.68	1.92	2.39	2.87	3.35	3.83	4.30	4.79	5.74
1 1/4	.2656	.5312	.797	1.06	1.33	1.59	1.86	2.12	2.65	3.19	3.72	4.25	4.78	5.31	6.38
1 3/8	.292	.585	.875	1.17	1.46	1.76	2.05	2.34	2.92	3.51	4.09	4.69	5.26	5.85	7.02
1 1/2	.319	.638	.957	1.28	1.59	1.92	2.23	2.55	3.19	3.83	4.47	5.10	5.74	6.38	7.65
1 5/8	.346	.692	1.04	1.38	1.73	2.08	2.42	2.72	3.46	4.15	4.84	5.53	6.22	6.91	8.29
1 3/4	.372	.744	1.11	1.49	1.86	2.23	2.60	2.98	3.72	4.47	5.20	5.95	6.70	7.44	8.93
2	.425	.850	1.28	1.70	2.12	2.55	2.98	3.40	4.25	5.10	5.95	6.80	7.65	8.50	10.20
2 1/4	.478	.96	1.44	1.91	2.39	2.87	3.35	3.83	4.78	5.75	6.69	7.65	8.61	9.57	11.48
2 1/2	.531	1.06	1.59	2.12	2.65	3.19	3.72	4.25	5.31	6.38	7.44	8.50	9.57	10.63	12.75
2 3/4	.584	1.17	1.75	2.34	2.92	3.51	4.09	4.67	5.84	7.02	8.18	9.35	10.52	11.69	14.03
3	.638	1.28	1.91	2.55	3.19	3.83	4.46	5.10	6.38	7.65	8.93	10.20	11.48	12.75	15.30
3 1/4	.691	1.38	2.07	2.76	3.45	4.15	4.83	5.53	6.91	8.29	9.67	11.05	12.43	13.81	16.58
3 1/2	.744	1.49	2.23	2.98	3.72	4.47	5.20	5.95	7.44	8.93	10.41	11.90	13.39	14.87	17.85
3 3/4	.80	1.59	2.39	3.19	3.99	4.78	5.58	6.38	7.97	9.57	11.16	12.75	14.34	15.94	19.13
4	.85	1.70	2.55	3.40	4.25	5.10	5.95	6.80	8.50	10.20	11.90	13.60	15.30	17.00	20.40
4 1/4	.90	1.81	2.71	3.61	4.52	5.42	6.32	7.22	9.03	10.84	12.65	14.45	16.26	18.06	21.68
4 1/2	.96	1.91	2.87	3.83	4.78	5.74	6.70	7.65	9.57	11.48	13.39	15.30	17.22	19.13	22.95
4 3/4	1.01	2.02	3.03	4.04	5.05	6.06	7.07	8.08	10.10	12.12	14.13	16.15	18.17	20.19	24.23
5	1.06	2.13	3.19	4.25	5.31	6.38	7.44	8.50	10.63	12.75	14.87	17.00	19.13	21.25	25.50
5 1/4	1.116	2.232	3.35	4.46	5.58	6.69	7.81	8.93	11.16	13.39	15.62	17.85	20.08	22.32	26.78
5 1/2	1.169	2.338	3.51	4.67	5.84	7.02	8.18	9.35	11.69	14.03	16.36	18.70	21.04	23.38	28.05
5 3/4	1.222	2.444	3.67	4.89	6.11	7.34	8.56	9.77	12.22	14.67	17.10	19.55	21.99	24.44	29.33
6	1.275	2.55	3.83	5.10	6.38	7.65	8.93	10.20	12.75	15.30	17.85	20.40	22.95	25.50	30.60
6 1/4	1.328	2.656	3.99	5.31	6.64	7.97	9.29	10.63	13.28	15.94	18.60	21.25	23.91	26.56	31.88
6 1/2	1.381	2.762	4.14	5.53	6.90	8.29	9.67	11.05	13.81	16.58	19.34	22.10	24.87	27.62	33.15
6 3/4	1.434	2.869	4.30	5.74	7.17	8.61	10.04	11.48	14.34	17.22	20.08	22.95	25.82	28.69	34.43
7	1.487	2.975	4.46	5.95	7.44	8.93	10.41	11.90	14.87	17.85	20.83	23.80	26.78	29.75	35.70
7 1/2	1.594	3.188	4.78	6.36	7.97	9.57	11.16	12.75	15.94	19.13	22.32	25.50	28.68	31.88	38.26
8	1.70	3.40	5.10	6.80	8.50	10.20	11.90	13.60	17.00	20.40	23.80	27.20	30.60	34.00	40.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WEIGHTS OF HOOP STEEL

Per Lineal Foot. Rolled to Birmingham (or Stub's) Gauge

Width, Inches	GAUGE NOS.														
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
⅜	.2104	.1887	.1709	.1530	.1390	.1211	.1058	.0918	.0829	.0740	.0625	.0536	.0446	.0408	.0357
½	.2805	.2516	.2278	.2040	.1853	.1615	.1411	.1224	.1105	.0986	.0833	.0714	.0595	.0544	.0476
⅝	.3506	.3145	.2848	.2550	.2316	.2019	.1764	.1530	.1381	.1233	.1041	.0893	.0744	.0680	.0595
¾	.4208	.3774	.3417	.3060	.2780	.2423	.2117	.1836	.1658	.1479	.1250	.1071	.0893	.0816	.0714
⅞	.4909	.4403	.3987	.3570	.3243	.2826	.2469	.2142	.1934	.1726	.1458	.1250	.1041	.0952	.0833
1	.5610	.5032	.4556	.4080	.3706	.3230	.2822	.2448	.2210	.1972	.1666	.1428	.1190	.1088	.0952
1 ⅛	.6311	.5661	.5126	.4590	.4169	.3634	.3175	.2754	.2486	.2219	.1874	.1607	.1339	.1224	.1071
1 ¼	.7013	.6290	.5695	.5100	.4633	.4038	.3528	.3060	.2763	.2465	.2083	.1785	.1488	.1360	.1190
1 ⅜	.7714	.6919	.6265	.5610	.5096	.4441	.3880	.3366	.3039	.2712	.2291	.1964	.1636	.1496	.1309
1 ½	.8415	.7548	.6834	.6120	.5559	.4845	.4233	.3672	.3315	.2958	.2499	.2142	.1785	.1632	.1428
1 ⅝	.9116	.8177	.7404	.6630	.6022	.5249	.4586	.3978	.3591	.3205	.2707	.2321	.1934	.1768	.1547
1 ¾	.9818	.8806	.7973	.7140	.6486	.5653	.4939	.4284	.3868	.3451	.2916	.2499	.2083	.1904	.1666
1 ⅞	1.0519	.9435	.8543	.7650	.6949	.6056	.5291	.4590	.4144	.3698	.3124	.2678	.2231	.2040	.1785
2	1.1220	1.0064	.9112	.8160	.7412	.6460	.5644	.4896	.4420	.3944	.3332	.2856	.2380	.2176	.1904
2 ⅛	1.1921	1.0693	.9682	.8670	.7875	.6864	.5997	.5202	.4696	.4191	.3540	.3035	.2529	.2312	.2023
2 ¼	1.2623	1.1322	1.0251	.9180	.8339	.7268	.6350	.5508	.4973	.4437	.3749	.3213	.2678	.2448	.2142
2 ⅜	1.3324	1.1951	1.0821	.9690	.8802	.7671	.6702	.5814	.5249	.4684	.3957	.3392	.2826	.2584	.2261
2 ½	1.4025	1.2580	1.1390	1.0200	.9265	.8075	.7055	.6120	.5525	.4930	.4165	.3570	.2975	.2720	.2380
2 ⅝	1.4726	1.3209	1.1960	1.0710	.9728	.8479	.7408	.6426	.5801	.5177	.4373	.3749	.3124	.2856	.2499
2 ¾	1.5428	1.3838	1.2529	1.1220	1.0192	.8883	.7761	.6732	.6078	.5423	.4582	.3927	.3273	.2992	.2618
2 ⅞	1.6129	1.4467	1.3099	1.1730	1.0655	.9286	.8113	.7038	.6354	.5670	.4790	.4106	.3421	.3128	.2737
3	1.6830	1.5096	1.3668	1.2240	1.1118	.9690	.8466	.7344	.6630	.5916	.4998	.4284	.3570	.3264	.2856
3 ⅛	1.7531	1.5725	1.4238	1.2750	1.1581	1.0094	.8819	.7650	.6906	.6163	.5206	.4463	.3719	.3400	.2975
3 ¼	1.8233	1.6354	1.4807	1.3260	1.2045	1.0498	.9172	.7956	.7183	.6409	.5415	.4641	.3868	.3536	.3094
3 ⅜	1.8934	1.6983	1.5377	1.3770	1.2508	1.0901	.9524	.8262	.7459	.6656	.5623	.4820	.4016	.3672	.3213
3 ½	1.9635	1.7612	1.5946	1.4280	1.2971	1.1305	.9877	.8568	.7735	.6902	.5831	.4998	.4165	.3808	.3332
3 ⅝	2.0336	1.8241	1.6516	1.4790	1.3434	1.1709	1.0230	.8874	.8011	.7149	.6039	.5177	.4314	.3944	.3451
3 ¾	2.1038	1.8870	1.7085	1.5300	1.3898	1.2113	1.0583	.9180	.8288	.7395	.6248	.5355	.4463	.4080	.3570
3 ⅞	2.1739	1.9499	1.7655	1.5810	1.4361	1.2516	1.0935	.9486	.8564	.7642	.6456	.5534	.4611	.4216	.3689
4	2.2440	2.0128	1.8224	1.6320	1.4824	1.2920	1.1288	.9792	.8840	.7888	.6664	.5712	.4760	.4352	.3808
4 ¼	2.3843	2.1386	1.9363	1.7340	1.5751	1.3728	1.1994	1.0404	.9393	.8381	.7081	.6069	.5058	.4624	.4046
4 ½	2.5245	2.2644	2.0502	1.8360	1.6677	1.4535	1.2699	1.1016	.9945	.8874	.7497	.6426	.5355	.4896	.4284
4 ¾	2.6648	2.3902	2.1641	1.9380	1.7604	1.5343	1.3405	1.1628	1.0498	.9367	.7914	.6783	.5653	.5168	.4522
5	2.8050	2.5160	2.2780	2.0400	1.8530	1.6510	1.4110	1.2240	1.1050	.9860	.8330	.7140	.5950	.5440	.4760

Weights of Half Round and Oval Bars

Size, Half Round	Size, Oval	Weight Per Foot	Size, Half Round	Size, Oval	Weight Per Foot
⅜	⅜ x 3/16	.186	1	1 x ½	1.323
7/16	7/16 x 1/32	.253	1 ⅛	1 ⅛ x 9/16	1.624
½	½ x ¼	.331	1 ¼	1 ¼ x ⅝	2.087
⅝	⅝ x 5/16	.517	1 ½	1 ½ x ¾	2.976
¾	¾ x ⅜	.744	1 ¾	1 ¾ x ⅞	4.059
⅞	⅞ x 7/16	1.013	2	2 x1	5.299

Weights of Half Oval Bars

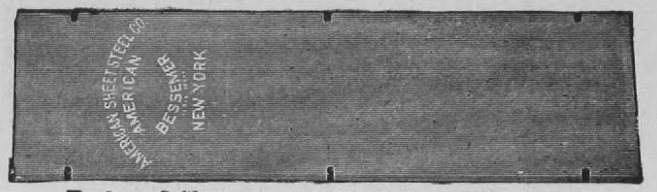
Size, Inches	Weight, Per Foot	Size, Inches	Weight, Per Foot
⅜ x 3/32	.093	1 x ¼	.662
7/16 x 1/64	.127	1 ⅛ x 9/32	.812
½ x ⅛	.163	1 ¼ x 5/16	1.032
⅝ x 5/32	.259	1 ½ x ⅜	1.488
¾ x 3/16	.372	1 ¾ x 7/16	2.026
⅞ x 7/32	.507	2 x ½	2.645

Weights of Wagon Box Iron

Width, Inches	Thickness, B. W. G.	Weight, Per Foot	Approximate No. Feet in a Bundle	No. Feet in a Ton, 2,000 Lbs.
¾	No. 10	.295	380	6,770
¾	No. 11	.264	422	7,575
¾	No. 12	.233	480	8,580
⅞	No. 10	.350	320	5,710
⅞	No. 11	.309	362	6,470
1	No. 10	.400	280	5,000

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHEET STEEL



Tank and Sheet Steel, Price Per 100 Pounds.

	Tank Steel	Blue Annealed Sheet Steel					
Gauge	1-4" and heavier	3-16 inch	Nos. 8	10	12	14	16
Store	$.....	.....	.....	.....	.....	.....	.....
Mill	.....	.....	.....	.....	.....	.....	.....

	One Pass Cold Rolled Sheet Steel						
Gauge	Nos. 16	18 to 21	22 to 24	26	27	28	30
Store	$.....	.....	.....	.....	.....	.....	.....
Mill	.....	.....	.....	.....	.....	.....	.....

Acme Blue Sheet Steel

Store.....No. 27 Gauge—24x101 inches.....Per 100 Pounds, $.....

Mill—All Standard Sizes and Gauges. Advance Over One Pass Cold Rolled Sheet Steel..Per 100 Pounds, ...

Note.—Order Black Sheets No. 22 and lighter in full bundles only, as we do not break bundles of No. 22 and lighter. We will, however, open bundles of No. 20 and heavier. Contents of full bundles below.

SIZES AND WEIGHTS OF SHEET STEEL CARRIED IN STOCK

Tank Steel

Gauge	Size of Sheet Inches	Weight Per Sq. Ft. Lbs.	Weight Per Sheet Lbs.
½ in.	48x120	20	800
⅜ in.	48x120	15	600
5/16 in.	48x120	12.5	500
¼ in.	36x120	10	300
¼ in.	48x120	10	400

Blue Annealed

Gauge Nos.	Size of Sheet Inches	Weight Per Sheet Lbs.	Gauge Nos.	Size of Sheet Inches	Weight Per Sheet Lbs.
3/16 in.	48x120	300	12	48x144	210
8	36x120	206.25	12	54x120	196.88
8	48x120	275	12	54x144	236.26
10	28x120	131.25	12	60x120	218.75
10	30x120	140.63	14	28x96	58.33
10	36x96	135	14	30x120	78.13
10	36x120	168.75	14	36x96	75
10	36x144	202.5	14	36x120	93.75
10	40x120	187.5	14	36x144	112.50
10	42x120	196.875	14	40x120	104.16
10	48x96	180	14	48x96	100
10	48x120	225	14	48x120	125
10	48x144	270	14	48x144	150
10	54x120	253.13	14	54x120	140.63
10	54x144	303.76	16	28x96	46.67
10	60x120	281.25	16	30x96	50
10	72x120	337.5	16	30x120	62.5
12	28x120	102.08	16	36x96	60
12	30x120	109.38	16	36x120	75
12	36x120	131.25	16	36x144	90
12	36x96	105.	16	40x120	83.33
12	36x144	157.5	16	42x120	87.50
12	40x120	145.72	16	48x96	80
12	42x120	153.125	16	48x120	100
12	48x96	140	16	48x144	120
12	48x120	175			

One Pass Cold Rolled

Gauge Nos.	Size of Sheet Inches	Weight Per Sheet Lbs.	No. of Sheets in a Bdle.	Weight per Bdle. Lbs.
16	28x96	46.67	3	140
18	24x96	32	5	160
18	28x96	37.33	4	149
18	30x96	40	4	160
18	36x96	48	3	144
20	24x96	24	6	144
20	28x96	26	6	156
20	30x96	28	5	140
20	36x96	36	4	144
22	24x96	20	7	140
22	28x96	23.33	6	140
22	30x96	25	6	150
22	36x96	30	5	150
24	24x101	16.83	9	151
24	28x96	18.67	8	149
24	30x96	20	7	140
24	36x96	24	6	144
26	24x101	12.63	12	151
26	28x96	14	11	154
26	30x96	15	10	150
27	24x101	11.57	12	139
27	30x96	13.75	11	151
28	24x101	10.52	14	147
28	30x96	12.5	12	150

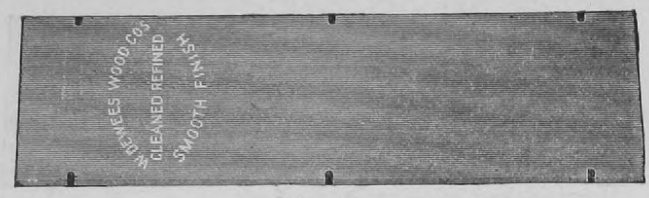
Acme Blue Sheet Steel

Gauge Nos.	Size of Sheet Inches	Weight Per Sheet Lbs.	No. of Sheets in a Bdle.	Weight per Bdle. Lbs.
27	24x101	11.57	12	139

Note.—Other specifications for Sheet Steel filled by special order, and shipped direct from mills.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WOOD'S SMOOTH SHEET IRON



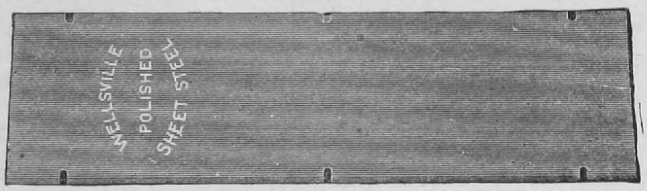
Wood's Cleaned, Refined, Smooth Finish Uniform Color Sheet Iron

Gauge Nos.....	14	16	18 and 20	22 and 24	26	27	28
Store, Per 100 Pounds, $.....	.....	.....	.....	.....	.....	.....	.....
Mill.. Per 100 Pounds,	.....	.....	.....	.....	.....	.....	.....

Stock Sizes

Gauge Nos.	Size of Sheet	Wt. Per Sheet	Sheets in Bdle.	Wt. Per Bdle.	Gauge Nos.	Size of Sheet	Wt. Per Sheet	Sheets in Bdle.	Wt. Per Bdle.
20	28x 96	28.	5	140	24	28x 96	18.67	8	149
22	28x 96	23.33	6	140	26	24x101	12.63	12	151
24	24x101	16.83	9	151	27	24x101	11.57	12	139

WELLSVILLE POLISHED SHEET STEEL



Wellsville Polished Sheet Steel has a very bright and smooth finish, similar but not equal to Planished Iron. Particularly adapted for the manufacture of Stove Pipe, Elbows, Stamped Ware, Ranges, Stoves, etc.

In Bundles—Gauge Nos.....	12 to 17	18 to 20	22 to 24	26	27	28
Store.....Per 100 Pounds,	$.....	.....	.....	.....	.....	.....
Mill.....Per 100 Pounds,	.....	.....	.....	.....	.....	.....
In Packs—Gauge Nos.....	12 to 17	18 to 20	22 to 24	26	27	28
Store.....Per 100 Pounds,	$.....	.....	.....	.....	.....	.....
Mill.....Per 100 Pounds,	.....	.....	.....	.....	.....	.....

Stock Sizes

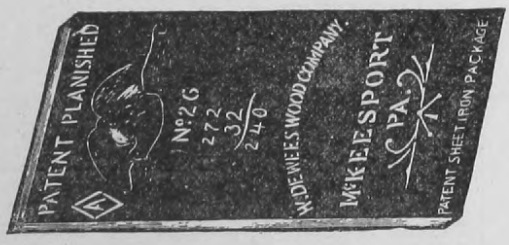
In Bundle of about 150 Pounds Each.

Gauge Nos.	Size of Sheet	Weight Per Sheet	Sheets in Bdle.	Weight Per Bdle.
26	28x101	14.73	10	147
27	24x101	11.57	12	139

In Packs of about 300 Pounds Each.

Gauge Nos.	Size of Sheet	Weight Per Sheet	Sheets in Pack
27	28x60	8.25	36

WOOD'S PLANISHED IRON



A Grade.

No. 26—28x60 inches*.....Per Pound, $.....

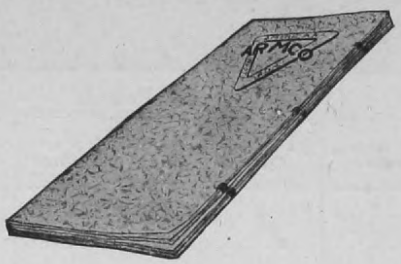
No. 27—28x60 inches*.....Per Pound, ...

Extra: For less than full packs add 1c per pound.

*The A Grade packs contain all full size sheets, 28x60 inches. Weight per sheet, No. 26, 9 pounds; No. 27, 8¼ pounds, approximately. Average weight per pack, 260 pounds.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ARMCO (AMERICAN INGOT) IRON RUST-RESISTING SHEETS



99.84% Pure

We all know that the old-fashioned Iron Nails, Metal Roofs and Iron Wire for Fences gave better service and resisted corrosion so much better than the present day article that there is no comparison, because old-fashioned Iron was free from impurities.

An old-fashioned Iron Roof did service on a building in Pittsburgh for forty years, and when it was removed was found to be as good as new. This metal was old-fashioned pure iron which is very little damaged by rust. "Armco" (American Ingot) Iron Rust-Resisting Sheets are 99.84 per cent pure, a standard even higher than that of the old-time product.

We absolutely guarantee "Armco" Iron to be the purest iron manufactured in this country or abroad. It is equal to the best grade of old-fashioned iron that always gave satisfaction and resisted corrosion.

"Armco" Iron has been endorsed by the most prominent chemists in the country and used in large quantities by the United States Government.

Read Bulletin 80, on the Corrosion of Iron and Steel, by Dr. A. S Cushman, of the U. S. Department of Agriculture. This bulletin shows the purer the iron the less likely are the electrolytic effects to become serious. Read the chapter on Corrosion in Bradley M. Stoughton's "Metallurgy of Iron and Steel." Purity, Evenness and Solidity are the basis of Rust-Resistance.

We solicit your inquiries and will be glad to furnish samples, prices, results of tests and full information regarding "Armco" Iron Rust-Resisting Sheets.

Flat Sheets—Galvanized

Gauge Nos.	10	12	14	16	18-20
From Store, Less than 5 Bdls	$.....	.....	.....	.....	.....
From Store, 5 to 14 Bdls., inc	.....	.....	.....	.....	.....
From Store, 15 to 24 Bdls., inc	.....	.....	.....	.....	.....
From Store, 25 Bdls or more	.....	.....	.....	.....	.....

Gauge Nos.	22-24	26	27	28
From Store, Less than 5 Bdls	$.....	.....	.....	.....
From Store, 5 to 14 Bdls., inc	.....	.....	.....	.....
From Store, 15 to 24 Bdls., inc	.....	.....	.....	.....
From Store, 25 Bdls. or more	.....	.....	.....	.....

Note.—For Roofing and other Formed Ingot Iron Products see Index.

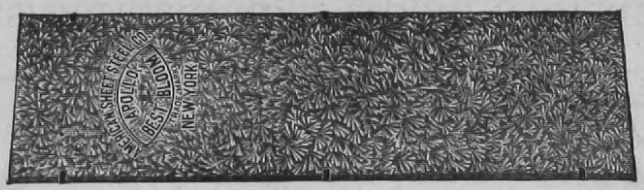
Sizes and Weights of "Armco" Galvanized Sheets Carried in Stock

Gauge Nos.	Size of Sheet	Weight Per Sheet	Sheets in a Bdle.	Weight Per Bdle.	Gauge Nos.	Size of Sheet	Weight Per Sheet	Sheets in a Bdle.	Weight Per Bdle.
24	28x96	21.58	7	151	26	30x96	18.12	8	145
24	30x96	23.12	7	162	28	24x96	12.50	12	150
24	36x96	27.75	6	166	28	28x96	14.58	10	146
26	24x96	14.50	10	145	28	30x96	15.62	10	156
26	28x96	16.91	9	152					

Note.—Black Sheets, Not Stock—Furnished on Special Orders Only

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GALVANIZED SHEETS



Price Per 100 Pounds

Gauge Nos.	Size of Sheet	Wt. Per Sheet	Sheets in Bdle.	Wt. Per Bdle.	From Store	From Mill	Gauge Nos.	Size of Sheet	Wt. Per Sheet	Sheets in Bdle.	Wt. Per Bdle.	From Store	From Mill
14	28x 96	61.23	3	184	$.....	$.....	24	24x 96	18.50	8	148	$.....	$.....
14	30x 96	65.62	2	131	.....	.....	24	26x 96	20.04	8	160	.....	.....
14	36x120	98.44	2	197	.....	.....	24	28x 96	21.58	7	151	.....	.....
16	28x 96	49.57	3	149	.....	.....	24	30x 96	23.12	7	162	.....	.....
16	30x 96	53.12	3	159	.....	.....	24	36x 96	27.75	6	166	.....	.....
16	36x120	79.69	2	159	.....	.....	26	24x 96	14.50	10	145	.....	.....
18	24x 96	34.50	4	138	.....	.....	26	26x 96	15.71	10	157	.....	.....
18	28x 96	40.24	4	161	.....	.....	26	28x 96	16.91	9	152	.....	.....
18	30x 96	43.12	4	172	.....	.....	26	30x 96	18.12	8	145	.....	.....
18	36x 96	51.75	3	155	.....	.....	26	36x 96	21.75	7	152	.....	.....
20	24x 96	26.50	6	159	.....	.....	27	28x 96	15.74	10	157	.....	.....
20	26x 96	28.70	5	143	.....	.....	27	30x 96	16.87	9	152	.....	.....
20	28x 96	30.91	5	155	.....	.....	28	24x 96	12.50	12	150	.....	.....
20	30x 96	33.12	5	166	.....	.....	28	26x 96	13.54	11	149	.....	.....
20	36x 96	39.75	4	159	.....	.....	28	28x 96	14.58	10	146	.....	.....
22	24x 96	22.50	7	157	.....	.....	28	30x 96	15.62	10	156	.....	.....
22	26x 96	24.37	6	146	.....	.....	28	36x 96	18.75	8	150	.....	.....
22	28x 96	26.24	6	157	.....	.....	28	36x120	23.44	7	164	.....	.....
22	30x 96	28.12	5	141	.....	.....	30	28x 96	12.25	12	144	.....	.....
22	36x 96	33.75	5	169	.....	.....	30	30x 96	13.12	11	144	.....	.....

SAP PAN IRON

Galvanized, No. 24—44x96 inches, 5 Sheets in a Bundle.. { **Full** Bundles .....Per 100 Pounds, $..... / Less than full Bundles..Per 100 Pounds, ...

Standard United States Gauge of Sheet Iron

Adopted by the Association of Iron and Steel Sheet Manufacturers July 1st, 1893.

Note.—This table gives gauge numbers and approximate thickness in inches and weights per square foot of **Uncoated** sheets. **Galvanized** sheets weigh 2½ ounces more per square foot than uncoated sheets of the same gauge.

Gauge Nos.	Approx. Thickness in Fractions of inch	Approx. Thickness in Decimals of inch	Wt. Per Sq. Ft. in Ounces, Avoirdupois	Wt. Per Sq. Ft. in Lbs. Avoirdupois	Gauge Nos.	Approx. Thickness in Fractions of inch	Approx. Thickness in Decimals of inch	Wt. Per Sq. Ft. in Ounces, Avoirdupois	Wt. Per Sq. Ft. in Lbs. Avoirdupois
0000000	½	.5	320	20.	17	9/160	.05625	36	2.25
000000	15/32	.46875	300	18.75	18	1/20	.05	32	2.
00000	7/16	.4375	280	17.50	19	7/160	.04375	28	1.75
0000	13/32	.40625	260	16.25	20	3/80	.0375	24	1.50
000	3/8	.375	240	15.	21	11/320	.034375	21½	1.34
00	11/32	.34375	220	13.75	22	1/32	.03125	20	1.25
0	5/16	.3125	200	12.50	23	9/320	.028125	18	1.125
1	9/32	.28125	180	11.25	24	1/40	.025	16	1.
2	17/64	.265625	170	10.625	25	7/320	.021875	14	.875
3	¼	.25	160	10.	26	3/160	.01875	12	.75
4	15/64	.234375	150	9.375	27	11/640	.0171875	11	.69
5	7/32	.21875	140	8.75	28	1/64	.015625	10	.625
6	13/64	.203125	130	8.125	29	9/640	.0140625	9	.5625
7	3/16	.1875	120	7.5	30	1/80	.0125	8	.5
8	11/64	.171875	110	6.875	31	7/640	.0109375	7	.4375
9	5/32	.15625	100	6.25	32	13/1280	.01015625	6½	.40625
10	9/64	.140625	90	5.625	33	3/320	.009375	6	.375
11	⅛	.125	80	5.	34	11/1280	.00859375	5½	.34375
12	7/64	.109375	70	4.375	35	5/640	.0078125	5	.3125
13	3/32	.09375	60	3.75	36	9/1280	.00703125	4½	.28125
14	5/64	.078125	50	3.125	37	17/2560	.006640625	4¼	.265625
15	9/128	.0703125	42	2.65	38	1/160	.00625	4	.25
16	1/16	.0625	40	2.5	..	....	.....	...	....

Note.—For the purpose of securing uniformity of gauge throughout the United States, Congress, **under date of March 3rd, 1893,** adopted the above as the **legal standard** for determining the thickness of uncoated iron and steel sheets, allowing a variation of 2½ per cent either above or below for practical use and application.

Digitized by Google UNIVERSITY OF MICHIGAN

BAR SOLDER

Buhl Extra Solder, in Bars of about 1½ pounds each.

	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per 100 Pounds	$.....	.....	.....

Packed—Fifty Pounds in a Box.

Warranted Solder, in Bars of about 1½ pounds each.

	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per 100 Pounds	$.....	.....	.....

Packed—Fifty Pounds in a Box.

Commercial Solder, in Bars of about 1½ pounds each.

	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per 100 Pounds	$.....	.....	.....

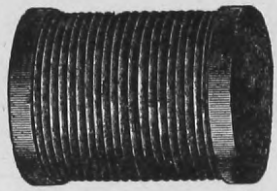
Packed—Fifty Pounds in a Box.

Plumbers No. 1 Wiping Solder, in Ingots of about 3 to 4 pounds each.

	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per 100 Pounds	$.....	.....	.....

Packed—Fifty Pounds in a Box.

WIRE SOLDER



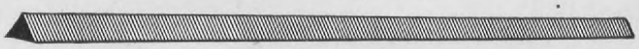
Wire Solder, ⅛ inch diameter.

	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per 100 Pounds	$.....	.....	.....

Spools for Wire Solder.....Each, $.....Extra

Packed—Fifty Pounds on a Spool.

ALUMINUM SOLDER



For soldering sheet aluminum and light and heavy aluminum castings. Can also be used for soldering cracks in aluminum castings. Aluminum solder does not work smoothly like common solder, and flux should **not** be used. Oil and Grease should be burned off with a blow torch after spraying with a small amount of gasoline, then file or scrape until bright or perfectly clean.

When soldering Sheet Aluminum, Light Castings Etc., use an ordinary soldering copper heated somewhat hotter than for tin solder. File or scrape all solder or tin off before using. Tin well with aluminum solder the surfaces to be joined, rubbing well into the surface and sweat together with a hot iron as in common solder.

For soldering heavy castings clean thoroughly, heat with blow torch until hot enough to melt the solder. Rub solder thoroughly into the surface with the tang of a file then proceed to fill up the hole. For soldering cracks in Aluminum Castings, file or chip a groove along the crack and proceed as above.

Aluminum Solder. In Triangular Bars of about one-quarter pound each.....Per Pound, $.....

BAR TIN

Bar Tin, in Bars of about 1¼ Pounds Each.

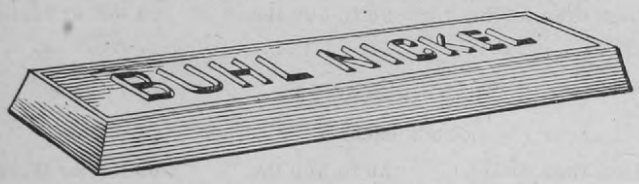
	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or More
From Store			
Per Pound	$.....	.....	.....

Packed—Fifty Pounds in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BABBITT METALS

BUHL NICKEL

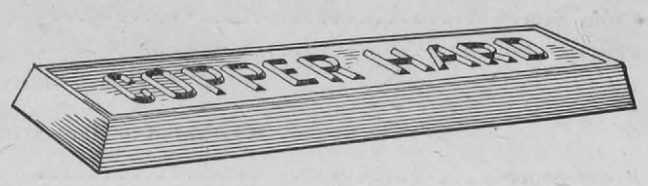


A Tin Base Nickel Alloy Metal adapted for large power plants, dynamos, hydraulic machinery, marine engines, air compressors, automobile bearings, electrical machinery and electric railway requirements. Especially adapted for severe service, where none but the best should be used. Its extreme toughness makes it the ideal Babbitt Metal for crankshaft and connecting rod bearings in automobile work and also the most satisfactory Babbitt for marine work.

Buhl Nickel Babbitt Metal.....Per Pound, $.....

Packed—Fifty Pounds in a Box.

COPPER HARD



A Tin Alloy that will stand the strain of hard service and high speed. Invaluable for fast running machinery, stationary engines, electric railway requirements, etc.

Copper Hard Babbitt Metal.....Per Pound, $.....

Packed—Fifty Pounds in a Box.

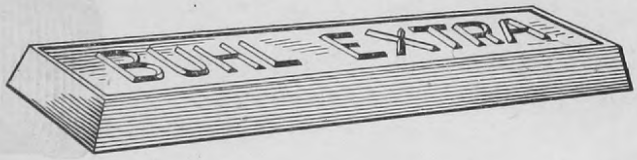
COPALOY

Copaloy as a Metal for Bearings has proven its superiority over widely advertised trade-mark brands of anti-friction Metals. It is a composition for high speed machinery, wearing longer, keeping cooler and requiring less oil than the trade mark brands. It has been subjected to the most severe tests on different kinds of bearings and we are recommending it to our customers to meet the competition of such Brands on the basis of quality. At the same time it furnishes them with a more profitable metal at a substantially lower price.

Copaloy Babbitt Metal.....Per Pound, $.....

Packed—Fifty-six Pounds in a Box.

BUHL EXTRA

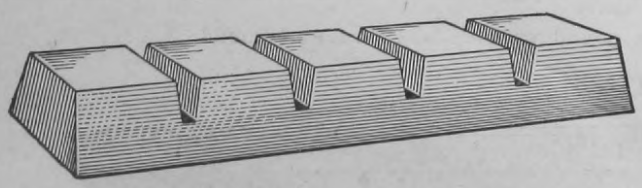


Especially adapted for high-speed machinery and where the strain of service is great. The most dependable Babbitt Metal for all-around use. It is adapted for all classes of machinery. A perfect balanced alloy, which stands hard wear. Great care is used in its manufacture, and an earnest effort made to make it a thoroughly reliable anti-friction metal. Made from high-grade metals. Quality never varies. Once used always used.

Buhl Extra Babbitt Metal.....Per Pound, $.....

Packed—Fifty Pounds in a Box.

NUMBER ONE

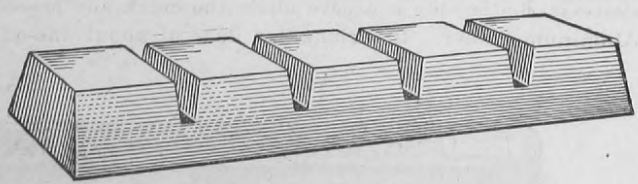


This is a very good Babbitt, suitable for heavy, fast running shafting and similar duties.

No. 1—Babbitt Metal.....Per Pound, $.....

Packed—Fifty Pounds in a Box.

NUMBER FOUR



Intended for slow speeds and light pressures, but can be used for line shafting hangers, etc.

No. 4—Babbitt Metal.....Per Pound, $.....

Packed—Fifty Pounds in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

METALS

BLOCK TIN

Block Tin, in Pigs of about 100 pounds each .....Per Pound, $.....

PIG LEAD

Pig Lead, in Pigs of about 90 pounds each .....Per Pound, $.....

SPELTER

Spelter, or Slab Zinc, in Slabs of about 40 pounds each.....Per Pound, $.....

ANTIMONY

Antimony in Cakes, weighing about 35 pounds each.....Per Pound, $.....

BAR LEAD

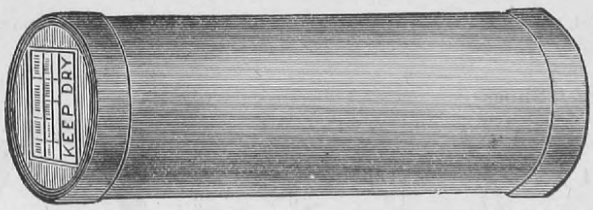
Bar Lead, in Bars of about 1¾ Pounds Each

From Store.....	Less than 50 lbs.	50 to 500 lbs.	500 lbs. or more
Per 100 Pounds.....	$.....	.....	.....

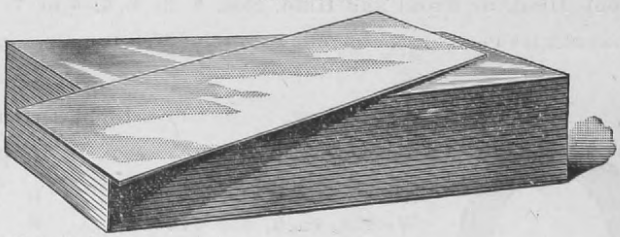
Packed—Fifty Pounds in a Box.

SHEET ZINC

IN CASKS



IN CASES



Roll Sheet Zinc, No. 9 Gauge

In Casks of.....	600 pounds	200 pounds	100 pounds	In Sheets
30x84 inches. Per 100 Pounds,	$.....	.....	.....	.....
36x84 inches. Per 100 Pounds,	.....	.....	.....	.....

Weight about ⅔ pound to a square foot; 14 pounds to a Sheet of 36x84 inches.

Flat Sheet Zinc

Flat Sheets, No. 9 Gauge, 30x54 inches.....Per 100 Pounds, $.....

Packed—About 100 Pounds in a Case. Sold in Full Cases Only.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

JUNIATA HORSE SHOES

Extra Swaged Steel Shoes

Front.

Front

Nos.	0	1	2	3	4	5	6	7
Weight, each, ozs.	10	13	15½	18½	22	25½	30	39
Number in a Keg.	160	123	103	86	73	63	53	41

Hind

Nos.	0	1	2	3	4	5	6	7
Weight, each, ozs.	8	10	12½	15½	19	22½	26½	31
Number in a Keg.	200	160	128	103	84	71	60	51

Hind.

Price, each size separate—

Front, Hind, or Front and Hind, Nos. 0 or 1.....Per Keg,.....

Front, Hind, or Front and Hind, Nos. 2, 3, 4, 5, 6 or 7.....Per Keg,.....

Price, assorted—

Front and Hind, assorted, Nos. 1, 2 and 3.....Per Keg,.....

Front and Hind, assorted, Nos. 2, 3 and 4, 3, 4 and 5, or 4, 5 and 6.....Per Keg,.....

Packed in 100 Pound Kegs as follows: Nos. 1 to 6 Front, each size separate: Hind, each size separate. Fronts and Hinds, Nos. 1 to 7, each size separate; and assorted, Nos. 1, 2 and 3; 2, 3 and 4; 3, 4 and 5, or 4, 5 and 6.

Snow Shoes

Front.

Front

Nos.	0	1	2	3	4	5	6	7
Weight, each, ozs.	10	12	15	18½	23½	28	32	38
Number in a Keg.	160	133	107	86	68	57	50	42

Hind

Nos.	0	1	2	3	4	5	6	7
Weight, each, ozs.	8	10½	12½	16	19½	23	27	33
Number in a Keg.	200	152	128	100	82	70	59	48

Hind.

Price, each size separate—

Front, Hind, or Front and Hind, Nos. 0 or 1.....Per Keg,.....

Front, Hind, or Front and Hind, Nos. 2, 3, 4, 5, 6 or 7.....Per Keg,.....

Packed in 100 Pound Kegs, as follows: Front, each size separate; Hind, each size separate; or Front and Hind, each size separate.

Light Driving Steel Shoes

Front.

Front

Nos.	0	1	2	3	4	5
Weight, each, ozs.	9	10½	13	16	20	23
Number in a Keg.	178	152	123	100	80	70

Hind

Nos.	0	1	2	3	4	5
Weight, each, ozs.	8	9	10	12	15	19
Number in a Keg.	200	178	160	133	107	84

Hind.

Price, each size separate—

Front and Hind, or Hind, Nos. 0 or 1.....Per Keg,.....

Front and Hind, or Hind, Nos. 2, 3, 4 or 5.....Per Keg,.....

Packed in 100 Pound Kegs as follows: Front and Hind, each size separate; or Hind each size separate.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

NEVERSLIP HORSE SHOES

"B" Pattern.

Regular.

Front.

"B" Pattern.

Ex-Light, Hind.

"B" Pattern Drilled Iron Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each Ozs.		For Calks. Inch.	Number in a Keg.		Per Pound.
	Front.	Hind.	Front.	Hind.	Front.	Hind.		Front.	Hind.	
0	5	5	4 1/4	4 1/4	11	11	3/8	145	145	$0.16 1/2
1	5 1/4	5 1/4	4 3/8	4 3/8	12	12	3/8	133	133	.16 1/2
2	5 5/8	5 5/8	4 3/4	4 5/8	15	15	7/16	107	107	.16
3	5 7/8	5 7/8	5 1/8	5	18	18	7/16	89	89	.16
4	6 1/8	6 1/8	5 1/2	5 3/8	22	22	1/2	73	73	.16
5	6 7/8	6 7/8	5 7/8	5 3/4	29	29	9/16	55	55	.16
6	7 1/4	7 1/4	6	5 7/8	32	32	5/8	50	50	.16
7	7 7/8	7 7/8	6 3/8	6 1/4	36	36	5/8	44	44	.16
8	8 1/4	8 1/4	6 5/8	6 1/2	42	42	5/8	38	38	.16

Packed—In 100 Pound Kegs, either Front or Hind, each size separate.

Drilled Light Steel Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each, Ozs.		For Calks. Inch.	Number in a Keg.		Per Pound.
	Front.	Hind.	Front.	Hind.	Front.	Hind.		Front.	Hind.	
0	4 7/8	4 7/8	4 1/8	4	8 1/2	8 1/2	3/8	184	184	$0.22
1	5 1/4	5 1/4	4 1/4	4 1/8	10	10	3/8	160	160	.22
2	5 1/2	5 1/2	4 1/2	4 3/8	12	12	7/16	133	133	.21 1/2
3	6	6	4 3/4	4 5/8	15	15	7/16	109	109	.21 1/2
4	6 3/8	6 3/8	5 1/8	5	16	16	1/2	100	100	.21 1/2
5	6 7/8	6 7/8	5 1/2	5 3/8	20	20	1/2	80	80	.21 1/2
6	7 1/4	7 1/4	6	6	23	23	9/16	60	60	.21 1/2

Packed—In 100 Pound Kegs, either Front or Hind, each size separate.

Drilled Extra Light Steel Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each, Ozs.		For Calks. Inch.	Per Pair.
	Front.	Hind.	Front.	Hind.	Front.	Hind.		
0	5	5	4 1/4	4 1/8	8 1/4	8	3/8	$0.52
1	5 1/4	5 1/4	4 1/2	4 3/8	9 1/4	9	3/8	.52
2	5 1/2	5 1/2	4 3/4	4 5/8	11 1/4	11	3/8	.52
3	5 3/4	5 3/4	5 1/4	5 1/8	12 1/2	12 1/2	3/8	.52
4	6 1/8	6 1/8	5 1/2	5 3/8	15	15	7/16	.52
5	6 1/2	6 1/2	5 3/4	5 5/8	19	18	7/16	.64

Packed—10 Pair Front and 10 Pair Hind in a Case.

"B" Pattern Calked Iron Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each, Ozs.		Calks. Inch.	Per Set
	Front.	Hind.	Front.	Hind.	Front.	Hind.		
2	5 5/8	5 5/8	4 3/4	4 5/8	18	18	7/16	$2.00
3	5 7/8	5 7/8	5 1/8	5	20	20	7/16	2.20
4	6 1/8	6 1/8	5 1/2	5 3/8	25	25	1/2	2.40
5	6 7/8	6 7/8	5 7/8	5 3/4	33	33	9/16	3.00
6	7 1/4	7 1/4	6	5 7/8	37	37	5/8	3.20

Packed—Five Sets in a Box, Five Pairs Front and **Five** Pairs Hind.

Calked Steel Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each, Ozs.		Calks. Inch.	Per Pair.
	Front.	Hind.	Front.	Hind.	Front.	Hind.		
1	5 1/4	5 1/4	4 1/4	4 1/8	12	12	3/8	$1.20
2	5 1/2	5 1/2	4 1/2	4 3/8	14	14	7/16	1.30
3	6	6	4 3/4	4 5/8	17	17	7/16	1.40
4	6 3/8	6 3/8	5 1/8	5	19	19	1/2	1.54
5	6 7/8	6 7/8	5 1/2	5 3/8	23	23	1/2	1.64

Packed—10 Pairs in a Case, either Front or Hind.

Calked Extra Light Steel Shoes

Nos.	Outside Length, Inches.		Outside Width, Inches.		Weight, Each, Ozs.		Calks. Inch.	Per Pair.
	Front.	Hind.	Front.	Hind.	Front.	Hind		
1	5 1/4	5 1/4	4 1/2	4 3/8	11 1/4	11	3/8	$1.20
2	5 1/2	5 1/2	4 3/4	4 5/8	13 1/4	13	3/8	1.20
3	5 3/4	5 3/4	5 1/4	5 1/8	14 1/4	14	3/8	1.28

Packed—10 Pairs in a Case, either Front or Hind.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD TOE CALKS

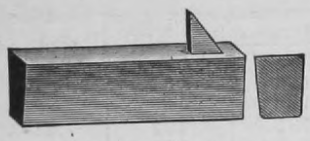
Price Per 100 Pounds

Size Nos.	Medium Length Blunt Pattern Inches	Long Blunt Pattern Inches	Medium Length Country or Half Sharp Pattern Inches	Long Country or Half Sharp Pattern Inches	Medium Length Sharp Pattern Inches	Long Sharp Pattern Inches
0	1 ½ x 13/32 x 9/32	1 ¾ x 13/32 x 9/32	1 ½ x 13/32 x 9/32	1 ¾ x 13/32 x 9/32	1 5/8 x 13/32 x 9/32	1 7/8 x 13/32 x 9/32
1	1 ½ x ½ x 5/16	1 ¾ x ½ x 5/16	1 ½ x ½ x 5/16	1 ¾ x ½ x 5/16	1 7/8 x ½ x 5/16	2 1/8 x ½ x 5/16
2	1 ¾ x 9/16 x ⅜	2 x 9/16 x ⅜	1 ¾ x 9/16 x ⅜	2 x 9/16 x ⅜	2 1/8 x 9/16 x ⅜	2 ⅜ x 9/16 x ⅜
3	2 x ⅝ x ⅜	2 ¼ x ⅝ x ⅜	2 x ⅝ x ⅜	2 ¼ x ⅝ x ⅜	2 ⅜ x ⅝ x ⅜	2 ⅝ x ⅝ x ⅜
4	2 ¼ x ⅝ x 7/16	2 ½ x ⅝ x 7/16	2 ¼ x ⅝ x ⅜	2 ½ x ⅝ x 7/16	2 ⅝ x ⅝ x 7/16	2 ⅞ x ⅝ x 7/16
5	2 ½ x ¾ x ½	2 ¾ x ¾ x ½	2 ½ x ¾ x ½	2 ¾ x ¾ x ½	2 ⅞ x ¾ x ½	3 1/8 x ¾ x ½
6	2 ¾ x ⅞ x ½	3 x ⅞ x ½	2 ¾ x ⅞ x ½	3 x ⅞ x ½	3 1/8 x ⅞ x ½	3 ⅜ x ⅞ x ½

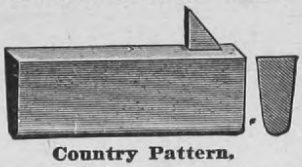
Packed—Twenty-five Pounds in a Box.

Per 100 Pounds } $..... ....

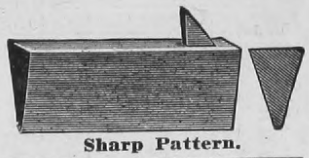
JUNIATA TOE CALKS



Blunt Pattern



Country Pattern.



Sharp Pattern.

Size Nos.	Medium Length Blunt Pattern Inches	Long Blunt Pattern Inches	Medium Length Country or Half Sharp Pattern Inches	Long Country or Half Sharp Pattern Inches	Medium Length Sharp Pattern Inches	Long Sharp Pattern Inches
0	1 ¼ x 7/16 x ⅜	1 ½ x 7/16 x ⅜	1 ⅜ x 15/32 x 5/16	1 ⅝ x 15/32 x 5/16	1 ½ x ½ x ⅜	1 ¾ x ½ x ⅜
1	1 ½ x ½ x ⅜	1 ¾ x ½ x ⅜	1 ½ x 17/32 x 5/16	1 ¾ x ½ x 5/16	1 ¾ x ⅝ x 7/16	2 x ⅝ x 7/16
2	1 ¾ x 9/16 x 7/16	2 x 9/16 x 7/16	1 ¾ x 21/32 x 11/32	2 x 21/32 x 11/32	2 x ¾ x ½	2 ¼ x ¾ x ½
3	2 x ⅝ x ½	2 ¼ x ⅝ x ½	2 x ¾ x 13/32	2 ¼ x ¾ x 13/32	2 ¼ x ⅞ x 9/16	2 ½ x ⅞ x 9/16
4	2 ¼ x ¾ x ½	2 ½ x ¾ x ½	2 ¼ x 27/32 x 7/16	2 ½ x 27/32 x 7/16	2 ½ x 1 x ⅝	2 ¾ x 1 x ⅝
5	2 ½ x 13/16 x 9/16	2 ¾ x 13/16 x 9/16	2 ½ x 27/32 x 7/16	3 x 15/16 x 17/32	2 ¾ x 1 x ⅝	3 x 1 x ⅜
6	2 ¾ x ⅞ x 9/16	3 x ⅞ x 9/16	2 ¾ x 15/16 x 17/32	3 ¼ x 15/16 x 17/32	3 x 1 x ⅝	3 ¼ x 1 x ⅝

Packed—Twenty-five Pounds in a Box.

Per 100 Pounds } $..... ....

HORSE SHOE CALKS

NEVERSLIP

No. 1.

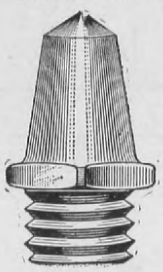
LOCK JAW

Solid Steel, Drop Forged.

Size, inches	7/16	½	9/16	⅝
Per 100	$4.40	4.40	4.80	4.80

Packed—50 in a Box.

NEVERSLIP



No. 4.

All Neverslip Drive Calks are made of Special Steel, and are the best shaped Drive Calks on the market. They are the only machined Drive Calks offered for sale, which means that they can be guaranteed as to size up to 1/1000 of an inch, which would be impossible in any other make.

A Hard Center Self Sharpening Calk and especially adapted for use on icy streets. Will positively prevent a horse from slipping under all circumstances.

Size, inches	5/16	⅜	7/16	½	9/16	⅝
No. 1—Sharp, to Drive.....Per 100,	....	...	$4.80	4.80	5.20	**5.20**
No. 4—Square Shoulder, to Screw...Per 100,	$4.60	4.60	5.00	5.00	5.40	**5.40**

Packed—50 in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TOE CALK WRENCHES

Neverslip.

Neverslip Regular Toe Calk Wrench removes all sizes of calks.

No. 4—Neverslip Toe Calk Wrench.....Each, $1.10

DRIVE CALK EXTRACTORS

Neverslip.

Neverslip Extractors are made of special dynamo steel and are a necessary part of the equipment of shoers using drive shoes and calks.

Neverslip Drive Calk Extractor. Sizes 7/16, 1/2, 9/16 and 5/8 inch.....Each, $0.60

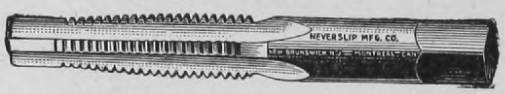
DRIVE CALK PUNCHES

Neverslip.

Made of special dynamo steel and used in connection with Neverslip drive shoes and calks.

Neverslip Drive Calk Punch. Sizes 7/16, 1/2, 9/16 and 5/8 inch.....Each, $0.40

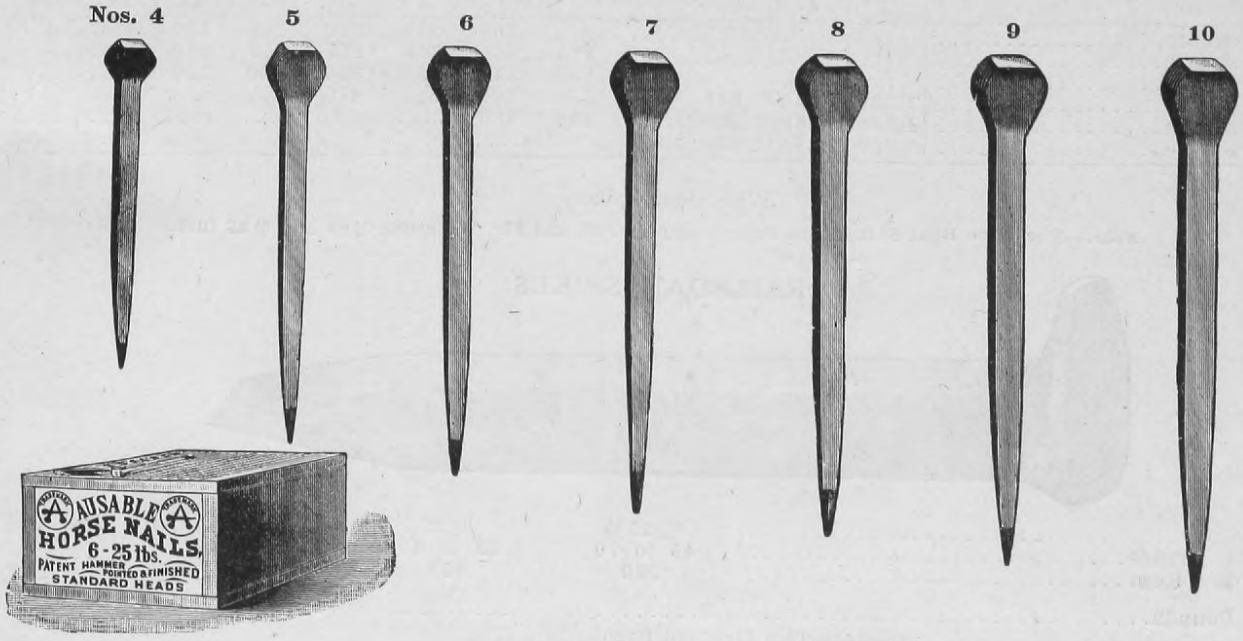
SHOE CALK TAPS



Neverslip Shoe Calk Hand Taps.

Inch	5/16	3/8	7/16	1/2	9/16	5/8
Each	$0.60	$0.70	$0.76	$0.88	$1.00	$1.10

HORSE SHOE NAILS



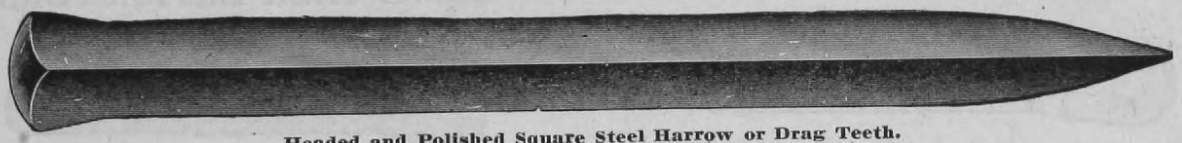
Polished and Pointed. List Prices Per Pound

Nos.	3	4	4½	5	6	7	8	9	10
Detroit, Standard Head	..	..	..	$0.31	.28	.26	.25	.24	.23
Ausable, Standard Head	..	$0.50	..	.31	.28	.26	.25	.24	.23
Ausable, City or Light Head	..	.50	..	.31	.28	.26	.25	.24	.23
Capewell, Standard Head	$0.75	.35	.30	.22	.19	.18	.17	.16	.16
Capewell, City or Light Head	.75	.35	.30	.22	.19	.18	.17	.16	.16

Packed—Five Pounds in a Paper Box; Twenty-five Pounds in a Wooden Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HARROW TEETH



Headed and Polished Square Steel Harrow or Drag Teeth.

Inches	½x10	⅝x10	¾x11	⅞x11
Full Kegs ..... Per 100 Pounds, $	.....	.....	.....	.....
Less than Full Kegs ..... Per 100 Pounds,	.....	.....	.....	.....

Packed—Two Hundred Pounds in a Keg.

BOAT SPIKES

Wrought Boat Spikes.

Inches	½	7/16	⅜	5/16	¼
Per 100 Pounds ..... $	.....	.....	.....	.....	.....

Packed—Two Hundred Pounds in a Keg.

Sizes Carried in Stock and Number in a Keg

½x8	½x9	½x10	½x12	7/16x9	7/16x10	⅜x5	⅜x6	⅜x7	⅜x8	⅜x9	⅜x10	5/16x5	5/16x6	¼x4
335	300	275	240	400	360	940	800	650	600	525	475	1230	1175	2375

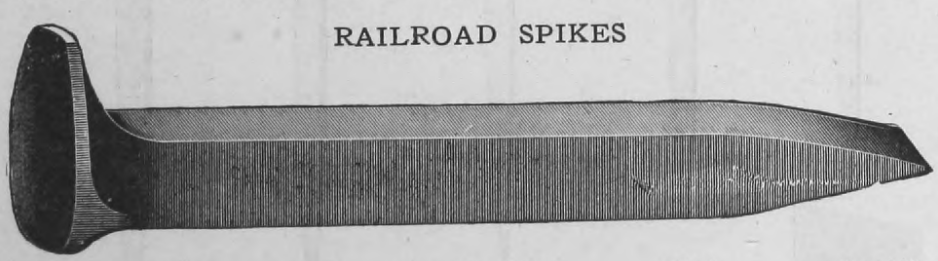
Approximate Number of Boat Spikes to a Keg of 200 Pounds

Length, Inches	3	4	5	6	7	8	9	10	11	12	14	16
⅝ inch square	....	....	....	....	....	260	240	220	205	190	175	160
½ inch square	....	....	....	450	375	335	300	275	260	240	....	....
7/16 inch square	....	....	....	600	590	510	400	360	320	230	....	....
⅜ inch square	1,320	1,140	940	800	650	600	525	475	....	....	....	....
5/16 inch square	1,660	1,360	1,230	1,175	990	880	....	....	....	....	....	....
¼ inch square	3,000	2,375	2,050	1,825	....	....	....	....	....	....	....	....

Wire Boat Spikes

Note.—For Wire Boat Spikes, see Spikes on pages 28 and 33. We stock ¼x8 and ⅜x8 inch.

RAILROAD SPIKES



Inches	9/16x5½	½x5	7/16x4½	⅜x3½
For Rails, pounds	45 to 70	35 to 40	20 to 30	16 to 20
Number in a Keg	360	450	680	1190
Per 100 Pounds ..... $	.....	.....	.....	.....

Packed—Two Hundred Pounds in a Keg.

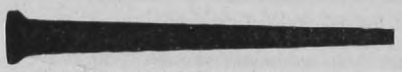
Approximate Number of Railroad Spikes to a Keg of 200 Pounds

Size Measured Under Head	Approx. Number Per Keg	Ties 2 Feet Between Centers, 4 Spikes Per Tie, Makes Per Mile—	Rail Used (Weight Per Yard)	Size Measured Under Head	Approx. Number Per Keg	Ties 2 Feet Between Centers, 4 Spikes Per Tie, Makes Per Mile—	Rail Used (Weight Per Yard)
5½x9/16	360	5,870 lbs.—29⅓ kegs	45 to 70	4 x7/16	720	2,940 lbs.—14¾ kegs	20 to 30
5 x9/16	400	5,170 lbs.—26 kegs	40 to 56	3½x7/16	900	2,350 lbs.—11¾ kegs	16 to 25
5 x½	450	4,660 lbs.—23⅓ kegs	35 to 40	4 x⅜	1,000	2,090 lbs.—10½ kegs	16 to 25
4½x½	530	3,960 lbs.—20 kegs	28 to 35	3½x⅜	1,190	1,780 lbs.— 9 kegs	16 to 20
4 x½	600	3,520 lbs.—17⅔ kegs	24 to 35	3 x⅜	1,240	1,710 lbs.— 8 kegs	16 to 20
4½x7/16	680	3,110 lbs.—15½ kegs	20 to 30	2½x⅜	1,342	1,575 lbs.— 7⅞ kegs	12 to 16

Note.—The above is given as Approximate, and the Company is not bound in any way to protect these figures.

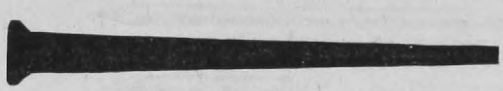
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STEEL CUT NAILS



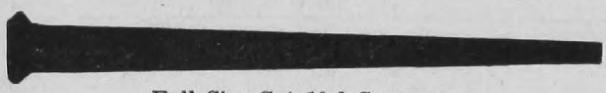
Full Size Cut 6 d Common.

Full Size Cut 6 d Clinch.



Full Size Cut 8 d Common.

Full Size Cut 6 d Casing.



Full Size Cut 10 d Common.

Full Size Cut 6 d Finishing.

NATIONAL STEEL CUT NAIL CARD

April 30, 1902.

Steel Cut Nails.....Base Price Per 100 Pounds, $.....

Common, Fence, Hookhead Brads, and Sheathing

20d to 60d	Base
10d to 16d	Advance, $0.05
8d and 9d	Advance, .10
6d and 7d	Advance, .20
4d and 5d	Advance, .30
3d	Advance, .45
2d	Advance, .75

Casing, Box and Flooring

10d and larger	Advance, $0.15
8d and 9d	Advance, .25
6d and 7d	Advance, .35
4d and 5d	Advance, .50
3d	Advance, .70
2d	Advance, 1.00

Finishing

10d and larger	Advance, $0.25
8d and 9d	Advance, .35
6d and 7d	Advance, .45
4d and 5d	Advance, .65
3d	Advance, .85
2d	Advance, 1.15

Fine Nails

4d	Advance, $0.50
3d	Advance, .75
2d	Advance, 1.00

Cut Spikes

All Sizes	Advance, $0.10

Common Barrel, Roofing, Cooper and Cement

1½ inch	Advance, $0.30
1⅜ inch	Advance, .40
1¼ inch	Advance, .50
1⅛ inch	Advance, .60
1 inch	Advance, .70
⅞ inch	Advance, .85
¾ inch	Advance, 1.00

Clinch, Car, Boat, Clout and Hoop

3 inch and larger	Advance, $0.45
2½ and 2¾ inch	Advance, .55
2 and 2¼ inch	Advance, .65
1½ and 1¾ inch	Advance, .75
1¼ inch	Advance, .95
1⅛ inch	Advance, 1.05
1 inch	Advance, 1.15
⅞ inch	Advance, 1.30
¾ inch	Advance, 1.45

Light Barrel and Lining

1⅛ inch	Advance, $0.75
1 inch	Advance, .85
⅞ inch	Advance, 1.00
¾ inch	Advance, 1.20

Slating

6d	Advance, $0.30
4d and 5d	Advance, .40
3d	Advance, .60
2d	Advance, .80

Tobacco Mfrs. Box Nails

6d and 7d Lining	Advance, $0.20
4d and 5d Lining	Advance, .30
5d Caddy	Advance, .30
4d Caddy	Advance, .50
3d Caddy	Advance, .70

Tobacco Warehouse

8d	Advance, $0.10
6d and 7d	Advance, .20
4d and 5d	Advance, .40

Packed—100 pounds in a keg. Shipping weight 106 pounds

STEEL CUT NAILS

Stock Sizes

Common: 3d, 4d, 6d, 8d, 10d, 20d, 30d, 40d, 60d.

Casing: 6d, 8d, 10d, 20d.

Clinch: 6d, 7d, 8d, 10d.

"IRON" CUT NAILS

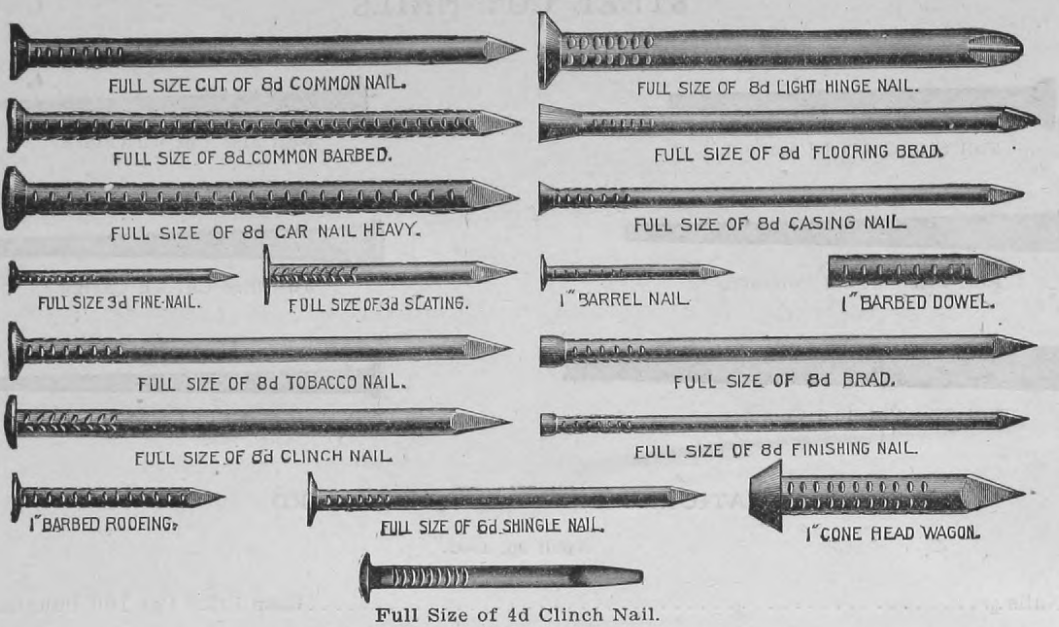
Iron Cut Nails.....Base Price Per 100 Pounds, $.....

Stock Sizes—3d Common.....Advance, $0.45 4d Common.....Advance, $0.30

Note—For all other Sizes and Kinds of Iron Cut Nails use Advances given on National Steel Cut Nail Card above.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WIRE NAILS



Full Size of 4d Clinch Nail.

National Wire Nail Card—Effective December 1, 1896

From Store ..... **Base**, Per 100 Pounds, $.....

From Mill, L. C. L. ..... **Base**, Per 100 Pounds, $.....

From Mill, C. L. ..... **Base**, Per 100 Pounds, $.....

If F. O. B. Cars Cleveland ..... **Add** Per 100 Pounds, $.....

If F. O. B. Boat Cleveland ..... **Add** Per 100 Pounds, $.....

Common, Fence, Shingle, Tobacco, Flooring and Common Brads

20d to 60d	Base	
10d to 16d	Advance,	$0.05
8d and 9d	Advance,	.10
6d and 7d	Advance,	.20
4d and 5d	Advance,	.30
3d	Advance,	.45
2d	Advance,	.70

Barbed Common and Barbed Car Nails

15c Advance over Common

Casing and Smooth Box

10d and larger	Advance,	$0.15
8d and 9d	Advance,	.25
6d and 7d	Advance,	.35
4d and 5d	Advance,	.50
3d	Advance,	.70
2d	Advance,	1.00

Barbed Box, 15c Advance over Smooth

Smooth Finishing

10d and larger	Advance,	$0.25
8d and 9d	Advance,	.35
6d and 7d	Advance,	.45
4d and 5d	Advance,	.65
3d	Advance,	.85
2d	Advance,	1.15

Fine

2d, fine	Advance,	$1.00
2d, extra fine, 1x17		1.10
3d, 1⅛x15	Advance,	.50
3d, extra fine, 1⅛x16		.65
4d	Advance,	.50

Sterilized Blued Lath

2d, 1x16½		$1.25
2d, light, 1x17		1.35
3d, 1⅛x15		.75
3d, light, 1⅛x16		.90

Barbed Roofing

¾ inch	Advance,	$0.75
⅞ inch	Advance,	.65
1 inch	Advance,	.60
1⅛ inch	Advance,	.60
1¼ inch	Advance,	.55
1½ and 1¾ inch	Advance,	.45
2 inch	Advance,	.35

Barrel

⅝ inch	Advance,	$1.35
¾ inch	Advance,	1.00
⅞ inch	Advance,	.85
1 inch	Advance,	.70
1⅛ inch	Advance,	.60
1¼ inch	Advance,	.50
1⅜ inch	Advance,	.40
1½ inch	Advance,	.30

Clinch

2d	Advance,	$1.05
3d	Advance,	.85
4d and 5d	Advance,	.65
6d and 7d	Advance,	.55
8d and 9d	Advance,	.45
10d to 20d	Advance,	.35

Hinge

4d	Advance,	$0.80
6d	Advance,	.70
8d	Advance,	.60
10d and larger	Advance,	.50

Spikes

All sizes to 9 inch	Advance,	$0.10
10 inch and larger	Advance,	.25

Barbed Dowel Pins

⅝ inch	Advance,	$1.25
¾ inch	Advance,	1.00
⅞ inch	Advance,	.85
1 inch	Advance,	.70
1⅛ inch and larger,	Advance,	.60

Slating

2d	Advance,	$0.80
3d	Advance,	.60
4d	Advance,	.40
5d	Advance,	.40
6d	Advance,	.30

Standard Lengths of Nails

Sizes	2d	3d	4d	5d	6d	7d	8d	9d	10d	12d	16d	20d	30d	40d	50d	60d
Length, in.	1	1¼	1½	1¾	2	2¼	2½	2¾	3	3¼	3½	4	4½	5	5½	6

Packed—100 Pounds in a Keg. Shipping Weight, 106 Pounds.

GALVANIZED WIRE NAILS

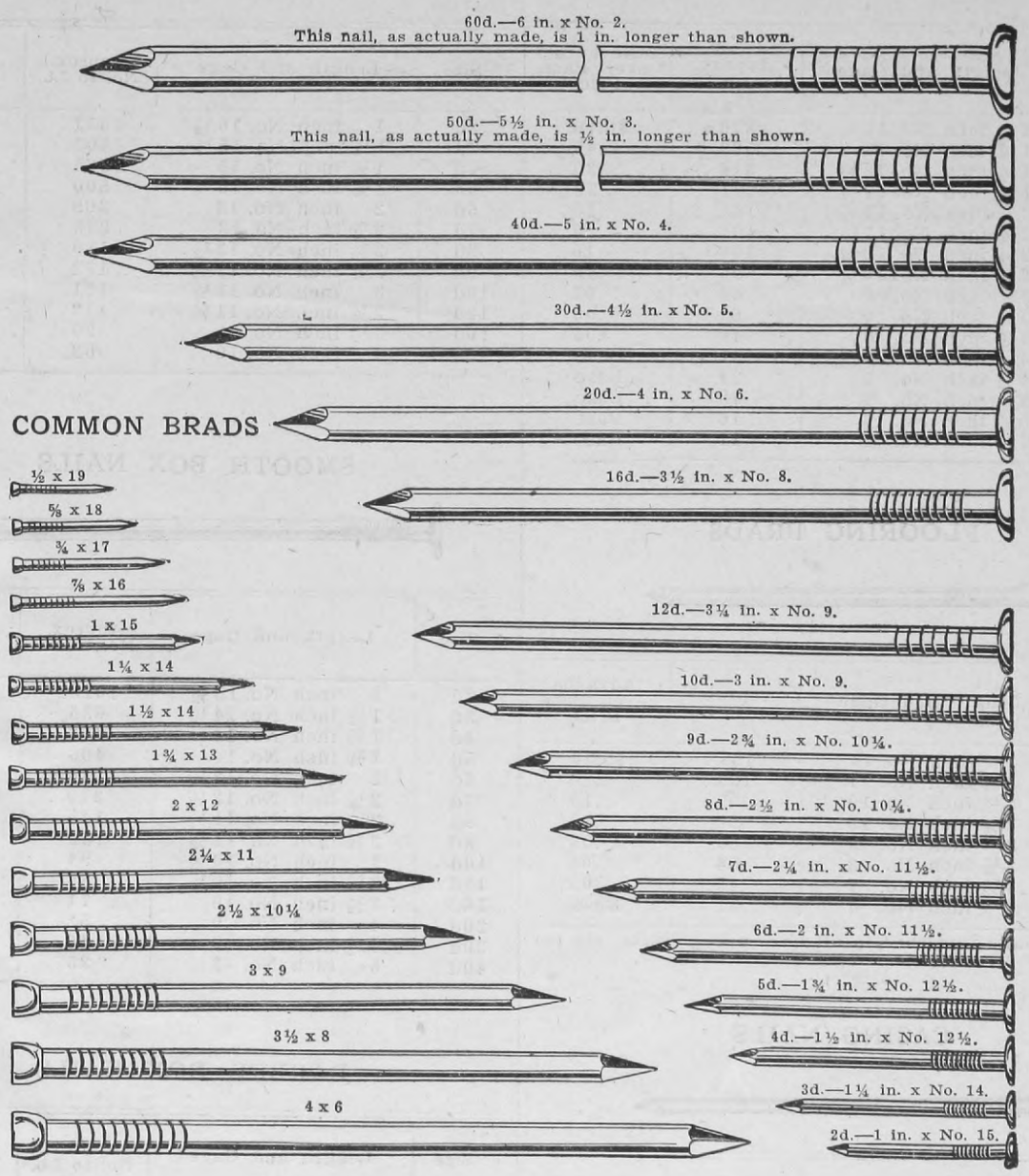
Standard Extras for Galvanizing Nails in addition to advance for size—November 30, 1915.

One inch and longer ..... Extra, $2.00

Shorter than one inch ..... Extra, 2.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMMON NAILS



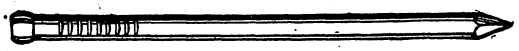
COMMON BRADS

Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price	Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 15	876	$0.70	10d	3 inch No. 9	69	$0.05
3d	1¼ " " 14	568	.45	12d	3¼ " " 9	63	.05
4d	1½ " " 12½	316	.30	16d	3½ " " 8	49	.05
5d	1¾ " " 12½	271	.30	20d	4 " " 6	31	Base
6d	2 " " 11½	181	.20	30d	4½ " " 5	24	Base
7d	2¼ " " 11½	161	.20	40d	5 " " 4	18	Base
8d	2½ " " 10¼	106	.10	50d	5½ " " 3	14	Base
9d	2¾ " " 10¼	96	.10	60d	6 " " 2	11	Base

Barbed nails furnished in all sizes and styles at 15c per 100 pounds over smooth.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COMMON BRADS



Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 15	876	$0.70
3d	1¼ inch No. 14	568	.45
4d	1½ inch No. 12½	316	.30
5d	1¾ inch No. 12½	271	.30
6d	2 inch No. 11½	181	.20
7d	2¼ inch No. 11½	161	.20
8d	2½ inch No. 10¼	106	.10
9d	2¾ inch No. 10¼	96	.10
10d	3 inch No. 9	69	.05
12d	3¼ inch No. 9	64	.05
16d	3½ inch No. 8	49	.05
20d	4 inch No. 6	31	Base
30d	4½ inch No. 5	24	Base
40d	5 inch No. 4	18	Base
50d	5½ inch No. 3	16	Base
60d	6 inch No. 2	11	Base

FLOORING BRADS

Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
6d	2 inch No. 11	157	$0.20
7d	2¼ inch No. 11	139	.20
8d	2½ inch No. 10	99	.10
9d	2¾ inch No. 10	90	.10
10d	3 inch No. 9	69	.05
12d	3¼ inch No. 8	54	.05
16d	3½ inch No. 7	43	.05
20d	4 inch No. 6	31	Base

Barbed nails furnished in all sizes and styles at 15c per 100 lbs. over smooth.

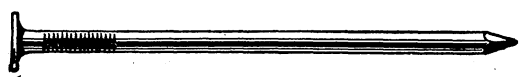
CASING NAILS

Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 15½	1010	$1.00
3d	1¼ inch No. 14½	635	.70
4d	1½ inch No. 14	473	.50
5d	1¾ inch No. 14	406	.50
6d	2 inch No. 12½	236	.35
7d	2¼ inch No. 12½	210	.35
8d	2½ inch No. 11½	145	.25
9d	2¾ inch No. 11½	132	.25
10d	3 inch No. 10½	94	.15
12d	3¼ inch No. 10½	87	.15
16d	3½ inch No. 10	71	.15
20d	4 inch No. 9	52	.15
30d	4½ inch No. 9	46	.15
40d	5 inch No. 8	35	.15

FINISHING NAILS

Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 16½	1351	$1.15
3d	1¼ inch No. 15½	807	.85
4d	1½ inch No. 15	584	.65
5d	1¾ inch No. 15	500	.65
6d	2 inch No. 13	309	.45
7d	2¼ inch No. 13	238	.45
8d	2½ inch No. 12½	189	.35
9d	2¾ inch No. 12½	172	.35
10d	3 inch No. 11½	121	.25
12d	3¼ inch No. 11½	113	.25
16d	3½ inch No. 11	90	.25
20d	4 inch No. 10	62	.25

SMOOTH BOX NAILS



Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 15½	1010	$1.00
3d	1¼ inch No. 14½	635	.70
4d	1½ inch No. 14	473	.50
5d	1¾ inch No. 14	406	.50
6d	2 inch No. 12½	236	.35
7d	2¼ inch No. 12½	210	.35
8d	2½ inch No. 11½	145	.25
9d	2¾ inch No. 11½	132	.25
10d	3 inch No. 10½	94	.15
12d	3¼ inch No. 10½	88	.15
16d	3½ inch No. 10	71	.15
20d	4 inch No. 9	52	.15
30d	4½ inch No. 9	46	.15
40d	5 inch No. 8	35	.15

BARBED BOX NAILS

Size	Length and Gage	Approx. No. to Lb.	Advance over Base Price
2d	1 inch No. 15½	1010	$1.15
3d	1¼ inch No. 14½	635	.85
4d	1½ inch No. 14	473	.65
5d	1¾ inch No. 14	406	.65
6d	2 inch No. 12½	236	.50
7d	2¼ inch No. 12½	210	.50
8d	2½ inch No. 11½	145	.40
9d	2¾ inch No. 11½	132	.40
10d	3 inch No. 10½	94	.30
12d	3¼ inch No. 10½	88	.30
16d	3½ inch No. 10	71	.30
20d	4 inch No. 9	52	.30
30d	4½ inch No. 9	46	.30
40d	5 inch No. 8	35	.30

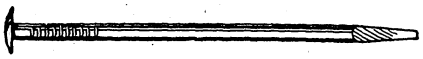
Barbed nails furnished in all sizes and styles at 15c per 100 lbs. over smooth.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CLINCH NAILS

Bright or Annealed.

Bright Clinch Nails will be Furnished Unless Otherwise Ordered.



Size	Length and Gage	Approx. No. to lb.	Advance over Base Price
2d	1 inch, No. 14	710	$1.05
3d	1¼ " " 13	429	.85
4d	1½ " " 12	274	.65
5d	1¾ " " 12	235	.65
6d	2 " " 11	157	.55
7d	2¼ " " 11	139	.55
8d	2½ " " 10	99	.45
9d	2¾ " " 10	96	.45
10d	3 " " 9	69	.35
12d	3¼ " " 9	62	.35
16d	3½ " " 8	49	.35
20d	4 " " 7	37	.35

Barbed nails furnished in all sizes and styles at 15c per 100 pounds over smooth.

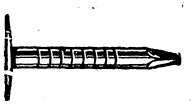
STERILIZED BLUED LATH NAILS

Size	Length and Gage	Approx. No. to lb.	Advance over Base Price
2d heavy	1 inch, No. 16½	1351	$1.25
2d light	1 " " 17	1560	1.35
3d heavy	1⅛ " " 15	778	.75
3d light	1⅛ " " 16	1015	.90

Stock Sizes { 3d, 1⅛ inch, No. 15—Heavy. 3d, 1⅛ inch, No. 16—Light.

Note—Lathers carry the nails in the mouth while at work and it is, therefore, from the standpoint of health sanitation, necessary to have the nails free from all injurious substances. Polished or bright nails cannot be made or kept entirely clean owing to process of manufacture as well as the effect of atmospheric conditions.

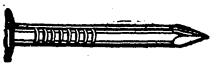
PLASTER BOARD NAILS



A smooth nail with diamond point and ½-inch flat head. Advance over Base.

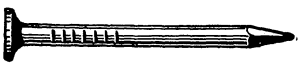
Length	No. 9 ½-inch Head	No. 10 ½-inch Head	No. 11 7/16-inch Head
1 -inch	$0.50	$0.60	$0.70
1¼-inch	.40	.50	.60
1½-inch	.35	.45	.55

SLATING NAILS



Size	Length and Gage	Approx. No. to lb.	Advance over Base Price
2d	1 inch, No. 12	411	$0.80
3d	1¼ " " 10½	225	.60
4d	1½ " " 10½	187	.40
5d	1¾ " " 10	142	.40
6d	2 " " 9	103	.30

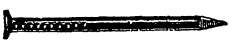
SHINGLE NAILS



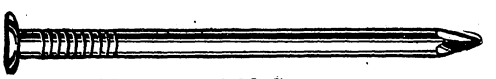
Size	Length and Gage	Approx. No. to lb.	Advance over Base Price
3d	1¼ inch, No. 13	429	$0.45
3½d	1⅜ " " 12½	345	.40
4d	1½ " " 12	274	.30

Barbed nails furnished in all sizes at 15c per 100 pounds over smooth.

GALVANIZED COMMON WIRE NAILS



Full Size 3d Fine Nail



Full Size of 8d Common.

Galvanized Common Wire Nails.....Subject to **Base Price** and the following extras: **Stock Sizes**	3d Fine	6d	8d	10d	20d
Advance for Size	$0.50	.20	.10	.05	.00
Extra for Galvanizing	2.00	2.00	2.00	2.00	2.00
Total Advance over Base	$2.50	2.20	2.10	2.05	2.00

GALVANIZED SLATING NAILS

Galvanized Slating Nails.....Subject to Base Price **Stock Sizes**	2d	3d	4d
Advance for Size	$0.80	.60	.40
Extra for Galvanizing	2.00	2.00	2.00
Total Advance Over Base	2.80	2.60	2.40

GALVANIZED SHINGLE NAILS

Galvanized Shingle Nails.....Subject to Base Price **Stock Sizes**	3d	4d
Advance for Size	$0.45	.30
Extra for Galvanizing	2.00	2.00
Total Advance Over Base	2.45	2.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CIGAR BOX NAILS

Cigar Box Nails made with short square point, or if so ordered with short round point. Bright, barbed or smooth. Made in sizes ½ inch, ⅝ inch, ¾ inch and ⅞ inch, of either No. 18, No. 19 or No. 20 gage. Packed in kegs, 25-pound boxes, and in 1-pound, 5-pound or 10-pound packages.

Flat or oval heads, as ordered.

Oval head, 15c per 100 pounds extra.

Note—For prices use list of "Miscellaneous Wire Nails" on Page 37.

BERRY-BOX NAILS

Diamond or Needle Point, Barbed, Flat Head

Size	Length and Gage	Approx. No. to Lb.	Advance Over Base Price
¾ inch	¾ inch, No. 16	1500	$1.35
¾ "	¾ " " 17	2050	1.50
⅞ "	⅞ " " 16	1300	1.25
⅞ "	⅞ " " 17	1800	1.40
1 "	1 " " 16	1150	1.15
1 "	1 " " 17	1550	1.30
1⅛ "	1⅛ " " 16	1010	1.15
1⅛ "	1⅛ " " 17	1400	1.30
1¼ "	1¼ " " 16	910	1.00

Note—Unless otherwise specified, barbed, needle points, will be furnished.

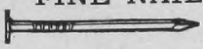
CLOUT NAILS

Length	Gage	Approximate Number to Pound	Advance Over Base Price
¾ inch	No. 15	1160	$1.30
⅞ "	" 14	808	1.15
1 "	" 14	705	1.00
1⅛ "	" 14	628	.90
1¼ "	" 13	423	.80
1⅜ "	" 13	390	.75
1½ "	" 13	350	.60

BARREL NAILS

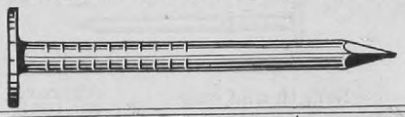
Size	Length and Gage	Approx. No. to Lb.	Advance Over Base Price
⅝ inch	⅝ inch, No. 15½	1615	$1.35
¾ "	¾ " " 15½	1346	1.00
⅞ "	⅞ " " 14½	906	.85
1 "	1 " " 14½	775	.70
1⅛ "	1⅛ " " 14½	700	.60
1¼ "	1¼ " " 14	568	.50
1⅜ "	1⅜ " " 13	400	.40
1½ "	1½ " " 13	367	.30

FINE NAILS



Size	Length and Gage	Approx. No. to Lb.	Advance Over Base Price
2d	1 inch, No. 16½	1,351	$1.00
3d	1⅛ " " 15	778	.50
4d	1½ " " 14	473	.50
2d extra fine	1 " " 17	1,560	1.10
3d extra fine	1⅛ " " 16	1,015	.65

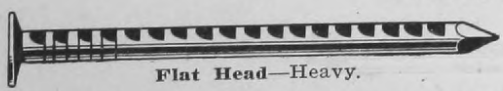
SMOOTH FOUNDRY NAILS



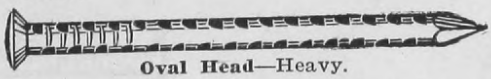
Length	No. 8 ½-Inch Head	No. 9 ½-Inch Head	No. 10 ½-Inch Head	No. 11 ½-Inch Head
¾ inch.....	$0.60	$0.70	$0.80	$0.90
⅞ "	.50	.60	.70	.80
1 "	.40	.50	.60	.70
1⅛ "	.35	.45	.55	.65
1¼ "	.30	.40	.50	.60
1½ "	.25	.35	.45	.55
1¾ "	.25	.35	.45	.55
2 "	.20	.25	.35	.45
2¼ "	.15	.20	.30	.40
2½ "	.15	.20	.30	.40
2¾ "	.10	.15	.25	.35
3 and longer..	.05	.10	.20	.30

Barbed Foundry Nails 15c advance.

BARBED CAR NAILS



Flat Head—Heavy.



Oval Head—Heavy.

In ordering Car Nails specify whether Light or Heavy, Annealed or Bright, Oval or Flat Head.

Light

Size	Length and Gage	Approx. No. to Lb.	Advance Over Base Price
4d	1½ inch, No. 12	274	$0.45
5d	1¾ " " 10	142	.45
6d	2 " " 10	124	.35
7d	2¼ " " 9	92	.35
8d	2½ " " 9	82	.25
9d	2¾ " " 8	62	.25
10d	3 " " 8	57	.20
12d	3¼ " " 7	50	.20
16d	3½ " " 7	43	.20
20d	4 " " 6	31	.15
30d	4½ " " 6	28	.15
40d	5 " " 5	21	.15
50d	5½ " " 4	17	.15
60d	6 " " 4	15	.15

Heavy

Size	Length and Gage	Approx. No. to Lb.	Advance Over Base Price
4d	1½ inch, No. 10	165	$0.45
5d	1¾ " " 9	118	.45
6d	2 " " 9	103	.35
7d	2¼ " " 8	76	.35
8d	2½ " " 8	69	.25
9d	2¾ " " 7	54	.25
10d	3 " " 7	50	.20
12d	3¼ " " 6	42	.20
16d	3½ " " 6	35	.20
20d	4 " " 5	26	.15
30d	4½ " " 5	24	.15
40d	5 " " 4	18	.15
50d	5½ " " 3	15	.15
60d	6 " " 3	13	.15

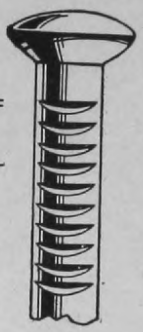
Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SPIKES

Made Only in Flat Head, Diamond Point and Oval Head, Chisel Point.

Size	Length and Gage		Approximate No. to Pound	Extra Over Base Price
10d	3 inch	No. 6	41	$0.10
12d	3¼ inch	No. 6	38	.10
16d	3½ inch	No. 5	30	.10
20d	4 inch	No. 4	23	.10
30d	4½ inch	No. 3	17	.10
40d	5 inch	No. 2	13	.10
50d	5½ inch	No. 1	10	.10
60d	6 inch	No. 1	9	.10
7 inch	7 inch	5/16 inch	7	.10
8 inch	8 inch	¼ inch	9	.35
8 inch	8 inch	⅜ inch	4	.10
9 inch	9 inch	⅜ inch	3½	.10
10 inch	10 inch	⅜ inch	3	.25
12 inch	12 inch	⅜ inch	2½	.25

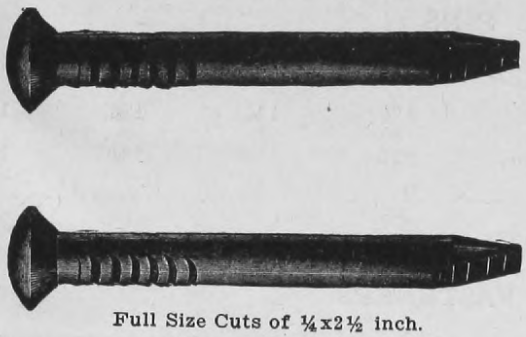
Flat Head, Diamond Point.



Oval Head, Chisel Point.

Stock Sizes:—Spikes 8x¼ inch and 8x⅜ inch in Oval Head, Chisel Point.

WIRE BOAT NAILS



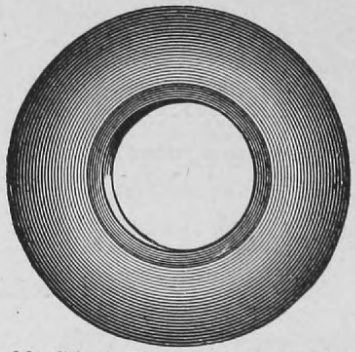
Full Size Cuts of ¼x2½ inch.

Wire Boat Nails, Round Countersunk Oval Head.

Inches	¼x1½	¼x2	¼x2½	¼x3
All Sizes	Per 100 Pounds, $			

Packed—One Hundred Pounds in a Keg.

CLINCH RINGS



Malleable Clinch Rings, Countersunk Hole.

Inches	⅝	¾	13/16	⅞	15/16	1	1 1/16
All Sizes	Per 100 Pounds, $						

Packed—One Hundred and Fifty Pounds in a Keg.

WIRE HINGE NAILS

Flat Countersunk Head.

Oval Head.

Flat Countersunk Head Annealed Wire Hinge Nails

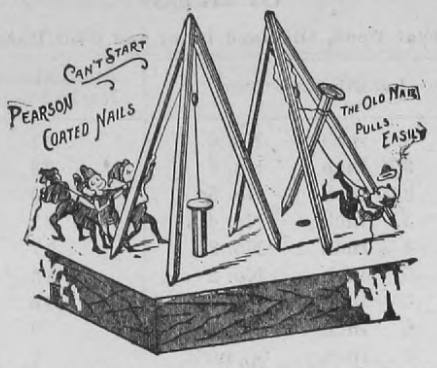
Inches	3/16x2	3/16x2½	3/16x3	¼x2	¼x2½	¼x3
Approximate Number to Pound	62	50	36	38	30	25
In 25 Pound Boxes..Per 100 Pounds,	$.....	.....	.....	.....	.....	.....
In 100 Pound Kegs...Per 100 Pounds,	.....	.....	.....	.....	.....	.....

Oval Head Annealed Wire Hinge Nails

Inches	3/16x2	3/16x2½	3/16x3	¼x2	¼x2½	¼x3
Approximate Number to Pound	62	50	36	38	30	25
In 25 Pound Boxes..Per 100 Pounds,	$.....	.....	.....	.....	.....	.....
In 100 Pound Kegs...Per 100 Pounds,	.....	.....	.....	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CEMENT COATED WIRE NAILS



Cement Coated Nails drive easier and hold more firmly than other nails, and they are waterproof. Unequalled for making boxes, crates, cases, kegs and barrels.

Base Price ..... Per Keg, $.....

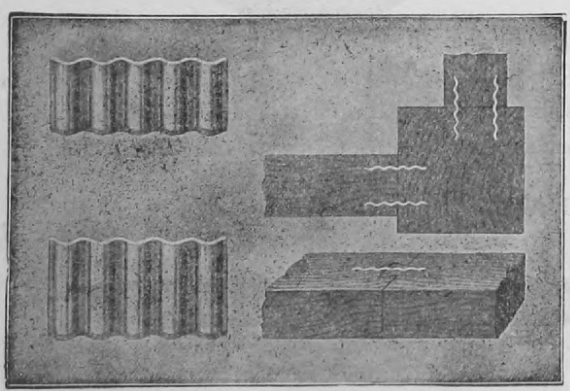
Sizes	2d	3d	4d	5d	6d	7d	8d	10d	20d	30d	40d
Advance over Base	$0.70	.45	.30	.30	.20	.20	.10	.05	.20	.20	.20
Number in a Keg	85,700	54,300	29,800	25,500	17,900	15,300	10,100	6,600	3,100	2,400	1,800
Length, Inches	1	1⅛	1⅜	1⅝	1⅞	2⅛	2⅜	2⅞	3¾	4¼	4¾
Gauge, No.	16	15½	14	13½	13	12½	11½	11	7	6	5
Net Weight, Pounds	79	64	61	70	65	72	71	63	83	84	82

Packed by count, each Keg contains the same number of Nails as a Keg of Standard Wire Nails, but about one-third less in weight.

BARBED DOWEL PINS

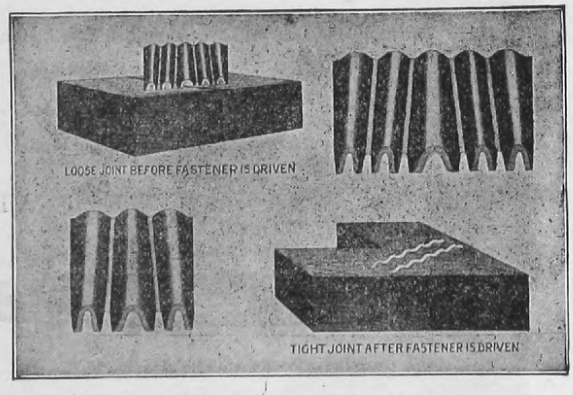
Size, inches	¾	⅞	1	1⅛	1¼	1⅜	1½
Gauge No.	8	8	8	8	8	8	8
Approximate number to a pound	250	210	190	165	150	130	120
In 25 Pound Boxes, Per 100 Lbs., $	.....	.....	.....	.....	.....	.....	.....
In 100 Pound Kegs, Per 100 Lbs., $	.....	.....	.....	.....	.....	.....	.....

CORRUGATED STEEL FASTENERS



These fasteners take the place of Dowels and their proper use dispenses with tenons, and mortises, making a strong, inexpensive joint.

The Divergent Fastener draws the pieces together when driven into the wood, thus forming a close joint.



Parallel Plain Edge

No. of Corrugations	3	4	5
⅜-inch ..... Per 1000,	$0.75	.95	1.20
½-inch ..... Per 1000,	.85	1.05	1.30
⅝-inch ..... Per 1000,	1.00	1.30	1.70
¾-inch ..... Per 1000,	1.15	1.45	1.85

Packed—1000 in a Carton. ⅜x3, 4, 5; ½x3, 4; ⅝x3; ¾x3. **Packed**—500 in a Carton. ½x5; ⅝x4, 5; ¾x4, 5.

Divergent Saw Edge Tapering

No. of Corrugations	3	4	5
⅜-inch ..... Per 1000,	$0.75	.95	1.20
½-inch ..... Per 1000,	.85	1.05	1.30
⅝-inch ..... Per 1000,	1.00	1.30	1.70
¾-inch ..... Per 1000,	1.15	1.45	1.85

Packed—1000 in a Carton. ⅜x3, 4, 5; ½x3, 4; ⅝x3; ¾x3. **Packed**—500 in a Carton. ½x5; ⅝x4, 5; ¾x4, 5. **Packed**—100 in a carton, ⅜x5, ½x5, ⅝x5.

Handy Assortment Corrugated Sawedge Tapering Fasteners. **Assortment** consists of 10 Boxes ¼-inch No. 5, 30 Boxes ⅜-inch No. 5, 30 Boxes ½-inch No. 5, and 30 Boxes ⅝-inch No. 5, Per Assortment, $.....

Packed—100 in a box, 100 boxes to a case—to retail for 10 and 15 cents a box.

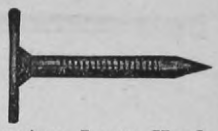
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ROOFING NAILS

Regular Head.

⅜-inch Head.

Broad Head.



American Large Head.

Regular Head Barbed Roofing Nails

Size and Gauge No.	¾"x13	⅞"x12	1"x12	1¼"x11	1½"x10	1¾"x10	2"x9
Approximate Number in a Pound	714	469	411	251	176	151	103
Plain — In 25 Lb. Boxes.....Per 100 Lbs., $							
Plain — In 100 Lb. Kegs.....Per 100 Lbs.,							
Galvanized — In 25 Lb. Boxes.....Per 100 Lbs.,							
Galvanized — In 100 Lb. Kegs.....Per 100 Lbs.,							

⅜ inch Head Barbed Roofing Nails

Size and Gauge No.	⅞"x10	1"x10
Galvanized. In 25 Lb. Boxes.....Per 100 Lbs., $		
Galvanized. In 100 Lb. Kegs.....Per 100 Lbs.,		

Broad Head Barbed Roofing Nails, ½ inch Head

Size and Gauge No.	⅞"x8	1"x8	1⅛"x8	1¼"x8	1½"x8	1¾"x8	2"x8
Approximate Number in a Pound	179	158	142	128	108	93	84
Plain — In 25 Lb. Boxes.....Per 100 Lbs., $							
Plain — In 100 Lb. Kegs.....Per 100 Lbs.,							
Galvanized — In 25 Lb. Boxes.....Per 100 Lbs.,							
Galvanized — In 100 Lb. Kegs.....Per 100 Lbs.,							

American Large Head Felt Roofing Nails, 9/16 inch Head

Plain.

Size and Gauge No.	1"x12
Approximate Number in a Pound	198
In 25 Pound Boxes.....Per 100 Pounds, $	
In 100 Pound Kegs.....Per 100 Pounds,	

Galvanized.

Size and Gauge No.	1"x12
Approximate Number in a Pound	198
In 25 Pound Boxes.....Per 100 Pounds, $	
In 100 Pound Kegs.....Per 100 Pounds,	

SHERMAN OR CRESCENT ROOFING NAILS

Sherman.

Sherman or **Crescent** Pattern Roofing Nails have much thicker heads than tin caps. This prevents buckling of the heads and increases the life of the nail as the head will not rust through like a tin cap.

Inches	⅞	1½
Plain, in 25 Lb. Boxes.Per 100 Lbs., $		
Galvanized, 25 Lb. Boxes.100 Lbs.,		

CAPNAL NEVER LEAK ROOFING NAILS

Capnal.

Capnal Nails automatically find the exact pitch of roof, although driven at any angle. Enables roofing to resist wind storms and inside vacuum pressure. Will double life of all roofing as they have ten times the life and strength of a tin cap.

No. 1—Capnal Roofing Nails. Made from 12-Gauge plain wire. **Dimensions,** 1⅛-inch bearing ring, ⅞-inch shank, 100 nails in a pound.

In 5 Pound Boxes.....Per 100 Pounds, $

In 300 Pound Barrels.....Per 100 Pounds,

Note—The weight on Barrels is approximate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL WIRE BRADS

2 inch. No. 14.

1½ inch. No. 16.

1 inch. No. 18.

No. ¼—In Quarter Pound Papers.

Inches ...	½	⅝		¾		⅞		1			1¼		1½	
Gauge Nos.	19	18	19	18	19	17	18	16	17	18	15	16	15	16
Per Pound	$0.83	.66	.73	.60	.68	.51	.53	.44	.48	.51	.40	.42	.39	.41

Packed—Three Pounds in a Package.

No. ½—In Half Pound Papers.

Inches ...	½	⅝		¾		⅞		1			1¼		1½		
Gauge Nos.	19	18	19	18	19	17	18	16	17	18	15	16	14	15	16
Per Pound	$0.79	.62	.69	.56	.64	.47	.49	.40	.44	.47	.36	.38	.34	.35	.37

No. 1—In One Pound Papers.

Inches	⅜	½			⅝			¾				⅞		1			
Gauge Nos..	20	18	19	20	18	19	20	16	17	18	19	17	18	15	16	17	18
Per Pound..	$1.00	.65	.75	.85	.58	.65	.75	.43	.46	.52	.60	.43	.45	.33	.36	.40	.43

Inches ...	1¼					1½				1¾		2			2¼	2½	3
Gauge Nos.	14	15	16	17	18	13	14	15	16	14	15	12	13	14	12	12	12
Per Pound	$0.31	.32	.34	.39	.43	.29	.30	.31	.33	.29	.30	.28	.28	.29	.28	.27	.27

No. 25—In Twenty-five Pound Boxes.

Inches	½		⅝		¾			⅞			1				1¼			
Gauge Nos..	19	20	18	19	16	17	18	16	17	18	14	15	16	17	18	14	15	16	17
Per Pound.	$0.74	.84	.57	.64	.42	.45	.51	.38	.42	.44	.31	.32	.35	.39	.42	.30	.31	.33	.38

Inches ...	1½					1¾			2			2¼	2½			2¾	3	
Gauge Nos.	14	15	16	17	18	13	14	15	12	13	14	13	12	13	14	12	10	12
Per Pound	$0.29	.30	.32	.37	.42	.27	.28	.29	.27	.27	.28	.27	.26	.27	.29	.26	.24	.26

SHADE NAILS

In One Pound Papers.

Shade Nails, No. 13 Gauge, Countersunk Heads, Needle Points..	Inch	⅝	¾
	Per Pound.....	$0.47	.42

FLAT HEAD WIRE NAILS

1¼ inch.

1½ inch.

2 inch.

No. 01—In One Pound Papers.

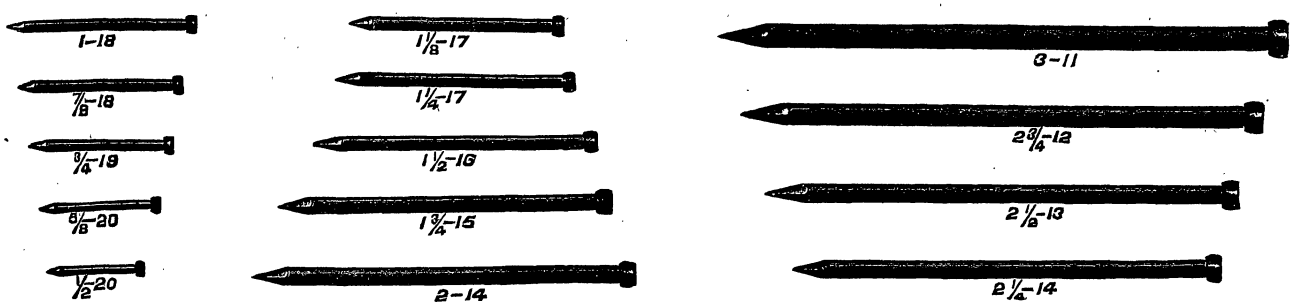
Inches	½		⅝		¾		⅞		1		1¼		1½		1¾	2		2¼	2½	3
Gauge Nos.	19	20	18	19	17	18	17	18	15	16	15	16	14	15	14	13	14	12	11	10
Per Pound	$0.75	.85	.58	.65	.46	.52	.43	.45	.33	.36	.32	.34	.30	.31	.29	.28	.29	.28	.27	.25

No. 025—In Twenty-five Pound Boxes.

Inches	⅝		¾		⅞		1			1¼		1½
Gauge Nos.	15	19	16	18	17	18	15	16	17	15	16	15
Per Pound	$0.44	.64	.42	.51	.42	.44	.32	.35	.39	.31	.33	.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MISCELLANEOUS WIRE NAILS



Miscellaneous Wire Nail List, Effective February 1, 1910, and applying to all Nails except Standard Nails in Kegs.

Prices Stated are per Pound for One, Five and Ten Pound Packages.

¼ in.	No. 19	$1.00
	No. 20	1.25
	No. 21	1.55
	No. 22	1.90
⅜ in.	No. 18	.80
	No. 19	.90
	No. 20	1.00
	No. 21	1.25
	No. 22	1.55
½ in.	No. 14, No. 15, No. 16	.55
	No. 17	.60
	No. 18	.65
	No. 19	.75
	No. 20	.85
	No. 21	1.00
	No. 22	1.25
⅝ in.	No. 12, No. 13, No. 14	.43
	No. 15	.45
	No. 16	.50
	No. 17	.52
	No. 18	.58
	No. 19	.65
	No. 20	.75
	No. 21	.85
	No. 22	1.10
¾ in.	No. 10, No. 11, No. 12	.36
¾ in.	No. 13	$0.38
	No. 14	.38
	No. 15	.42
	No. 16	.43
	No. 17	.46
	No. 18	.52
	No. 19	.60
	No. 20	.70
	No. 21	.85
⅞ in.	No. 8, No. 9, No. 10, No. 11, No. 12	.33
	No. 13	.34
	No. 14	.35
	No. 15	.36
	No. 16	.39
	No. 17	.43
	No. 18	.45
	No. 19	.56
	No. 20	.67
1 in.	Nos. 7 to 12	.30
	No. 13	.31
	No. 14	.32
	No. 15	.33
	No. 16	.36
	No. 17	.40
	No. 18	.43
	No. 19	.53
	No. 20	.64
1⅛ in.	Nos. 7 to 12	$0.30
	No. 13	.31
	No. 14	.32
	No. 15	.32
	No. 16	.35
	No. 17	.40
	No. 18	.43
	No. 19	.53
1¼ and 1⅜ in.	Nos. 6 to 12	.29
	No. 13	.30
	No. 14	.31
	No. 15	.32
	No. 16	.34
	No. 17	.39
1½ and 1⅝ in.	Nos. 4 to 13	.29
	No. 14	.30
	No. 15	.31
	No. 16	.33
	No. 17	.38
1¾ in.	Nos. 4 to 13	.28
	No. 14	.29
	No. 15	.30
	No. 16	.32
	No. 17	.38
2 in.	Nos. 3 to 10	.27
	No. 11	.28
	No. 12	.28
	No. 13	.28
	No. 14	.29
2 in.	No. 15	$0.30
	No. 16	.35
2¼ in.	Nos. 3 to 10	.27
	No. 11	.28
	No. 12	.28
	No. 13	.28
	No. 14	.29
2½ in.	Nos. 3 to 10	.26
	No. 11	.27
	No. 12	.27
	No. 13	.28
2¾ in.	Nos. 3 to 10	.26
	No. 11	.27
	No. 12	.27
3 in.	Nos. 3 to 10	.25
	No. 11	.26
	No. 12	.27
3¼ in.	Nos. 3 to 10	.25
	No. 11	.26
	No. 12	.27
3½ in.	Nos. 3 to 10	.25
	No. 11	.26
4 in.	Nos. 3 to 10	.25
	No. 11	.26

List Extras—Subject to Discount

	Per Pound		Per Pound
For Nails packed in ½ pound Papers	Add to List, $0.04	For Special Heads or Headless	Add to List, $0.02
For Nails packed in ¼ pound Papers	Add to List, .08	For Needle or any Special Points	Add to List, .02
For Barbing	Add to List, .02	Tinned, Galv., Blued or Coppered Nails	At Special Prices
For Annealing	Add to List, .02		

Rebates from List Prices

For Nails in 25 pound Boxes.	Deduct from List	Per Pound, $0.01
For Nails in 50 pound Boxes.	Deduct from List	Per Pound, .01
For Nails in 100 pound Kegs.	Deduct from List	Per Pound, .02

Note.—For Nails combining several specialties, add as above for each. For sizes not appearing on the List, use the List prices for the desired gauge in the nearest shorter length. Nails heavier than listed, at Special Net Prices, according to quantity.

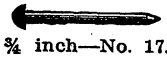
For Fractional Gauge Nails, use the List Prices for same length applying on the next finest full Gauge.

BASKET NAILS

Basket Nails are usually ⅝ inch or ¾ inch long, made from No. 18 wire and sold on Miscellaneous List and Discount. Specify according to requirements.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRASS ESCUTCHEON PINS



¾ inch—No. 17.

⅞ inch—No. 16.

1 inch—No. 14.

1¼ inch—No. 12.

List of March 1, 1906. In One Pound Paper Boxes. Price Per Pound.

Wire Gauge Number.	LENGTH, INCHES												
	3/16	¼	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
10	.....	.....	$0.75	$0.73	$0.72	$0.71	$0.70	$0.69	$0.68	$0.67	$0.66	$0.65	$0.65
11	.....	.....	.76	.74	.73	.72	.71	.70	.69	.68	.67	.66	.66
12	.....	.....	.77	.75	.74	.73	.72	.71	.70	.69	.68	.67	.67
13	.....	.....	.78	.76	.75	.74	.73	.72	.71	.70	.69	.69	.69
14	$0.90	$0.83	.80	.77	.76	.75	.74	.73	.72	.71	.70	.70	.70
15	.95	.85	.82	.78	.77	.76	.75	.74	.73	.72	.72	.72	.72
16	1.00	.90	.85	.82	.80	.78	.76	.75	.74	.74	.74	.74	.75
17	1.10	1.00	.92	.89	.87	.85	.83	.81	.80	.80	.80	.81	.82
18	1.20	1.10	1.00	.96	.94	.92	.90	.90	.90	.92	.92	.93	.95
19	1.35	1.20	1.15	1.10	1.05	1.00	1.00	1.03	1.03	1.03	1.05	.....	.....
20	1.55	1.35	1.25	1.20	1.15	1.10	1.10	1.15	1.15	1.15	.....	.....	.....
21	1.75	1.55	1.45	1.35	1.30	1.30	1.35	1.35	.....	.....	.....	.....	.....
22	2.00	1.75	1.60	1.45	1.40	1.45	.....	.....	.....	.....	.....	.....	.....

STEEL ESCUTCHEON PINS

List of February 1, 1910. In One Pound Paper Boxes. Price Per Pound.

Wire Gauge Number.	LENGTH, INCHES												
	3/16	¼	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
10	.....	.....	.....	.....	.....	$0.40	$0.37	$0.34	$0.34	$0.33	$0.33	$0.32	$0.31
11	.....	.....	.....	.....	.....	.40	.37	.34	.34	.33	.33	.32	.32
12	.....	.....	.....	.....	$0.47	.40	.37	.34	.34	.33	.33	.32	.32
13	.....	.....	.....	.....	.47	.42	.38	.35	.35	.34	.33	.32	.32
14	.....	.....	.....	$0.59	.47	.42	.39	.36	.36	.35	.34	.33	.33
15	.....	.....	.....	.59	49	.46	.40	.37	.36	.36	.35	.34	.34
16	.....	.....	.....	.59	.54	.47	.43	.40	.39	.38	.37	.36	.39
17	.....	.....	.....	.64	.56	.50	.47	.44	.44	.43	.42	.42	.....
18	.....	.....	$0.84	.69	.62	.56	.49	.47	.47	.....	.....	.....	.....
19	.....	$1.04	.94	.79	.69	.64	.60	.57	.57	.....	.....	.....	.....
20	$1.84	1.29	1.04	.89	.79	.74	.71	.68	.....	.....	.....	.....	.....
21	2.04	1.59	1.29	1.04	.89	.89	.....	.....	.....	.....	.....	.....	.....
22	2.24	1.94	1.59	1.29	1.14	.....	.....	.....	.....	.....	.....	.....	.....

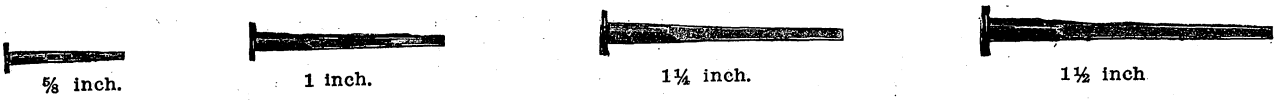
Approximate Number of Miscellaneous Wire Nails, Brads and Escutcheon Pins Per Pound.

Wire Gauge	3/16	¼	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2	2¼	2½	2¾	3	3½	4	4½	5	6	7	8	9	10	11	12
⅜	.....	.....	.....	.....	.....	.....	.....	.....	.....	33	27	23	20	18	16	15	14	12	10	9	8	7	6	5	4½	4	3¾	3¼
0	.....	.....	.....	.....	.....	.....	.....	.....	.....	34	29	25	21	19	17	16	15	13	11	10	9	8	7	5½	5	4⅓	4	3½
5/16	.....	.....	.....	.....	.....	.....	.....	57	50	45	38	32	28	25	23	21	19	16	14	13	11	10	8	7	6	5½	5	4½
2	.....	.....	.....	.....	.....	.....	.....	65	58	52	44	37	32	29	26	24	22	19	16	14	13	11	9	8	7	6½	6	5½
3	.....	.....	.....	.....	.....	100	87	76	67	60	50	43	38	34	30	28	25	22	19	17	15	13	11	10	8	7½	...	...
4	.....	.....	.....	.....	120	103	90	80	72	60	51	45	40	36	33	30	26	23	20	18	15	13	11	10	9	...	...	...
5	.....	.....	.....	211	169	141	121	106	94	85	71	60	53	47	42	39	35	30	26	24	21	18	15	....	....	....	....	...
6	.....	.....	.....	247	197	164	141	123	111	99	82	71	62	55	50	45	41	35	31	28	25	21	18	....	....	....	....	...
7	.....	.....	.....	299	239	200	171	149	133	120	100	85	75	67	60	54	50	43	37	33	30	25	...	....	....	....	....	...
8	.....	.....	.....	345	275	229	197	172	153	137	115	98	86	76	69	62	57	49	43	39	35	29	...	....	....	....	....	...
9	.....	.....	.....	414	331	276	236	207	184	165	138	118	103	92	82	75	69	59	52	46	41	...	...	....	....	....	....	...
10	.....	.....	663	496	397	333	283	248	220	198	165	142	124	110	99	90	83	71	62	55	50	...	...	....	....	....	....	...
11	.....	.....	837	628	502	418	359	314	279	251	209	179	157	139	125	114	105	90	79	70	...	...	...	....	....	....	....	...
12	.....	.....	1096	822	658	548	469	411	365	329	274	235	204	182	164	149	137	117	103	...	...	...	...	....	....	....	....	...
13	.....	.....	1429	1072	857	714	613	536	476	429	357	306	268	238	214	195	178	153	...	...	...	...	...	....	....	....	....	...
14	.....	2840	1893	1420	1136	947	811	710	631	568	473	406	350	315	284	258	236	...	...	...	...	...	...	....	....	....	....	...
15	.....	3504	2336	1752	1402	1168	1001	876	778	701	584	500	438	389	350	...	...	...	...	...	...	...	...	....	....	....	....	...
16	.....	4571	3048	2280	1828	1523	1305	1143	1015	913	761	653	571	508	...	...	...	...	...	...	...	...	...	....	....	....	....	...
17	.....	6233	4156	3116	2495	2077	1781	1558	1385	1246	1038	890	779	...	...	...	...	...	...	...	...	...	...	....	....	....	....	...
18	.....	8276	5517	4138	3310	2758	2364	2069	1839	1655	1379	1182	...	...	...	...	...	...	...	...	...	...	...	....	....	....	....	...
19	.....	10668	7112	5334	4267	3556	2933	2667	2370	2133	1778	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
20	20000	15000	10000	7500	6000	5000	4400	3750	3333	3000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
21	23702	17777	11850	8888	7111	5926	5079	4444	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
22	30476	22856	15237	11428	9143	7618	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...

Note.—These approximate numbers are an average only, and the figures given may be varied either way, by changes in the dimensions of the heads or points. Brads and no-head nails will run more to the pound than table shows, and large or thick headed nails will run less.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CLOUT NAILS



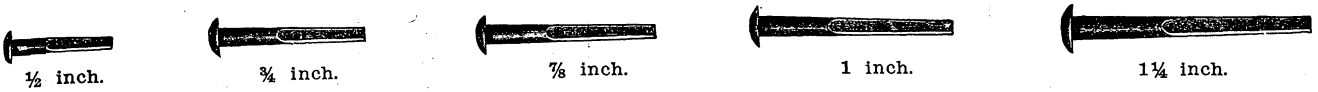
⅝ inch. 1 inch. 1¼ inch. 1½ inch

Clout Nails—In Half Pound and One Pound Papers, and Twenty-five Pound Boxes.

In Half Pound Papers	Inches	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
	Blued..Per Pound,	$0.38	.32	.31	.30	.28	.27	.27	.27	.27	.27	.27
	Tinned.Per Pound,	.46	.38	.37	.36	.34	.33	.33	.33	.33	.33	.33
In One Pound Papers	Inches	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
	Blued..Per Pound,	$0.36	.30	.29	.28	.26	.25	.25	.25	.25	.25	.25
	Tinned.Per Pound,	.44	.36	.35	.34	.32	.31	.31	.31	.31	.31	.31
In Twenty-five Pound Boxes	Inches	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
	Blued..Per Pound,	$0.34	.28	.27	.26	.24	.23	.23	.23	.23	.23	.23
	Tinned.Per Pound,	.42	.34	.33	.32	.30	.29	.29	.29	.29	.29	.29

Packed—In Half and One Pound Papers and Twenty-five Pound Boxes.

TRUNK NAILS



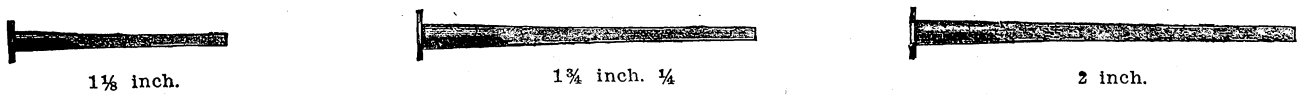
½ inch. ¾ inch. ⅞ inch. 1 inch. 1¼ inch.

Trunk Nails—In One Pound Papers and Twenty-Five Pound Boxes.

In One Pound Papers	Inches	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
	Blued.....Per Pound,	$0.30	.29	.28	.26	.25	.25	.25	.25	.25	.25
	Tinned.....Per Pound,	.36	.35	.34	.32	.31	.31	.31	.31	.31	.31
In Twenty-five Pound Boxes	Inches	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
	Blued.....Per Pound,	$0.28	.27	.26	.24	.23	.23	.23	.23	.23	.23
	Tinned.....Per Pound,	.34	.33	.32	.30	.29	.29	.29	.29	.29	.29

Packed—In One Pound Papers and Twenty-five Pound Boxes.

COPPER CLOUT NAILS



1⅛ inch. 1¾ inch. ¼ 2 inch.

Copper Clout Nails, Clout Nail Shape, in One Pound Boxes.

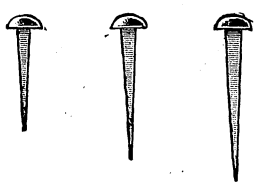
Inches	¾	⅞	1	1⅛	1¼	1½	1¾	2	2¼	2½
Per Pound.....	$.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Packed—In One Pound Papers.

STEEL HOOP NAILS

Hoop Nails, Steel, ⅞ inch, Light, in Kegs of 100 Pounds.....Per Keg, $.....

SHANK TACKS



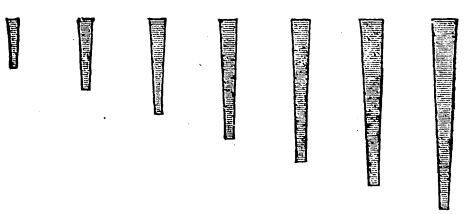
In Quarter Pound Papers.

Inch	3½-8	4-8	4½-8	5-8	5½-8
Ounces	4	6	8	10	12

All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.

IRON SHOE OR HEEL NAILS



In Quarter Pound Papers. No. 13 Gauge.

Inch	3½-8	4-8	4½-8	5-8	5½-8
Ounces	4	6	8	10	12

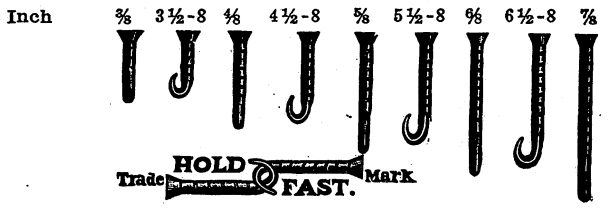
All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COBBLERS' SHOE NAILS

HOLD FAST



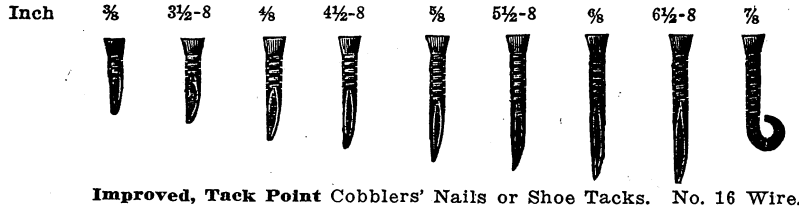
No. 1.

Hold Fast Corrugated Wire Clinching Shoe Nails, No. 16 Wire.

No. 1—Hold Fast, ⅜, 3½-8, ⅛, 4½-8, ⅝, 5½-8, ⅝, 6½-8 and ⅞ in ¼ pound Papers.....Per Dozen, $.....

Packed—One Dozen Papers in a Package.

IMPROVED, TACK POINT



Improved, Tack Point Cobblers' Nails or Shoe Tacks. No. 16 Wire.

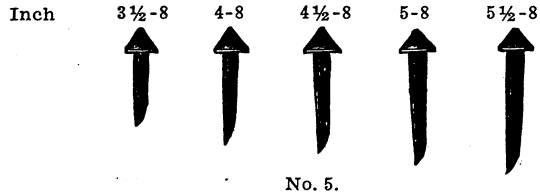
No. 2—Swedes Iron, ⅜, 3½-8, ⅛, 4½-8, ⅝, ⅝, 6½-8, and ⅞ inch, in 4 ounce Papers.....Per Dozen, $.....

No. 3—Brass Plated, ⅜, 3½-8, ⅛, 4½-8, ⅝, ⅝, 6½-8, and ⅞ inch { in 2 ounce Papers.....Per Dozen, ... / in 4 ounce Papers.....Per Dozen, ...

No. 4—Brass, ⅜, 3½-8, ⅛, 4½-8, ⅝, ⅝, 6½-8, and ⅞ in. { in 2 ounce Papers.....Per Dozen, ... / in 4 ounce Papers.....Per Dozen, ...

Packed—One Dozen Papers in a Package.

HUNGARIAN NAILS



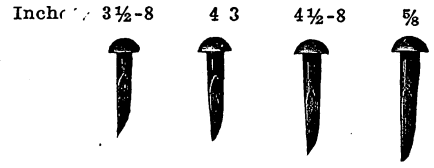
No. 5.

Cone Head Hungarian Nails, in Quarter Pound Papers.

Inch.....	3½-8	⅛	4½-8	⅝	5½-8
Number...	4	6	8	10	12

No. 5—All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.



No. 6.

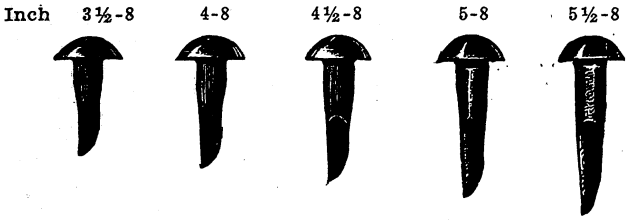
Shot Head Hungarian Nails, in Quarter Pound Papers.

Inch.....	3½-8	⅛	4½-8	⅝	5½-8
Number...	4	6	8	10	12

No. 6—All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.

HUNGARIAN NAILS



No. 7.

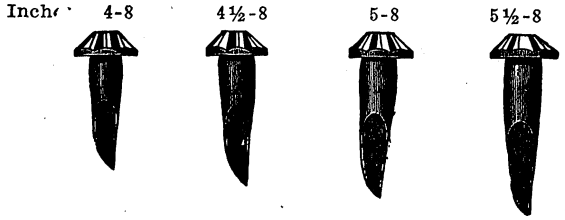
Over Stout Hungarian or Round Head Hob Nails. In Quarter Pound Papers.

Inch.....	3½-8	⅛	4½-8	⅝	5½-8
Number...	4	6	8	10	12

No. 7—All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.

HOB NAILS



No. 8.

Grooved Head Hob Nails, in Quarter Pound Papers.

Inch.....	3½-8	⅛	4½-8	⅝	5½-8
Number...	4	6	8	10	12

No. 8—All Sizes.....Per Dozen Papers, $.....

Packed—One Dozen Papers in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON BILL POSTERS' TACKS

Number	4	6	8	10
Inch,	7/16	8/16	9/16	5/8

Iron Bill Posters' or Railroad Tacks, Blued.

In One Pound Papers.

Number	4	6	8	10
Per Pound	$0.30	.28	.26	.25

In Twenty-five Pound Boxes.

Number	4	6	8	10
Per Pound	$0.28	.26	.24	.23

Packed—In One Pound Papers and in Twenty-five Pound Boxes.

WIRE BILL POSTERS' TACKS

Number	4	6	8	10
Inches,	7/16	8/16	9/16	5/8

Wire Bill Posters' or Railroad Tacks, Blued, Large Heads, Needle Points.

In One Pound Papers.

Number	4	6	8	10
Per Pound	$0.30	.28	.26	.25

In Twenty-five Pound Boxes.

Number	4	6	8	10
Per Pound	$0.28	.26	.24	.23

COPPER TACKS

Number	6	10	14	18	22
Inches,	8/16	10/16	12/16	14/16	16/16

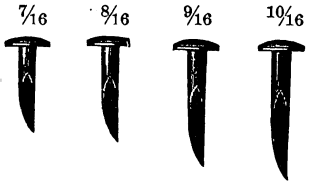
Flat Head Copper Tacks, in One Pound Boxes.

Number	½	⅝	¾	⅞	1
Per Pound	$.....	.....	.....	.....	.....

Packed—One Pound in a Paper Box.

LINING NAILS

Number	4	6	8	10
Inches,	7/16	8/16	9/16	10/16



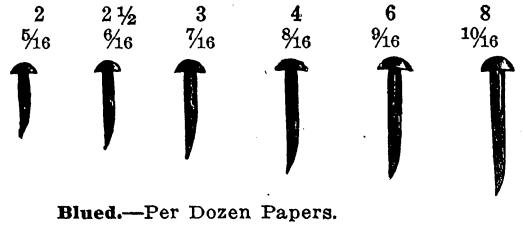
Solid Head, In ¼ Pound Papers.

Number	4	6	8	10
Japanned. Per Dozen Papers	$1.62	1.56	1.50	1.44

Packed—One Dozen Papers in a Package.

GIMP TACKS

Number	2	2½	3	4	6	8
Inches,	5/16	6/16	7/16	8/16	9/16	10/16



Blued.—Per Dozen Papers.

Number	2	2½	3	4	6	8
In ⅛ lb. papers	$0.96	.85½	...	...	...	...
In ¼ lb. papers	....	....	1.41	1.20	1.14	1.08

Packed—One Dozen Papers in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SWEDES UPHOLSTERERS' TACKS

Number,	1	1½	2	2½	3	4	6	8	10	12	14	16	18	20	22	24
Inch	3/16	3 1/2/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	13/16	14/16	15/16	1	18/16

Swedes Iron, Blued, Upholsterers' Cut Tacks.

Per Dozen Papers.

Number	1	1½	2	2½	3	4
In ⅛ Pound Papers	$1.41	1.11	.85½	.76½	.....	.....
In ¼ Pound Papers	.....	.....	....	.....	1.23	1.14

Packed—One Dozen Papers in a Package.

Per Pound.

Number	1	1½	2	2½	3	4	6	8	10	12	14	16	18
In ½ Pound Papers	.....	.....	.....	.....	.....	...	$0.32	.30	.29	.28	.....	.....	.....
In 1 Pound Papers	$0.84	.64	.47	.41	.35	.32	.30	.28	.27	.26	.26	.26	.26
In 25 Pound Boxes	.82	.62	.45	.39	.33	.30	.28	.26	.25	.24	.24	.24	.24

WIRE UPHOLSTERERS' TACKS

Number,	4	6	8	10
Inch,	7/16	8/16	9/16	10/16

Blued Steel Wire Upholsterers' Tacks.

Per Pound.

Number	4	6	8	10
In 1 Pound Papers	$0.32	.30	.28	.27
In 25 Pound Boxes	.30	.28	.26	.25

TRIMMERS' TACKS

Number,	4	6	8	10
Inch,	7/16	8/16	9/16	10/16

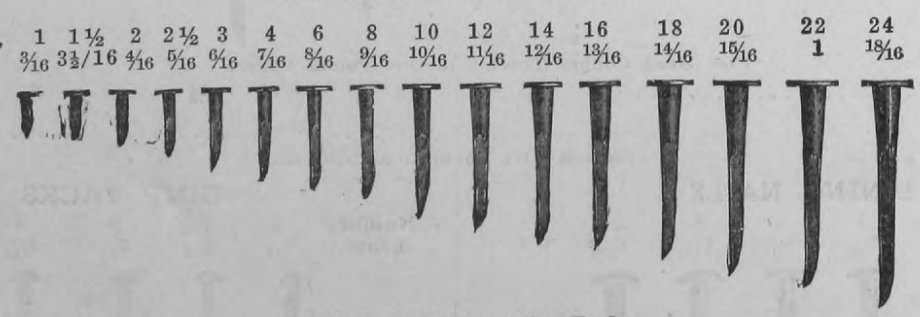
Blued Trimmers' Tacks.

Per Pound.

Number	3	4	6	8	10
In 25 Pound Boxes	$0.41	.34	.32	.30	.29

AMERICAN CUT TACKS

Number,	1	1½	2	2½	3	4	6	8	10	12	14	16	18	20	22	24
Inch	3/16	3 1/2/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	13/16	14/16	15/16	1	18/16



American Iron, Blued, Cut Tacks.

Number	1	1½	2	2½	3	4	6	8	10	12	14	16
In ⅛ lb. Papers—Per doz.	$1.42½	1.12½	.87	.78	.69	.64½	.....	.....	.....	.....	.....	.....
In ¼ lb. Papers—Per doz.	.....	.....	.....	.....	.....	.....	1.11	1.05	1.02	.99	.....	.....
In ½ lb. Papers—Per lb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.29	.29

Packed—⅛ and ¼ Pound Papers—One Dozen Papers in a Package. ½ Pound Papers are not dozened but are packed 100 Pounds—200 Papers in a Case.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CARPET TACKS

BLUED

Number	6	8	10	12
Inches.	8/16	9/16	10/16	11/16

Large Head, American Iron, Blued.

Per Dozen Papers.

Number	6	8	10	12
In ¼ Pound Papers.....	$1.05	.99	.96	.93

Packed—One Dozen Papers in a Package.

TINNED

Number	4	6	8	10	12
Inches	7/16	8/16	9/16	10/16	11/16

Large Head, American Iron, Tinned.

Per Dozen Papers.

Number	6	8	10	12
In ¼ Pound Papers.....	$1.23	1.17	1.14	1.11

Packed—One Dozen Papers in a Package.

Tinned Carpet Tacks, in 25 Pound Boxes

Tinned American Iron Carpet Tacks, Large Head.....	**Number**	8	10
In 25 Pound Boxes.....Per Pound,		$0.31	.30

Packed—Twenty-five Pounds in a Box.

NEVER RUST

No. 8

No. 10

Never-Rust Carpet Tacks, Covered with Four Coats of Japan.

Number	8	10
In Quarter Pound Paper..Per Dozen,	$.....	.....

Packed—One Dozen Papers in a Carton; Fifty Dozen in a Case.

WIRE

Number	6	8	10	12
Inches,	8/16	9/16	10/16	11/16

Blued Wire Carpet Tacks.

Per Dozen Papers.

Number	6	8	10	12
In ¼ Pound Papers.....	$1.05	.99	.96	.93

Packed—One Dozen Papers in a Package.

CASED CARPET TACKS

Ferro Bronze Wire Carpet Tacks, Flat Head, **400** Count, **Bronze** Plated.

Number	8	Assorted 6, 8 and 10
Per Case	$.....	.....

Packed—Half Gross Packages in a Display Case.

Blue Jay Wire Carpet Tacks, **500** Count, **Polished** Steel.

Number	8	Assorted 6, 8 and 10
Per Case	$.....	.....

Packed—Half Gross Packages in a Display Case.

Tri-Colored Wire Carpet Tacks

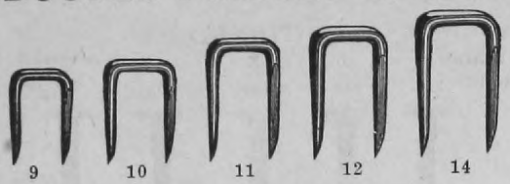
500 Count, **Blued** Steel. Put up in Red, White and Blue Packages.

Number	8	Assorted 6, 8 and 10
Per Case	$.....	.....

Packed—Half Gross Packages in a Display Case.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

DOUBLE POINTED TACKS



Nos.	9	10	11	12	14

In ⅛ Pound Papers—Blued or Tinned.

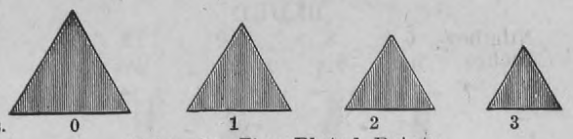
Nos.	9	10	11	12	14
Blued, Per Dozen Papers...	$0.69	.66	.64½	.63	.60
Tinned, Per Dozen Papers..	.78	.75	.73½	.72	.69

Packed—One Dozen Papers in a Package.

In Twenty-five Pound Boxes—Blued.

Nos.	10	11	12	14
Blued, Per Pound.....	$0.32	.31	.30	.28

GLAZIERS' POINTS



Nos.	0	1	2	3

Triangle—Zinc Plated Points.

In Quarter and Half Pound Papers.

Nos.	0	1	2	3	4
Quarter Pound Papers .....Per Dozen, $.....					
Half Pound Papers .....Per Dozen, ...					

Packed—Quarter Pound Papers, One Dozen in a Package. Half Pound Papers, Packed Separately.

In Twenty-five Pound Boxes.

Nos.	0	1	2	3	4
Twenty-five Pound Boxes.....Per Pound, $.....					

BLIND STAPLES

Inches,	⅜	½	⅝	¾

WIRE CLOTH STAPLES

No. 5.

In ⅛ Pound Papers.
Blued, for Window and Door Screens.

No. 5—5/16 x ⅜ ins. Per Doz., $.....

Packed—One Dozen Papers in a Package.

BED SPRING STAPLES

Inches,	⅝	¾	⅞	1

Barbed Blind Staples.

Inches	⅜	½	⅝	¾
Number to pound..	2592	1920	1648	1408
Per Pound	$....	....	....	....

Packed—In 10 Pound Boxes.

Barbed Coppered Steel Bed Spring Staples. No. 16 Wire.

Inches	½	⅝	¾	⅞	1	1¼
Number to pound..	1168	896	784	656	500	400
Per Pound	$...	...	...	...	...	...

Packed—In 25 Pound Boxes.

BARREL STAPLES

Inches,	½ x ⅝	⅝ x ⅝	⅝ x ¾

Flat Coppered Steel Wire, Sharp Pointed, Barrel or Hoop Staples.

Per Pound.

Inches	9/16 x ¾	⅝ x ¾	¾ x ½	¾ x ⅝
Number to pound.	640	568	600	568
In 25 lb. Boxes..	$.....	.....	.....	.....
In 100 lb. Kegs...	.....	.....	.....	.....

Note.—The first dimension gives the width, the second dimension the height.

ELECTRICIANS' STAPLES

Flat Steel Wire, Round Crown, Blued.

Inches	½	⅝	¾	⅞	1
Number to pound..	1350	800	688	592	464
Per Pound	$....	....	....	....	....

Packed—In 10 Pound Boxes.

WIRE HOOP STAPLES

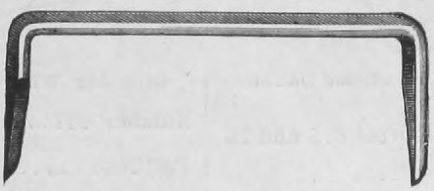
Full Size.

½ inch. ⅝ inch.

Galvanized—Used for Putting on Wire Hoops, made from No. 14 Wire.

Per Pound.....In.	½	⅝
Number to lb.....	610	568
In 25 lb. Boxes...	$.....	.....
In 100 lb. Kegs...	.....	.....

CLAMP STAPLES

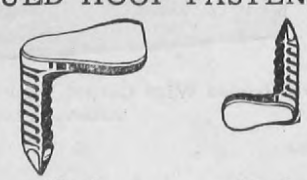


Flat Coppered Wire Clamp Staples.

Inches	2x¾ Light	2x¾ Heavy
No. to lb...	144	120
Per Pound..	$.....	.....

Packed—In 25 Pound Boxes.

BLUED HOOP FASTENERS



No. 1 No. 2.

No. 1 is made of No. 9 Wire; No. 2 is made of No. 10½ Wire.

Per Pound....Nos.	1	2
Length Shank, ins.	9/16	½
Wire Number.....	9	10½
In 25 lb. Boxes..	$.....	.....
In 100 lb. Kegs...	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

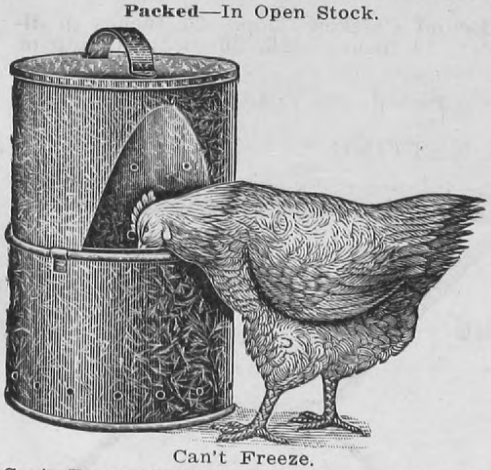
CHICKEN FOUNTAINS

No. W K 1.

A Chicken Fountain which supplies the water automatically and has more drinking space than any other fountain of the same capacity. It is made of galvanized iron and will last for years. Easily cleaned as it has no corners to catch the dirt.

No. W-K1—Chicken Fountain, Galvanized Iron, 2 gallon capacity.....Per Dozen, $9.00

Packed—In Open Stock.

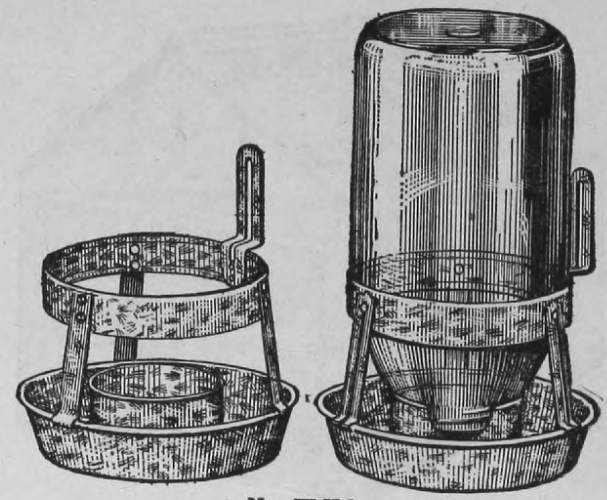


Can't Freeze.

The Can't Freeze Poultry Fountain and Heater is made of galvanized sheet steel; it contains a small oil lamp in the lower chamber which requires about one quart of oil a week. The water tank holds two gallons and is so constructed that the fowls cannot get dirt into the water; can be readily used outside the heater in summer. It is simple in construction and will give permanent satisfaction.

Can't Freeze Fountain and Heater Complete.....Per Dozen, $24.00

Packed—One Twelfth Dozen in a Carton.



No. W K 3.

A Sanitary Chicken Fountain and Feeder, simple to handle and automatic in action; can be hung up out of the dirt and litter by reversing the collar. Large chickens can not step into it and carry filth into the water, and little chicks cannot drown in it. Made of Galvanized Iron.

No. W-K3—Chicken Fountain and Feeder without Jar.....Per Dozen, $2.20

Packed—In Open Stock.

HENS' NESTS

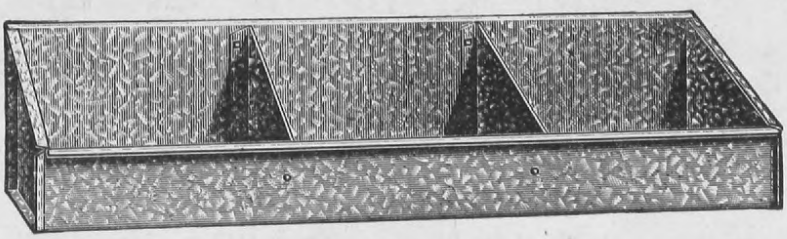
No. 20.

A sanitary nest which can be readily changed and provided with fresh straw or other materials, entirely free from vermin. Patent Lock Rib construction, Rust-proof, Lacquer. Ribs are Flat Steel, Coppered.

No. 20—Hen's Nest, diameter 17 inches, depth 8 inches.....Per Dozen, $2.50

Packed—Siz Dozen in a Crate.

W-K SANITARY HENS' NESTS



No. 3.

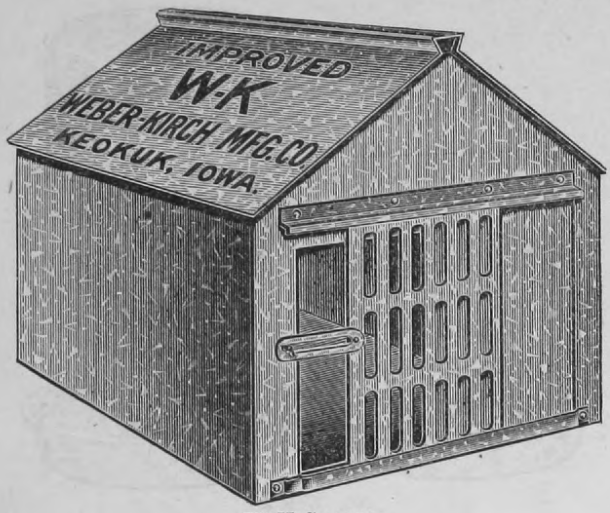
The W-K Hens' Nest is sanitary, light and airy. It is made of galvanized iron, cheaper and better than any wooden nest. Size of each nest is 11x11 inches inside; the total outside length is 36 inches. Prevents mites in your hens' nests, as lice cannot live in a metal nest.

No. 3—Hen's Nest, Each Nest 11x11 inches inside, total length 36 inches.....Per Dozen, $21.00

Packed—Half Dozen in a Crate, K. D. Shipping Weight 50 lbs. per Crate.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CHICKEN COOPS



W-K Square.

This Coop is made of Galvanized Iron, which makes it rat, weasel, mink, skunk and mite proof. Will not absorb moisture, easily cleaned and perfectly sanitary. Bottom can be slid out and cleaned without picking up the Coop. Can be taken apart easily in a few seconds. There is plenty of room for a hen and twenty-five chicks, until they are old enough to shift for themselves.

W-K Square Chicken Coop—18x24x17 inches... .....Per Dozen, $28.80

Packed—One-half Dozen in a Crate.

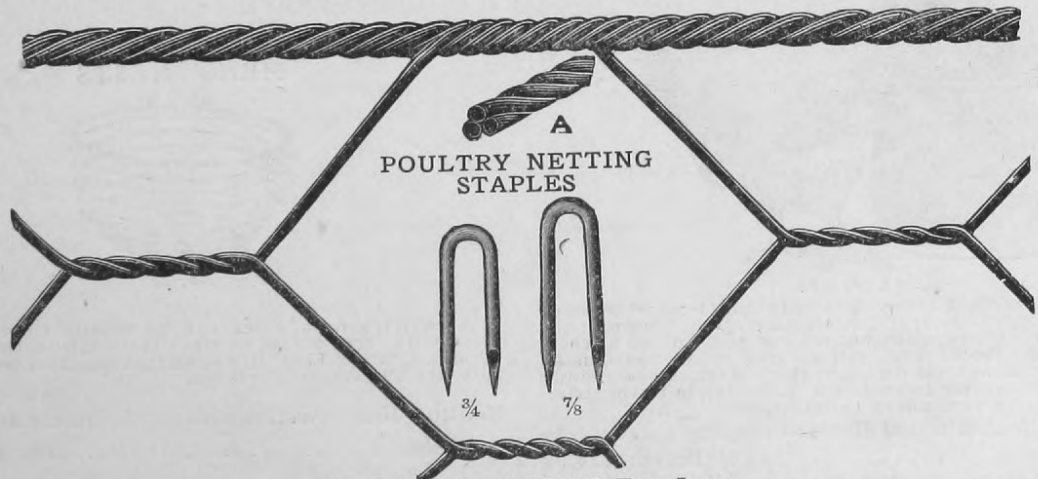
Dandy Round.

The Dandy Coop is vermin proof, closes up tight top and bottom for cool weather; in summer the top can be lifted up one inch and the door is turned into a ventilator allowing the air to circulate in through and upward. It is easy to clean as it has no dirt catching angles; chicks cannot crowd into corners. In fact every favorable feature—Sanitation and ventilation—is found, on the Dandy Chicken Coop.

Dandy Round Chicken Coop. 21 inches in diameter, 14 inches high, 20 inches to top of cone.....Per Dozen, $28.80

Packed—One-half Dozen in a Crate.

GALVANIZED POULTRY NETTING



List Price "Per Roll" 150 Feet Long

Width, Inches	12	18	24	30	36	42	48	60	72
2 inch Mesh, No. 19 Wire	$2.48	3.56	4.54	5.42	6.19	7.22	8.25	10.32	12.38
2 " " " 20 "	2.14	3.08	3.92	4.68	5.35	6.24	7.13	8.91	10.69
1½ " " " 20 "	3.15	4.53	5.78	6.90	7.88	9.19	10.50	13.13	15.75
1 " " " 20 "	4.95	7.12	9.08	10.83	12.38	14.44	16.50	20.63	24.75
¾ " " " 20 "	8.55	12.30	15.68	18.71	21.38	24.94	28.50	35.63	42.75

Package—All widths 150 Lineal Feet in a Roll.

Discount.
Galvanized Before Weaving.....%

Discount.
Galvanized After Weaving.....%

POULTRY NETTING STAPLES

No. 14 Steel Wire. ¾ and ⅞ Inches.

Bright

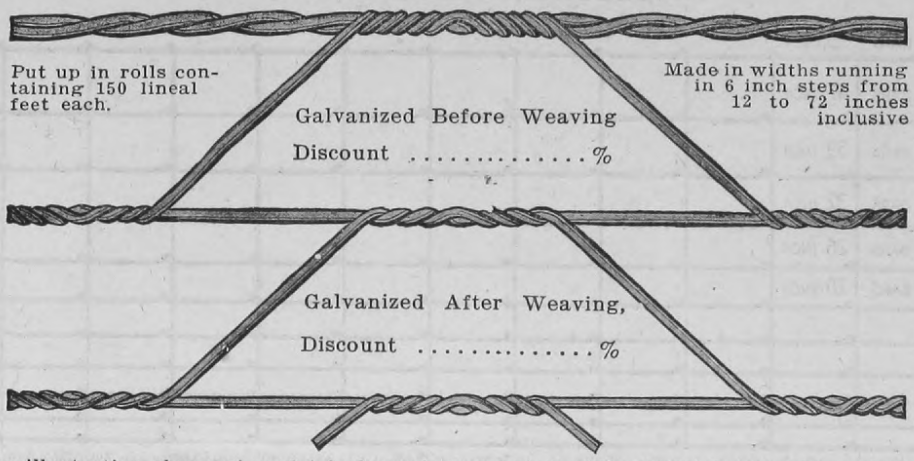
In 10 lb. Boxes.....Per 100 lbs., $.....
In 25 lb. Boxes.....Per 100 lbs., ...
In 100 lb. Kegs.....Per 100 lbs., ...

Galvanized

In 10 lb. Boxes.....Per 100 lbs., $.....
In 25 lb. Boxes.....Per 100 lbs., ...
In 100 lb. Kegs.....Per 100 lbs., ...

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

U. S. POULTRY FENCE



Above illustration shows size of 1 inch mesh or opening, style of twist and cable margin wire.

The U. S. Poultry Fence has proven itself best by test, it is strictly a **"No Sag"** fence, as the combination of line and mesh wires, closely woven, prevents any lengthening or narrowing between posts. In erecting U. S. Poultry Fence the line wires permit of being stretched to a high tension, which compels the fence to remain rigid and upright without anchoring it to a baseboard or top rail. These features place it a long stride beyond the Hex mesh netting, which never fails to narrow and lengthen if you attempt to stretch it to a tension required to prevent sagging.

"Two" Inch Mesh—No. 19 Wire—List Price Per Square Foot, $0.02½.

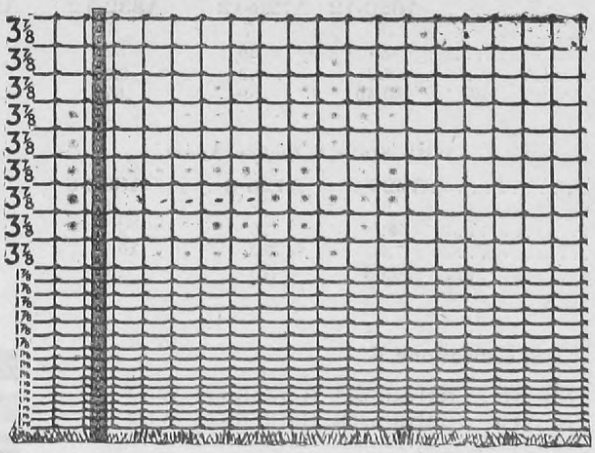
Width, Inches	12	18	24	30	36	42	48	60	72
Square Feet, Per Roll	150	225	300	375	450	525	600	750	900
Approx. Weight, Per Roll	12½	17½	23	28	33½	38½	43	53	63
Per Roll	$2.48	3.56	4.54	5.42	6.19	7.22	8.25	10.32	12.38

"One" Inch Mesh—No. 19 Wire—List Price Per Roll 150 Feet Long.

Width, Inches	12	18	24	30	36	42	48	60	72
Square Feet, Per Roll	150	225	300	375	450	525	600	750	900
Approx. Weight, Per Roll	20	29½	37½	45	53	62	71	87½	106½
Per Roll	$4.95	7.12	9.08	10.83	12.38	14.44	16.50	20.63	24.75

Packed—All Widths 150 Lineal Feet in a Roll.

BANNER "STANDARD" POULTRY FENCE



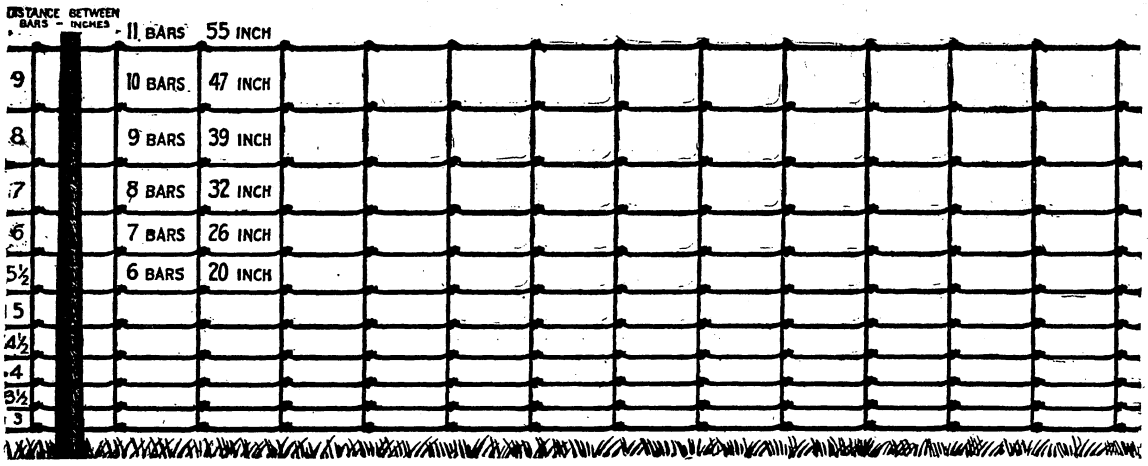
An Improved Square Mesh Poultry Fence of great strength, durability and closeness of mesh, especially designed to hold all poultry from the chick to the full grown bird, and shut out small animals. The spacing between the six line wires at the bottom is only 1⅛ inches and it gradually increases to 3⅞ inches at the top. The upright wires or stays run continuously across the fence and lock firmly around the intersecting line wires in a loop knot, forming a smooth solid joint without any sharp, rough edges. Top and Bottom Horizontal Wires or Bars are of No. 15 Galvanized Steel Wire, Intermediate Horizontal Wires or Bars are of No. 17 Galvanized Steel Wire. Upright Wires or Stays are of No. 17 Galvanized Steel Wire and spaced 4 inches apart.

Nos.	Height, Inches	Number of Hor. Running Wires	Approx. Weight Per Roll, Pounds	Per Rod
1012	12	10	22	$0.44
1318	18	13	28.5	.57
1624	24	16	35.5	.71
1936	36	19	43.7	.88
2248	48	22	52.6	1.05
2560	60	25	61.4	1.23
2872	72	28	68.3	1.40
3184	84	31	78.6	1.57

Packed—All Widths 10 Rods, 165 Lineal Feet, in a Roll.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

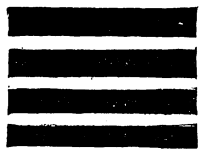
NATIONAL FARM FENCE



Made of hard, tough, springy wire, thoroughly galvanized; carries enormous tensile strength and is so elastic that its adjustment to weather conditions is perfect. Embodies all the good features of the old fences and a lot of new and essential features that cannot be secured in the old style. It appeals to the farmer as the sizes of wire and the spacings are right, making an ideal fence for all purposes. The more the fence is stretched the more firmly the stay is held in place.

Specifications A

Top Bar	No. **9** Galvanized Hard Steel Wire
Bottom Bar	No. **9** Galvanized Hard Steel Wire
Intermediates	No. **11** Galvanized Hard Steel Wire
Stays	No. **11** Galvanized Hard Steel Wire



With Stays 12 Inches Apart.

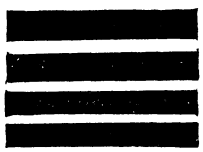
Nos.	A620-12	A726-12	A832-12	A939-12	A1047-12	A1155-12
Number of Bars	6	7	8	9	10	11
Approximate Height, inches	20	26	32	39	47	55
Approx. Weight per rod, pounds	6.2	7.2	8.3	9.4	10.6	11.8
Per Rod	$0.49	.59	.67	.76	.85	.95

With Stays 6 Inches Apart.

Nos.	A620-6	A726-6	A832-6	A939-6	A1047-6	A1155-6
Number of Bars	6	7	8	9	10	11
Approximate Height, inches	20	26	32	39	47	55
Approx. Weight per rod, pounds	7.9	9.3	10.8	12.4	14.1	15.9
Per Rod	$0.63	.73	.85	.97	1.10	1.24

Specifications B

Top Bar	No. **10** Galvanized Hard Steel Wire
Bottom Bar	No. **10** Galvanized Hard Steel Wire
Intermediates	No. **11½** Galvanized Hard Steel Wire
Stays	No. **12** Galvanized Hard Steel Wire



With Stays 12 Inches Apart.

Nos.	B620-12	B726-12	B832-12	B939-12	B1047-12	B1155-12
Number of Bars	6	7	8	9	10	11
Approximate Height, inches	20	26	32	39	47	55
Approx. Weight per rod, pounds	5.1	5.8	6.8	7.7	8.6	9.6
Per Rod	$0.45	.50	.60	.67	.75	.84

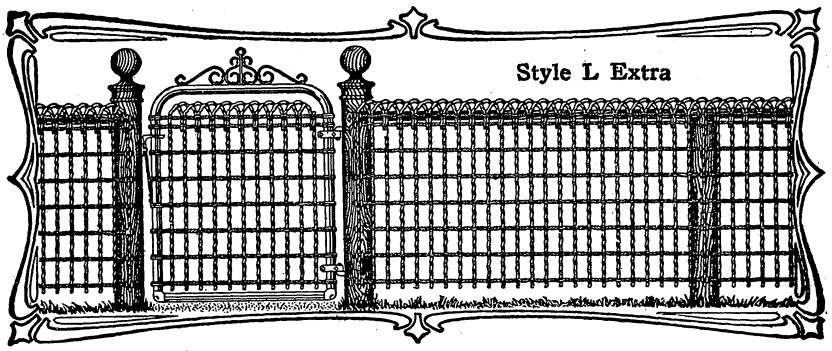
With Stays 6 Inches Apart.

Nos.	B620-6	B726-6	B832-6	B939-6	B1047-6	B1155-6
Number of Bars	6	7	8	9	10	11
Approximate Height, inches	20	26	32	39	47	55
Approx. Weight per rod, pounds	6.3	7.4	8.5	9.9	10.9	12.4
Per Rod	$0.56	.66	.76	.88	.97	1.10

Packed—Put up in 20, 30 and 40 Rod Rolls.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

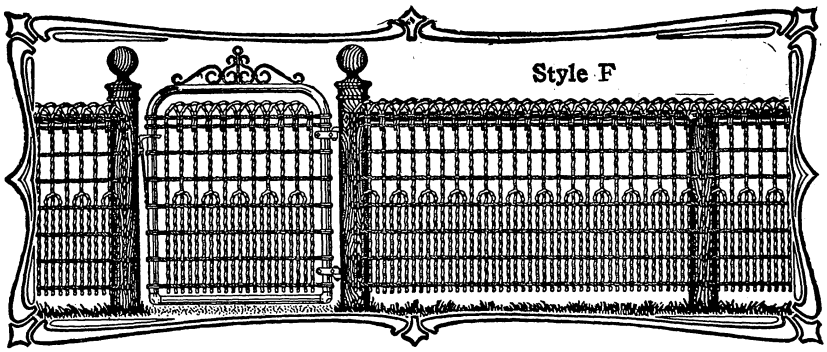
CYCLONE LAWN FENCE



Style L Extra, for use with wood posts. Corrugated pickets are of No. 9 heavily galvanized wire spaced 2⅞ inches apart. Cabled line wires are of heavily galvanized wire spaced about 6 inches apart, except the two top cables, which are spaced 2⅝ inches apart.

Height, inches	36	42	48
Number of Cables	7	8	9
Per 100 Lineal Feet	$16.00	18.00	20.00

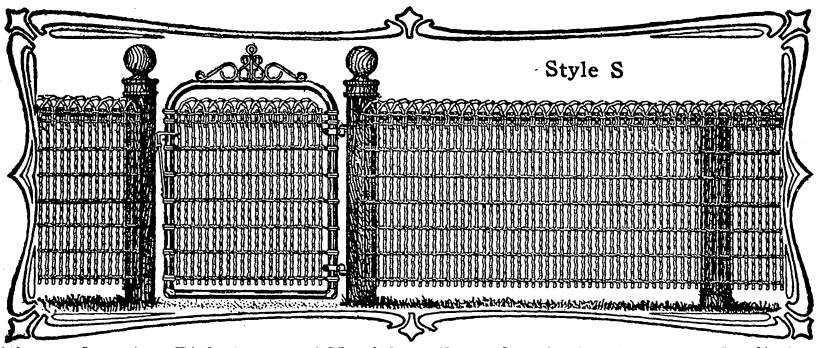
Packed—Put up in 20 Rod Rolls of 330 Lineal Feet.



Style F, Close Mesh, for use with wood posts. Pickets are of No. 9 heavily galvanized wire spaced 2⅞ inches apart at the top, with an additional No. 9 galvanized picket interwoven so as to give an extra close spacing of 1⅜ inches at the bottom. Cables are of heavily galvanized wire, spaced about 6 inches apart, except two top cables which are spaced 2⅜ inches apart.

Height, inches	36	42	48
Number of Cables	7	8	9
Per 100 Lineal Feet	$22.00	24.00	28.00

Packed—Put up in 20 Rod Rolls of 330 Lineal Feet.



Style S—For use with wood posts. Pickets are of No. 9 heavily galvanized wire, spaced 1⅜ inches apart; the pickets extend from top to bottom of fabric. This is the closest-mesh sanitary fence made, besides being a very attractive and ornamental pattern.

Height, inches	42	48	54	60
Number of Cables	8	9	10	11
Per 100 Lineal Feet	$31.00	35.00	39.00	44.00

Packed—Put up in 20 Rod Rolls of 330 Lineal Feet.

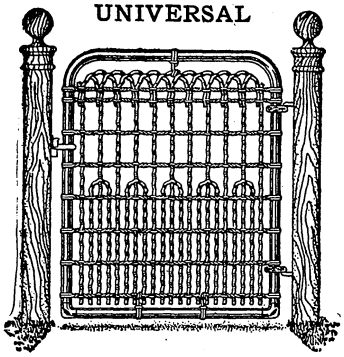
Cyclone Ornamental Fabrics are made by cabling horizontal wires on heavy corrugated-wire pickets, reversing the twist of each cable on each picket, thereby causing the cabled line wires to become firmly seated in the corrugations of the pickets, forming an immovable joint, providing for contraction and expansion of fabric and producing a lock at intersections that tends to tighten as the strain increases. The reverse twist of the cables being made on the pickets (not between them) prevents the cables from untwisting or becoming slackened under severe strains or climatic changes.

Some of the special features to be found only in the genuine **Cyclone** are: the close, short lock at the intersection of the cables and picket wires; the uniform spacing of pickets; the close twist of cabled line wires; no ragged finish of picket ends at either top or bottom; and the sharp corrugation at the bottom of the picket wires. A sharp corrugation at the bottom of the pickets effectually prevents the bottom cable from being slipped off the picket ends.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CYCLONE LAWN GATES

UNIVERSAL

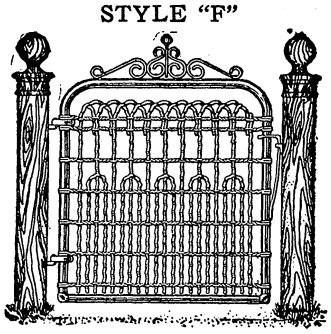


Universal, Single Close Mesh, Plain Top, Walk Gates, with adjustable hinges and latches for wood posts. Frames are of high carbon steel tubing 1⅛ inches in diameter, pickets are of No. 9 heavily galvanized wire spaced 1⅜ inches at bottom and 2⅞ inches at top.

Height, inches..	36	42	42	48	48	48
Opening, inches.	36	36	42	36	42	48
Each	$3.80	3.80	4.20	3.80	4.20	4.80

Note—Gates are measured by size of opening between posts and not by width of gate.

STYLE "F"

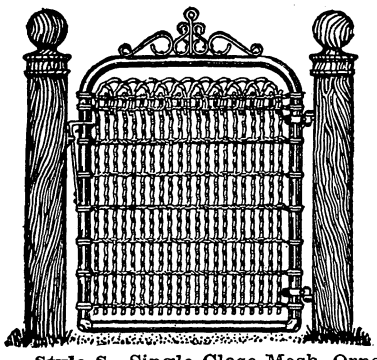


Style F, Single, Close Mesh, Ornamental Top, Walk Gates. Frames are of high-grade steel tubing with adjustable hinges and latches for wood posts.

Height, inches..	36	36	42	42	48	48
Opening, inches.	36	42	36	42	36	42
Each	$4.80	5.20	4.80	5.20	4.80	5.20

Note—Gates are measured by size of opening between posts and not by width of gate.

STYLE "S"



Height, inches.....	42	42	42	48	48	48
Opening, inches.....	36	42	48	36	42	48
Each	$4.80	5.20	5.60	4.80	5.20	5.60

Height, inches	54	54	54	60	60
Opening, inches	36	42	48	42	48
Each	$5.28	5.72	6.16	6.24	6.72

Style S—Single Close Mesh, Ornamental Top, Walk Gates. Frames of heavy, high-grade, steel tubing 1⅛ inch diameter. Pickets extending from top to bottom of fabric are made of No. 9 heavily galvanized wire spaced 1⅜ inches apart. Furnished with adjustable hinges and latch for wood posts.

Note—Gates are measured by size of opening between posts and not by width of gate.

CYCLONE VICTOR "ADJUSTABLE" FARM GATES

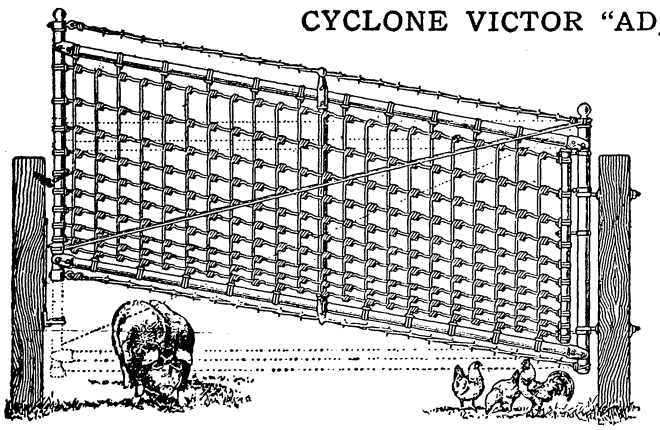


Illustration showing Gate in Elevated Position.

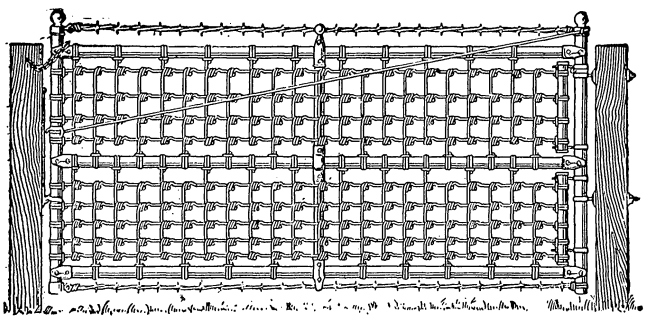


Illustration showing Gate Closed.

Lateral bars are heavy high-carbon steel tubing 1⅝ inches in diameter with brazed seams. End bars are "U"-shape. Top and bottom bars are bolted directly to the "U" bars, making a positive, flexible joint. Center bar is made of two pieces securely bolted around frame at top and bottom and trussed in the center to withstand shock or strain. **"Automatic latch"** locks gate securely in any position. Stretcher-bar keeps fabric at proper tension and is adjustable. **"Adjustable truss-rod"** raises front end of gate 30 inches and hinge end can be raised up to 12 inches. This permits small stock to pass under freely, while large stock are barred; also permit gates to swing freely over snow in winter. All gates have **"Heavily galvanized fabric,"** top and bottom wires No. 9, intermediate wires No. 10, cross-bars No. 10 spaced 6 inches apart. **"Regularly furnished"** with framework and fittings painted, also furnished galvanized when so ordered. Unless otherwise ordered painted gates will be shipped. **"Regularly shipped"** with heavy wrought steel eye-bolt hinges to fasten to wood posts. **"Steel Post Fittings Extra"**—When Steel Post Fittings are wanted be sure to mention on order "for steel post fittings," stating kind of posts. The 10, 12 and 14 foot opening sizes have one center-bar, the 16 foot size has two center-bars.

List Prices of the "Two-Bar" Victor Gate

Height, Inches	Opening, Feet	Painted, Each	Galvanized, Each
54	10	$ 7.35	$ 8.15
54	12	8.25	9.15
54	14	9.15	10.15
54	16	10.10	11.15

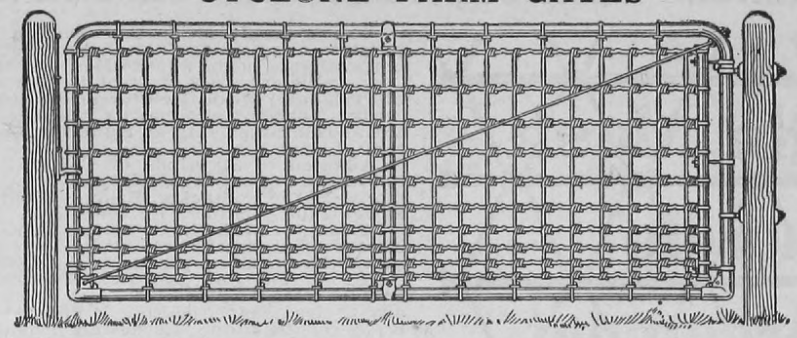
List Prices of the "Three-Bar" Victor Gate

Height, Inches	Opening, Feet	Painted, Each	Galvanized, Each
66	10	$10.00	$11.00
66	12	11.25	12.35
66	14	12.50	13.65
66	16	13.40	14.65

Note—Be sure to specify on order whether Gates are wanted with frame painted or galvanized.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CYCLONE FARM GATES

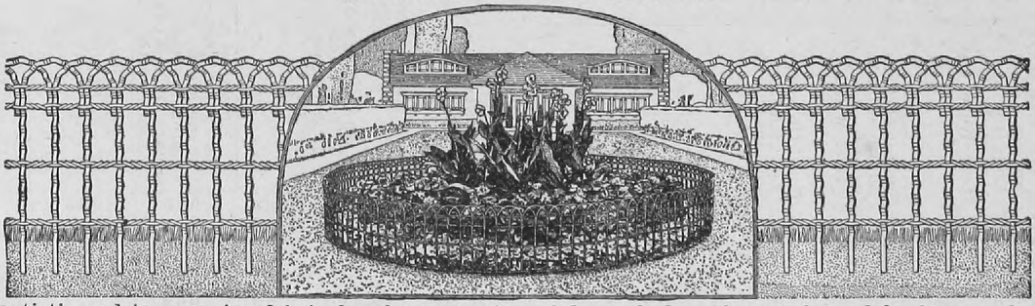


Style A, Single Plain Top, Drive Gates, with adjustable hinges and latches for wood posts. Frames are of high carbon tubular steel, fabrics are of heavy galvanized wire, closely woven to produce a general purpose gate. Provided with an adjustable truss rod which effectually prevents any possible sagging. Has improved malleable sleeve, square bottom corners, which relieve the strain on tubing at corners and add great strength.

Height, inches				48	54
10 Foot Opening.	Frame painted.	Fabric galvanized	Each,	$9.00	$9.00
12 Foot Opening.	Frame painted.	Fabric galvanized	Each,	10.00	10.00
14 Foot Opening.	Frame painted.	Fabric galvanized	Each,	11.60	11.60

Note.—Gates are measured by size of opening between posts and not by width of gate.

FLOWER BED GUARDS

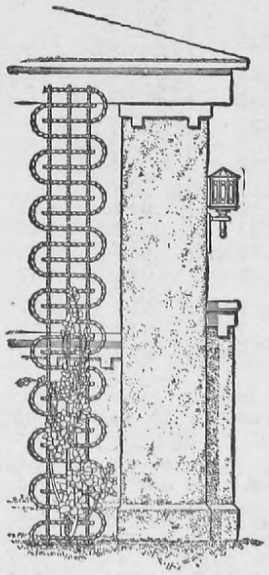


A neat, artistic and inexpensive fabric for the protection of flower beds. Also much used for lawn and curbway border. Can be readily taken up and used from year to year, cut off to length required, and the ends hooked together when set. No posts are required to hold it in place, as the picket ends are left projecting for insertion in the ground. Uprights are of No. 9 and cables of No. 13 heavily galvanized wire.

Cyclone Perfection Flower Bed Guards and Lawn Borders	Height, inches	16	22
	Per 100 Lineal Feet	$11.00	$13.00

Packed—Put up in 10 and 20 Rod Rolls of 165 and 330 Lineal Feet, respectively.

SINGLE TRELLIS

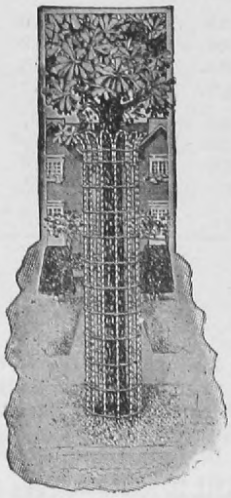


Cyclone Single Trellis. Practical, durable and attractive. For climbing vines and flowers. Easily placed in position. Corrugated wires are of No. 10 and Cables of No. 13 Galvanized Wire.

Width, inches	18	24	30
Per 100 Lineal Feet	$8.00	10.00	12.00

Packed—Put up in 10 and 20 Rod Rolls, of 165 and 330 Lineal Feet, respectively.

TREE GUARDS

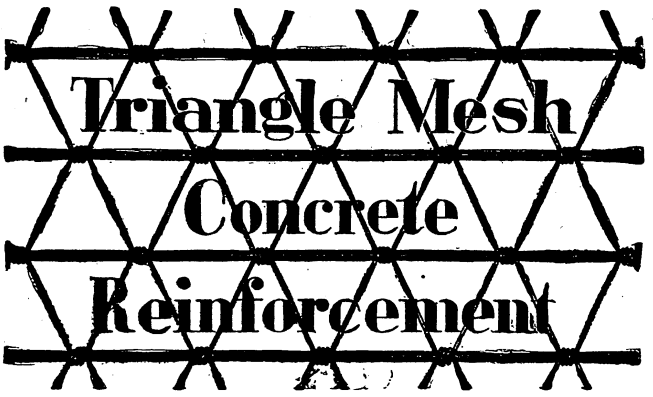


Cyclone Tree Guards, for protection without shading or otherwise injuring the tree. Made of heavy galvanized wire, furnished with spiral spring, which attaches to tree and prevents rubbing or bruising of the bark. Height, 6 feet.

Diameter, inches	8	10	12
Per Dozen	$17.00	20.00	23.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

TRIANGLE MESH CONCRETE REINFORCEMENT



The Triangle Mesh Construction provides the greatest possible strength against **Diagonal** stress or strain which is not available in the Square Mesh Construction reinforcement.

A sufficient area of steel is provided in the cross wires of **Triangle Mesh Reinforcement** to prevent temperature cracks, thereby eliminating the necessity of laying additional reinforcements at right angles to the longitudinal or tension members.

Adapted to all kinds of Concrete Construction such as Pavements, Roadways, Floors, Roofs, Retaining Walls, Columns, Stands, Stacks, Bridge Floors and Trestle Work, Sewer Pipe, Viaducts Culverts, Etc.

Triangle Mesh Steel Woven Wire Reinforcement is the most perfect reinforcement for concentrated loads, distributing the stress imposed by the load throughout the floor slab. A hinge joint is provided on each longitudinal, which enables this reinforcement to be folded longitudinally in any desired shape, making it adaptable to all kinds of concrete construction. Its design provides a most perfect mechanical bond between the steel and the concrete, and from the fact that it is not galvanized (unless specifically ordered) the maximum adhesive bond is developed.

Prices furnished promptly on receipt of Specifications. Special Sizes on Application.

TABLE No. 1—Longitudinals Spaced 4 Inches

Cross Wires Number 14 Gauge Spaced 4 Inches

Number and Gauge of Wires, Areas per Foot Width and Weights per 100 Square Feet

Style Number	No. and Gauge of Wires, each Longitudinal A. S. & W. Co. Steel Wire Ga.	Sectional Area Longitudinals square inches per foot width	Total Effective Longitudinal Sectional Area square inches per foot width	Approximate Weight lbs. per 100 square feet	Per 100 square feet
032	1—No. 12 ga.	.026	.032	22	$....
040	1—No. 11 ga.	.034	.040	25	....
049	1—No. 10 ga.	.043	.049	28	....
058	1—No. 9 ga.	.052	.058	32	....
068	1—No. 8 ga.	.062	.068	35	....
080	1—No. 7 ga.	.074	.080	40	....
093	1—No. 6 ga.	.087	.093	45	....
107	1—No. 5 ga.	.101	.107	50	....
126	1—No. 4 ga.	.120	.126	57	....
146	1—No. 3 ga.	.140	.146	65	....
153	1—No. ¼ in.	.147	.153	68	....
168	1—No. 2 ga.	.162	.168	74	....
180	2—No. 6 ga.	.174	.180	78	....
208	2—No. 5 ga.	.202	.208	89	....
245	2—No. 4 ga.	.239	.245	103	....
267	3—No. 6 ga.	.261	.267	111	....
287	3—No. 5½ ga.	.281	.287	119	....
309	3—No. 5 ga.	.303	.309	128	....
336	3—No. 4½ ga.	.330	.336	138	....
365	3—No. 4 ga.	.359	.365	149	....
395	3—No. 3½ ga.	.389	.395	160	....

TABLE No. 2—Longitudinals Spaced 4 Inches

Cross Wires Number 14 Gauge Spaced 8 Inches

Number and Gauge of Wires, Areas per Foot Width and Weights per 100 Square Feet

Style Number	No. and Gauge of Wires, each Longitudinal A. S. & W. Co. Steel Wire Ga.	Effective Sectional Area of cross Reinforcement square inches per foot width	Effective Longitudinal Sectional Area square inches per foot width	Approximate Weight lbs. per 100 square feet	Per 100 square feet
036P	1—No. 12 ga.	.009	.036	17	$....
044P	1—No. 11 ga.	.009	.044	20	....
053P	1—No. 10 ga.	.009	.053	24	....
062P	1—No. 9 ga.	.009	.062	27	....
072P	1—No. 8 ga.	.009	.072	31	....
084P	1—No. 7 ga.	.009	.084	35	....
097P	1—No. 6 ga.	.009	.097	40	....

TABLE No. 3—Longitudinals Spaced 4 Inches

Cross Wires Number 12½ Gauge Spaced 8 Inches

Number and Gauge of Wires, Areas per Foot Width and Weights per 100 Square Feet

Style Number	No. and Gauge of Wires, each Longitudinal A. S. & W. Co. Steel Wire Ga.	Effective Sectional Area of Cross Reinforcement square inches per foot width	Effective Longitudinal Sectional Area square inches per foot width	Approximate Weight lbs. per 100 square feet	Per 100 square feet
041R	1—No. 12 ga.	.014	.041	21	$....
049R	1—No. 11 ga.	.014	.049	24	....
058R	1—No. 10 ga.	.014	.058	28	....
067R	1—No. 9 ga.	.014	.067	31	....
077R	1—No. 8 ga.	.014	.077	35	....
089R	1—No. 7 ga.	.014	.089	40	....
102R	1—No. 6 ga.	.014	.102	44	....

We Stock Plain Materials only as follows: Stock Length of Rolls—150 feet.
Stock Numbers and Widths of Rolls are—Nos. 049, 093, 153 and 245—40″ wide, and No. 032, 56″ wide.
Widths available are, approximately, 16, 20, 24, 28, 32, 36, 40, 41, 48, 52 and 56 inches.

Note.—Material may be furnished on special orders either plain or galvanized and otherwise according to the various specifications above. Unless otherwise specified, shipments will be made of material **not** galvanized.

TABLE No. 4—Areas in Square Feet per Roll of Triangle Mesh Reinforcement

Width, inches	16	20	24	28	32	36	40	44	48	52	56
150 ft. Rolls	200	250	300	350	400	450	500	550	600	650	700
200 ft. Rolls	267	333	400	467	533	600	667	733	800	867	933
300 ft. Rolls	400	500	600	700	800	900	1000	1100	1200	1300	1400

Note.—For the lighter styles, rolls of any of the above lengths may be used. Material of medium weights is recommended to be used in 150 or 200 foot lengths, while with the heaviest styles it is more conveniently handled in rolls containing 150 foot lengths.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BALE TIES

Single Loop

For bailing or bundling hay, straw, flax, excelsior, wool, rags, shavings, sawdust, etc.

Prices per Bundle of 250 Ties.

Length in feet	No. 16 Wire	No. 15 Wire	No. 14 Wire	No. 13 Wire	No. 12 Wire	Length in feet	No. 16 Wire	No. 15 Wire	No. 14 Wire	No. 13 Wire	No. 12 Wire
5	$2.63	$3.19	$3.66	$4.46	$5.47	8¾	$4.11	$5.05	$5.84	$7.17	$ 8.87
5¼	2.72	3.32	3.80	4.64	5.70	9	4.20	5.18	5.97	7.35	9.10
5½	2.82	3.44	3.94	4.82	5.92	9¼	4.31	5.29	6.13	7.54	9.33
5¾	2.91	3.56	4.10	5.00	6.16	9½	4.40	5.42	6.28	7.72	9.56
6	3.01	3.69	4.23	5.18	6.38	9¾	4.50	5.55	6.41	7.90	9.79
6¼	3.10	3.82	4.38	5.36	6.61	10	4.59	5.67	6.56	8.08	10.01
6½	3.21	3.93	4.53	5.54	6.83	10¼	4.69	5.79	6.71	8.26	10.24
6¾	3.30	4.06	4.67	5.72	7.06	10½	4.78	5.92	6.85	8.42	10.46
7	3.41	4.19	4.82	5.90	7.29	10¾	4.90	6.03	7.00	8.60	10.69
7¼	3.50	4.31	4.97	6.09	7.51	11	4.98	6.17	7.15	8.79	10.92
7½	3.60	4.44	5.10	6.27	7.74	11¼	5.09	6.28	7.28	8.97	11.15
7¾	3.71	4.56	5.26	6.45	7.97	11½	5.18	6.41	7.43	9.15	11.38
8	3.81	4.68	5.40	6.63	8.20	11¾	5.28	6.54	7.58	9.33	11.60
8¼	3.92	4.81	5.54	6.81	8.42	12	5.38	6.65	7.72	9.51	11.83
8½	4.01	4.92	5.69	6.99	8.65	.....	.....	.....	.....	.....	.....

Note.—To get the length of Tie required, add three inches to the measure around the bale, when under pressure.
Other styles furnished on special orders.

METAL BOX STRAPPING

Embossed and Lacquered.

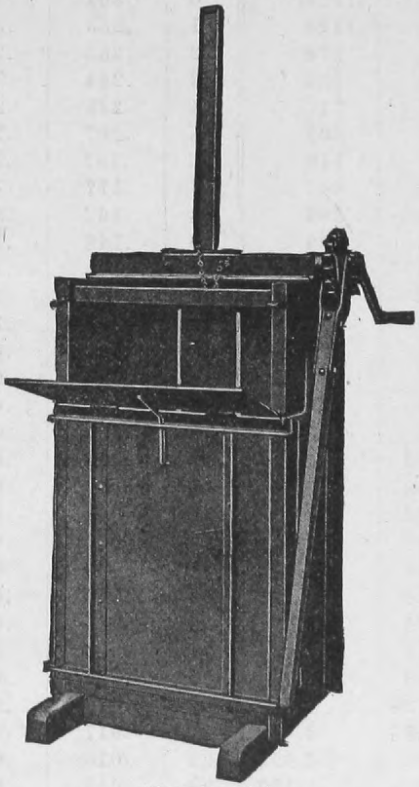
A continuous metal strap with a series of raised bosses along the edges to strengthen the same and protect the nail heads. Made of soft annealed steel of great tensile strength through which nails can be driven without first punching holes.

Acme Metal Box Strapping.....	Width, inch	½	⅝	¾
	Per Coil	$1.00	1.25	1.50

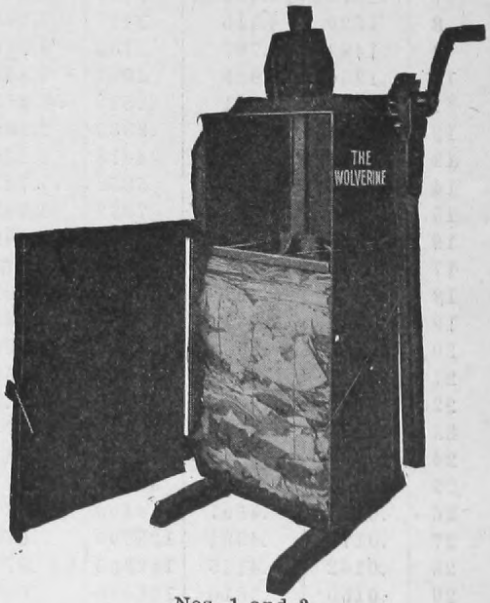
Packed—Three Hundred **Feet** in a Coil, 20 Coils in a Case.

WASTE PAPER BALERS

Junior.
Open Ready to Wire Bale.



Nos. 1 and 2.
Ready to Receive Paper.



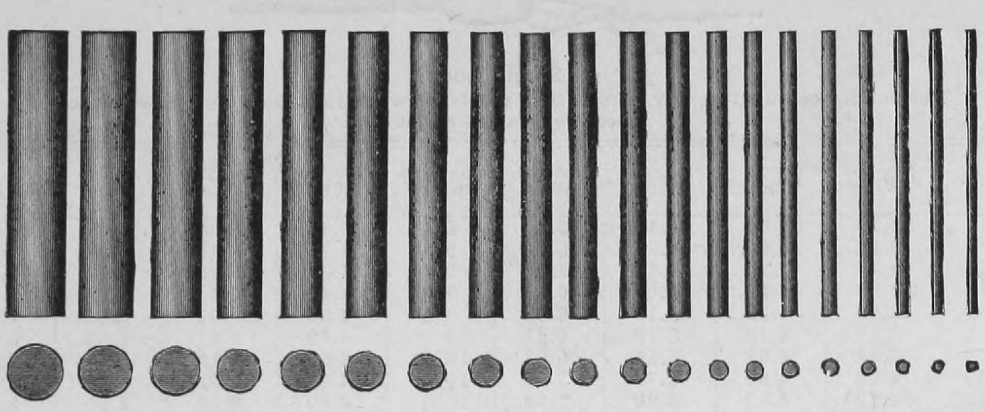
Nos. 1 and 2.
Open Ready to Wire Bale.

The Wolverine line of all steel fire-proof Balers is made in three sizes: the Junior size, especially adapted for apartment houses, schools and residences as it requires only 21x18 inches floor space. Paper Balers can be used for baling almost any material as waste paper, rags, excelsior, shavings, tobacco, flax, wool, hair, cotton waste and other fibrous materials.

Junior Wolverine—Weight of Bale, 60 to 75 pounds. Size of Bale, 14x18x24 inches.....Each, $35.00
No. 1 Wolverine—Weight of Bale, 100 to 150 pounds. Size of Bale, 16x20x30 inches.....Each, 60.00
No. 2 Wolverine—Weight of Bale, 150 to 200 pounds. Size of Bale, 20x24x30 inches.....Each, 70.00

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

WIRE SIZES AND COMPARATIVE GAUGES



Cuts Showing Exact Sizes of No. 1 to No. 20 Gauge Steel Wire, by American Steel & Wire Company Gauge.

Size, Weight and Length of Wire

A. S. & W. Co. Gauge.

A. S. & W. Co. Gauge	Diameter		Feet in 100 Pounds Approx.	Pounds in 100 Feet	Pounds in One Mile
	Decimal of an inch	Milli-meters			
000	.3625	9.2075	285	35.05	1851
00	.3310	8.407	342	29.22	1543
0	.3065	7.785	399	25.06	1323
1	.2830	7.185	468	21.36	1128
2	.2625	6.668	544	18.38	970
3	.2437	6.190	631	15.84	836
4	.2253	5.723	738	13.54	715
5	.2070	5.258	875	11.43	603
6	.1920	4.877	1017	9.832	519
7	.1770	4.496	1197	8.356	441
8	.1620	4.115	1429	7.000	369
9	.1483	3.767	1705	5.866	309
10	.1350	3.429	2057	4.861	256
11	.1205	3.061	2582	3.873	204
12	.1055	2.680	3369	2.969	156
13	.0915	2.324	4478	2.233	117
14	.0800	2.032	5858	1.707	90
15	.0720	1.829	7232	1.383	73
16	.0625	1.588	9598	1.042	55
17	.0540	1.372	12860	.7778	41
18	.0475	1.207	16620	.6018	31.77
19	.0410	1.041	22300	.4484	23.67
20	.0348	.8839	30960	.3230	17.00
21	.0317	.8052	37310	.2680	14.15
22	.0286	.7264	45840	.2182	11.52
23	.0258	.6553	56330	.1775	9.37
24	.0230	.5842	70870	.1411	7.45
25	.0204	.5182	90090	.1110	5.86
26	.0181	.4597	114400	.08738	4.61
27	.0173	.4394	125300	.07983	4.215
28	.0162	.4115	142900	.07	3.696
29	.0150	.3810	166600	.06001	3.169
30	.0140	.3556	191300	.05228	2.76
31	.0132	.3553	215200	.04647	2.454
32	.0128	.3251	228800	.04370	2.307
33	.0118	.2997	269300	.03714	1.961

Table of Comparative Sizes Wire Gauges

In Decimals of an Inch.

No. of Wire Gauge	A. S. & W. Co., or Washburn & Moen	Birmingham, or Stubs'	Browne & Sharp	English Legal Standard	Old English or London
000	.362	.425	.40964	.372	.4250
00	.331	.380	.36480	.348	.3800
0	.307	.340	.32495	.324	.3400
1	.283	.300	.28930	.300	.3000
2	.263	.284	.25763	.276	.2840
3	.244	.259	.22942	.252	.2590
4	.225	.238	.20431	.232	.2380
5	.207	.220	.18194	.212	.2200
6	.192	.203	.16202	.192	.2030
7	.177	.180	.14428	.176	.1800
8	.162	.165	.12849	.160	.1650
9	.148	.148	.11443	.144	.1480
10	.135	.134	.10189	.128	.1340
11	.120	.120	.09074	.116	.1200
12	.105	.109	.08081	.104	.1098
13	.092	.095	.07196	.092	.0950
14	.080	.083	.06408	.080	.0830
15	.072	.072	.05707	.072	.0720
16	.063	.065	.05082	.064	.0650
17	.054	.058	.04526	.056	.0580
18	.047	.049	.04030	.048	.0490
19	.041	.042	.03589	.040	.0400
20	.035	.035	.03196	.036	.0350
21	.032	.032	.02846	.032	.0315
22	.028	.028	.02535	.028	.0295
23	.025	.025	.02257	.024	.0270
24	.023	.022	.02010	.022	.0250
25	.020	.020	.01790	.020	.0230
26	.018	.018	.01594	.018	.0205
27	.017	.016	.01419	.0164	.01875
28	.016	.014	.01264	.0148	.01650
29	.015	.013	.01126	.0136	.01550
30	.014	.012	.01002	.0124	.01375
31	.0132	.010	.00893	.0116	.01225
32	.0128	.009	.00795	.0108	.01125
33	.0118	.008	.00708	.0100	.01025

Note.—Brass Wire will weigh about 10 per cent. heavier, and Copper Wire about 15 per cent. heavier than Steel Wire.

"For U. S. Standard Gauge for Plate see Page 18."

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BARBED WIRE

On Catch Weight Spools of 90 to 120 Pounds.

Four Point

Lyman Regular or Cattle Wire, 12 Ga.

Round Barbs, 6 inches apart.

Painted.....Per 100 Pounds, $.....

Galvanized.....Per 100 Pounds, ...

Four Point

Lyman Thickset or Hog Wire, 12 Ga.

Round Barbs, 4 inches apart.

Painted.....Per 100 Pounds, $.....

Galvanized.....Per 100 Pounds, ...

Two Point

American Glidden Thickset or Hog Wire, 12 Ga.--Round Barbs, 3 inches apart.

Painted.....Per 100 Pounds, $.....

Galvanized.....Per 100 Pounds, $.....

American Special, 14 Ga.

American Glidden, 12 Ga.

Galvanized, on 80 Rod Spools

		Approximate Weight Per Spool	Per Spool
American Special	Two Point, Regular or Cattle Wire, Round Barbs 5 inches apart	51 lbs.	$.....
	Two Point, Thickset or Hog Wire, Round Barbs 3 inches apart	54 lbs.	.....
American Glidden,	Two Point, Thickset or Hog Wire, Round Barbs 3 inches apart	84 lbs.	.....
Lyman	Four Point, Regular or Cattle Wire, Round Barbs 6 inches apart	84 lbs.	.....
	Four Point, Thickset or Hog Wire, Round Barbs 4 inches apart	90 lbs.	.....

Estimated Table of Weights and Measures for Barbed Wire

No. of Acres	Size of Enclosure	Miles of Fence	Rods of Fence	Posts Required		Pounds of Wire (One Strand)	
				½ Rod Apart	1 Rod Apart	Two Point	Four Point
640 or 1 Section..	1 x 1 Mile	4	1280	2560	1280	1408	1488
320 or ½ Section.	½ x 1 Mile	3	960	1920	960	1056	1116
160 or ¼ Section.	½ x ½ Mile	2	640	1280	640	704	744
80	¼ x ½ Mile	1½	480	960	480	528	558
40	¼ x ¼ Mile	1	320	640	320	352	372
20	⅛ x ¼ Mile	¾	240	480	240	264	279
10	40 x 40 Rods	½	160	320	160	176	186
5	20 x 40 Rods	⅜	120	240	120	132	140
1	12¾ x 12¾ Rods	.....	50¾	104	52	55½	61

Posts Required to a Mile

Feet apart.....	8	10	12	16½	20	25	30	33
No. of Posts.....	660	528	440	320	264	212	176	160

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WIRE IN BUNDLES

Smooth Annealed Steel Fence Wire

Plain

No. 9 and Coarser—In Coils of 100 Pounds..... { From Store..**Base** Price, Per 100 Pounds, $..... / From Mill...**Base** Price, Per 100 Pounds, ...

Advances on Smooth, Annealed Steel Fence Wire, Per 100 Pounds.

Nos.	**9** and Coarser	**10**	**11**	**12** and **12½**	**13**	**14**	**15**	**16**	**17**	**18**
Plain —Add to Base Price,	Base	.05	.10	.15	.25	.35	.45	.55	.70	.85
Galv'd—Add to Base Price,	.70	.75	.80	.85	.95	1.05	1.50	1.60	2.15	2.30

Galvanized Brace Wire

No. 8—In 5 Pound Coils, 100 pounds in a bundle.....Per 100 Pounds, $.....

Note.—Sold in full bundles of 100 pounds only. We do not break bundles.

American Steel & Wire Co.'s W. & M. Telephone Wire

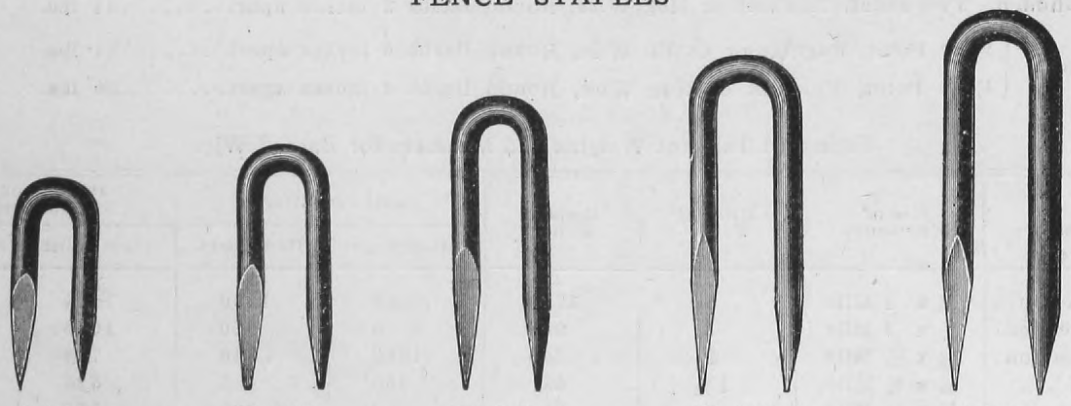
W. & M. Telephone Wire is drawn from metal, made especially for the purpose and rigidly inspected. The spelter is carefully laid on with uniform thickness, insuring ample protection and long life for the wire under extreme weather conditions. In point of conductivity this wire has attained the highest possibilities.

Nos. 8 to 14 inclusive, in half mile coils; No. 6 in One-third Mile Coils.

Nos. (Birmingham Wire Gauge).....	**6**	**8**	**9**	**10**	**11**	**12**	**14**
Diameter in decimals of an inch.....	.203	.165	.148	.134	.120	.109	.083
Bundles per mile.....	3	2	2	2	2	2	2
Weight per 1000 feet, Pounds.....	111.74	73.86	59.46	48.86	39.00	32.19	18.75
Weight per Mile, Pounds.....	590	390	314	258	206	170	99
Extra B.B .....Per Pound, $.....	.....	.....	.....	.....	.....	.....	.....
B.B .....Per Pound, ...	.....	.....	.....	.....	.....	.....	.....
Steel .....Per Pound, ...	.....	.....	.....	.....	.....	.....	.....

Note.—Less than 1500 pounds, ¼ cents per pound advance.

FENCE STAPLES



1 inch. 1¼ inch. 1½ inch. 1¾ inch. 2 inch.

Plain and Galvanized Fence Staples, Made of No. 9 Wire

In 25 Pound Boxes.

Inches	1¼	1¾
Plain .....Per 100 Pounds,	$.....	.....

In 100 Pound Kegs.

Inches	1	1¼	1½	1¾	2
Plain .....All Sizes, Per 100 Pounds, $.....					
Galvanized .....All Sizes, Per 100 Pounds, ...					

Shipping Weight per Keg 106 Pounds.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WIRE IN BUNDLES

Bright Market Wire in 100 Pound Bundles

Base Price.....Per 100 Pounds, $.....

Nos.	9 and Coarser	10	11	12	13	14	15	16	18
Advance per 100 Pounds	Base	$0.05	.10	.15	.25	.35	.45	.55	.85

Bright Market Wire in 25 Pound Bundles

Nos.	9 and Coarser	10	11	12	13	14	15	16	18
Per Bundle	.....	.....	.....	.....	.....	.....	.....	.....	.....

Coppered Market Wire in 100 Pound Bundles

Nos.	9 and Coarser	10	11	12	13	14	15	16	18
Per 100 Pounds	.....	.....	.....	.....	.....	.....	.....	.....	.....

Coppered Market Wire in 25 Pound Bundles

Nos.	9 and Coarser	10	11	12	13	14	15	16	18
Per Bundle	.....	.....	.....	.....	.....	.....	.....	.....	.....

Extras for Straightening and Cutting Wire

Five Hundred Pounds or Over of Each Size.

	20 in. and over	10 in. and up to 20 in.	5 in. and up to 10in.	3 in. and up to 5 in.
Nos. 6 and Coarser	$.....	.....	.....	.....
Nos. 7 to 9 inc.	.....	.....	.....	.....
Nos. 10 to 12 inc.	.....	.....	.....	.....
Nos. 13 and 14	.....	.....	.....	.....
Nos. 15 and 16	.....	.....	.....	.....

Extra for Quantity.

Less than 500 Pounds of One Size.

300 Pounds to 499 Pounds.....	$.....
200 Pounds to 299 Pounds.....	.....
100 Pounds to 199 Pounds.....	.....
50 Pounds to 99 Pounds.....	.....
25 Pounds to 49 Pounds.....	.....

MALINS STOVE PIPE WIRE

Black Enameled, Rust Proof Finish.

Malin's Annealed Stove Pipe Wire in 50 foot Coils.....	Nos.	19	20
	Per Dozen Coils.....	$.....	.....

Packed—One Dozen Coils in a Box.

Annealed Stone Wire in 12 Pound Bundles

Base Price.....Per 100 Pounds, $.....

Nos.	16	17	18	19	20	21	22	23	24	25	26	27
Advance per 100 Pounds.....	Base	$0.15	.30	.70	.85	1.00	1.15	1.30	1.45	1.60	1.75	2.50

Galvanized Annealed Stone Wire in 12 Pound Bundles

No. 18—Galvanized Annealed Stone Wire in 12 Pound Bundles.....Per Pound, $.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WIRE IN BUNDLES

MUSIC SPRING WIRE

The Finest Grade of Spring Wire Made.

Our Wire is specially made for mechanical purposes only, has a tensile strength of about 170 tons per square inch of section, and is extremely tough instead of being brittle. It is particularly designed for making springs of the highest grade and for use in machines for cutting clay or other substances. No other Music Wire is so well adapted to the demands made on the hardware trade.

Be sure and **compare** the diameter with gauge wanted as Music Wire Gauge is different from all other gauges.

Music Wire Gauge Nos.	Diam. in Decimals	No. of Feet in a Pound	Per Pound List Price	Per Pound Net Price	Music Wire Gauge Nos.	Diam. in Decimals	No. of Feet in a Pound	Per Pound List Price	Per Pound Net Price	Music Wire Gauge Nos.	Diam. in Decimals	No. of Feet in a Pound	Per Pound List Price	Per Pound Net
00	.008	5858	$12.00	.....	14	.033	344	$1.60	.....	29	.075	68	$1.20	.....
0	.009	4629	9.00	.....	15	.035	305	1.60	.....	30	.080	58	1.20	.....
1	.010	3749	7.50	.....	16	.037	274	1.40	.....	31	.083	54	1.20	.....
2	.011	2936	6.00	.....	17	.039	247	1.40	.....	32	.086	51	1.20	.....
3	.012	2604	5.00	.....	18	.041	223	1.40	.....	33	.091	46	1.20	.....
4	.013	2218	4.00	.....	19	.043	203	1.20	.....	34	.094	43	1.20	.....
5	.014	1913	3.50	.....	20	.045	185	1.20	.....	35	.098	39	1.20	.....
6	.016	1465	3.00	.....	21	.047	170	1.20	.....	36	.102	36	1.20	.....
7	.018	1157	2.75	.....	22	.049	156	1.20	.....	37	.106	34	1.20	.....
8	.020	937	2.50	.....	23	.051	144	1.20	.....	38	.110	32	1.20	.....
9	.022	775	2.25	.....	24	.055	124	1.20	.....	39	.114	29	1.20	.....
10	.024	651	2.00	.....	25	.059	108	1.20	.....	40	.118	27	1.20	.....
11	.026	560	1.80	.....	26	.063	94	1.20	.....	1/8"	.125	24	1.20	.....
12	.029	447	1.80	.....	27	.067	83	1.20	.....	9/64"	.140	20	1.20	.....
13	.031	391	1.60	.....	28	.071	74	1.20	.....	5/32"	.156	16	1.20	.....

Coppered Steel Spring Wire in 100 Pound Bundles

Base Price ..... Per 100 Pounds, $.....

Nos.	5 to 9	10	11	12	13	14	15	16
Advance per 100 Pounds.....	Base	$0.10	.20	.30	.45	.60	.85	1.10

Coppered Steel Spring Wire in 25 Pound Bundles

Nos.	5 to 9	10	11	12	13	14	15	16
Per Bundle	$.....	.....	.....	.....	.....	.....	.....	.....

Brass Spring Wire in 12 Pound Bundles

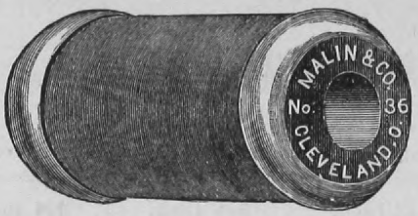
Nos.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Per Pound	$....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Soft Copper Wire in 12 Pound Bundles

Nos.	7	8	9	10	11	12	13	14	15
Per Pound	$.....	.....	.....	.....	.....	.....	.....	.....	.....
Nos.	16	17	18	19	20	21	22	24	26
Per Pound	$.....	.....	.....	.....	.....	.....	.....	.....	.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SPOOLED WIRE



Annealed Steel Wire

Nos.	16	18	19	20	22	24	26
Quarter Pound Spools.....Per Dozen,	$0.96	.96	1.02	1.02	1.10	1.14	1.20
Half Pound Spools.....Per Dozen,	1.58	1.64	1.66	1.68	1.80	1.94	2.04
One Pound Spools.....Per Dozen,	2.46	2.64	2.68	2.76	2.96	3.15	3.30

Tinned Steel Wire

Nos.	16	18	20	22	24
Quarter Pound Spools.....Per Dozen,	$1.20	1.20	1.25	1.32	1.40

Soft Brass Wire

Nos.	18	20	22	24
Quarter Pound Spools.....Per Dozen,	$2.20	2.20	2.40	2.60

Spring Brass Wire

Nos.	16	18	20	22	24
Quarter Pound Spools.....Per Dozen,	$2.20	2.20	2.20	2.40	2.60

Soft Copper Wire

Nos.	16	18	20	22	24
Eighth Pound Spools.....Per Dozen,	$1.47	1.47	1.47	1.60	.....
Quarter Pound Spools.....Per Dozen,	$2.20	2.20	2.20	2.40	2.60
Half Pound Spools.....Per Dozen,	3.90	3.90	3.90	4.40	4.70
One Pound Spools.....Per Dozen,	7.50	7.50	7.50	8.20	8.60

Hair Wire on Spools

Nos	28	30	32	34	36	Assorted 3 Spools Each 28, 30, 32 and 34
Black..... Per Gross,	$3.50	3.75	4.00	4.25	5.25	3.90
Tinned..... Per Gross,	4.25	4.50	4.75	5.00	6.00	4.60

Packed—All above One Dozen Spools in a Box.

ASSORTMENTS OF SPOOLED WIRE

No. 1—Retail Dealers'

This assortment contains 147 Spools of Black and Tinned Annealed Steel, Copper and Brass Wire, and comprises almost every size likely to be called for. It has been put up especially to meet the demands of the Retail Hardware Trade, and it covers all of the most salable sizes without any dead stock.

Contents.

12 each Black Hair Wire, Nos. 28, 30, 32, 34.
12 each Tinned Hair Wire, Nos. 28, 30, 32.
3 each ¼-lb. Black Annealed Steel Wire, Nos. 18, 20, 22, 24, 26.
3 each ¼-lb. Tinned Annealed Steel Wire, Nos. 18, 20, 22, 24.
6 each 1-oz. Soft Brass Wire, Nos. 20, 22, 24.
6 each 1-oz. Soft Copper Wire, Nos. 20, 22, 24.

No. 1—Retail Dealers' Assortment, containing 147 Spools in a Display Case..Per Case, $.....

No. 2—Malin's Improved

This assortment contains 40 Spools of Black and Galvanized Annealed Steel, Copper, and Brass Wire, and great care has been taken to select salable sizes only. Put up in a neat wooden box with hinged cover.

Contents.

2 each 2-oz. Black Annealed Steel Wire, Nos. 18, 20, 22, 24, 26.
2 each 2-oz. Tinned Annealed Steel Wire, Nos. 18, 20, 22, 24, 26.
2 each 2-oz. Soft Brass Wire, Nos. 18, 20, 22, 24, 26.
2 each 2-oz. Soft Copper Wire, Nos. 18, 20, 22, 24, 26

No. 2—Malin's Improved Assortment, containing 40 Spools in a Display Case...Per Case, $.....

Favorite Assortment

This assortment contains 48 spools of wire on ½ and 1-ounce spools, and is especially adapted for small stores wishing a limited amount of wire and salable sizes at a small investment.

Contents.

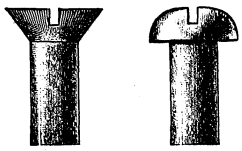
12 each Black Hair Wire, No. 28. 12 each Tinned Hair Wire, Nos. 30, 32. 2 each Soft Brass and Soft Copper Wire, Nos. 20, 22, 24.

No. 3—Favorite Assortment, containing 48 Spools in a Display Case.....Per Case, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON WOOD SCREWS

Flat Head. Round Head.



List of July 22nd, 1903. Price Per Gross.

1-4 Inch.

No.	
0	$0.72
1	.72
10 2	.72
3	.72
4	.72

1 1-4 Inch.

No.	
3	$0.88
4	.92
5	.98
6	1.05
7	1.10
10 8	1.15
9	1.20
10	1.30
11	1.40
12	1.55
13	1.70
14	1.90
*15	2.15
16	2.50
17	2.75
5 18	3.30
20	4.00
22	4.80
24	5.40

3 Inch.

No.	
6	$ 2.95
7	3.00
8	3.05
9	3.10
10	3.15
11	3.20
1 12	3.30
13	3.40
14	3.50
15	3.80
16	4.20
*17	4.80
18	5.50
½ 20	6.50
22	7.50
24	8.70
26	10.50

3-8 Inch.

No.	
0	$0.72
1	.72
2	.72
3	.72
10 4	.72
5	.75
6	.78
7	.82
8	.88
9	.94

1 1-2 Inch.

No.	
3	$0.98
4	1.05
5	1.10
6	1.15
10 7	1.20
8	1.30
9	1.35
10	1.40
11	1.50
12	1.65
*13	1.80
14	2.00
15	2.35
16	2.80
5 17	3.20
18	3.80
20	4.30
22	5.10
24	5.90

3 1-2 Inch.

No.	
8	$ 3.90
9	4.00
10	4.10
11	4.20
12	4.30
13	4.40
14	4.50
½ 15	4.75
16	4.95
17	5.40
18	6.15
20	7.30
22	8.70
24	10.20
26	12.00

1-2 Inch.

No.	
1	$0.72
2	.72
3	.72
4	.75
10 5	.78
6	.80
7	.84
8	.90
9	.96
10	1.05
11	1.10
12	1.20

1 3-4 Inch.

No.	
5	$1.30
6	1.35
7	1.45
10 8	1.50
9	1.55
10	1.60
*11	1.70
12	1.80
13	2.00
14	2.25
15	2.60
5 16	2.90
17	3.50
18	4.00
20	4.50
22	5.20
24	6.00

4 Inch.

No.	
8	$ 4.90
9	5.10
10	5.20
11	5.30
12	5.40
13	5.60
14	5.90
15	6.20
½ 16	6.50
17	7.00
18	7.60
20	8.60
22	9.70
24	11.20
26	14.00
28	16.00
30	18.50

5-8 Inch.

No.	
1	$0.72
2	.72
3	.72
4	.75
5	.78
6	.82
10 7	.86
8	.92
9	.98
10	1.07
11	1.12
12	1.20
13	1.25
14	1.30

2 Inch.

No.	
5	$1.45
6	1.50
7	1.55
8	1.60
9	1.65
10	1.75
5 11	1.85
12	2.00
13	2.20
14	2.45
15	2.75
16	3.10
17	3.70
*18	4.20
*20	4.80
1 22	5.50
24	6.40

4 1-2 Inch.

No.	
12	$ 7.00
13	7.20
14	7.60
15	7.85
16	8.15
17	8.60
½ 18	9.15
20	9.85
22	11.20
24	13.50
26	16.00
28	18.50
30	21.50

3-4 Inch.

No.	
2	$0.72
3	.75
4	.78
5	.82
6	.85
7	.90
8	.95
10 9	1.00
10	1.10
11	1.15
12	1.25
13	1.35
14	1.50
15	1.65
16	1.80

2 1-4 Inch.

No.	
5	$1.55
6	1.60
7	1.65
8	1.75
9	1.85
10	1.95
5 11	2.05
12	2.20
13	2.35
14	2.65
15	3.10
*16	3.50
*17	3.85
18	4.55
1 20	5.30
22	6.10
24	6.90

5 Inch.

No.	
12	$ 8.10
13	8.30
14	8.60
15	9.10
16	9.70
17	10.10
½ 18	11.00
20	11.50
22	13.00
24	15.00
26	18.00
28	21.00
30	24.00

7-8 Inch.

No.	
2	$0.74
3	.78
4	.82
5	.85
6	.90
7	.94
8	1.00
10 9	1.05
10	1.15
11	1.25
12	1.35
13	1.45
14	1.55
15	1.75
16	2.00

2 1-2 Inch.

No.	
5	$1.90
6	2.00
7	2.10
8	2.20
5 9	2.30
10	2.40
11	2.50
12	2.60
13	2.70
14	2.90
*15	3.30
16	3.65
17	4.20
1 18	4.70
20	5.80
22	6.70
24	7.50

6 Inch.

No.	
12	$10.00
13	10.30
14	11.00
15	11.60
16	12.40
17	13.00
½ 18	14.50
20	16.00
22	18.00
24	20.00
26	23.00
28	27.00
30	30.50

1 Inch.

No.	
3	$0.80
4	.84
5	.87
6	.92
7	.98
8	1.05
10 9	1.10
10	1.20
11	1.30
12	1.40
13	1.60
14	1.70
15	2.00
16	2.50
*17	2.70
5 18	2.80
20	3.50

2 3-4 Inch.

No.	
6	$2.40
7	2.60
8	2.70
9	2.80
10	2.90
11	3.00
12	3.10
1 13	3.20
14	3.30
15	3.60
16	3.90
17	4.50
18	5.00
20	6.10
½ *22	7.20
24	8.50

* The number of Gross in a package is indicated by small figures on the side, divided by a star (*).

Iron Screws of the following variety are invoiced from the above list at varying discounts as follows:

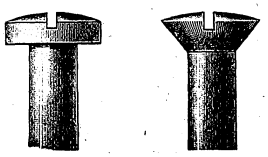
Discounts

Bright	Flat Head	%
	Round and Oval Head	%
Blued	Flat Head	%
	Round Head	%
Japanned	Flat Head	%
	Round Head	%
Tinned and Galvanized	Flat Head	%
	Round and Oval Head	%
Antique Copper Brass and Bronze Plated	Flat Head	%
	Round Head	%
Nickel and Silver Plated	Flat Head	%
	Round Head	%

Note.—The Standard of measurement for Screws is as follows: Flat Head are measured over all, Oval Head from Rim to Point, Round and Fillister Head from Bottom of Slot to Point. Drive Screws shown on following page are measured over all same as Flat Head Wood Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Fillister Head. Oval Head.



BRASS WOOD SCREWS

List of July 22nd, 1903. Price Per Gross.

ATLANTIC SCREW WORKS INC. HARTFORD, CONN.

¼ Inch.

	No.	
10	0	$0.84
	1	.84
	2	.88
	3	.92
	4	.97
	5	1.04

1¼ Inch.

	No.	
	3	$2.10
	4	2.20
	5	2.25
	6	2.35
	7	2.45
10	8	2.85
	9	3.20
	10	3.50
	11	4.10
	12	4.65
	13	5.35
*	14	5.85
	15	6.55
	16	7.20
5	17	7.85
	18	9.35
	20	10.45

3 Inch.

	No.	
	10	$13.70
	11	13.85
	12	14.00
	13	14.10
1	14	14.30
	15	14.60
	16	15.40
*	17	16.80
	18	19.95
	20	23.40
	22	27.10
½	24	31.15
	26	35.85
	28	41.15
	30	47.45

⅜ Inch.

	No.	
	0	$0.84
	1	.87
	2	.92
10	3	.97
	4	1.04
	5	1.12
	6	1.20
	7	1.35
	8	1.50

1½ Inch.

	No.	
	4	$2.95
	5	3.05
	6	3.10
	7	3.20
10	8	3.30
	9	3.65
	10	4.25
	11	4.65
*	12	5.35
	13	5.95
	14	6.65
	15	7.60
	16	8.35
5	17	9.15
	18	10.85
	20	12.65
	22	14.50

3½ Inch.

	No.	
	10	$15.85
	11	16.00
	12	16.15
	13	16.30
	14	16.45
	15	16.60
	16	17.70
½	17	19.40
	18	22.75
	20	26.90
	22	31.20
	24	35.80
	26	41.20
	28	47.45
	30	54.55

½ Inch.

	No.	
	1	$0.92
	2	.96
	3	1.02
	4	1.08
10	5	1.20
	6	1.30
	7	1.45
	8	1.65
	9	1.90
	10	2.15

1¾ Inch.

	No.	
	6	$3.95
	7	4.00
10	8	4.10
	9	4.20
	10	4.70
*	11	5.35
	12	6.05
	13	6.70
	14	7.35
	15	8.65
5	16	9.50
	17	10.45
	18	12.40
	20	14.50
	22	16.85
	24	18.90

4 Inch.

	No.	
	12	$18.60
	13	18.80
	14	19.00
	15	19.25
	16	20.35
	17	22.30
½	18	26.90
	20	30.80
	22	36.00
	24	40.70
	26	47.35
	28	54.55
	30	62.70

⅝ Inch.

	No.	
	1	$0.96
	2	1.00
	3	1.08
	4	1.15
	5	1.30
	6	1.40
	7	1.60
10	8	1.85
	9	2.10
	10	2.40
	11	2.65
	12	3.00
	13	3.35
	14	3.70
	15	4.10
	16	4.55

2 Inch.

	No.	
	6	$5.15
	7	5.20
	8	5.25
	9	5.30
	10	5.40
	11	6.15
5	12	6.85
	13	7.55
	14	8.45
	15	9.75
	16	10.70
	17	11.70
*	18	13.90
	20	16.30
1	22	18.90
	24	21.00

4½ Inch.

	No.	
	14	$22.60
	15	22.80
	16	23.40
	17	25.75
	18	30.90
½	20	35.40
	22	41.40
	24	46.80
	26	54.40
	28	62.70
	30	72.15

¾ Inch.

	No.	
	2	$1.12
	3	1.18
	4	1.25
	5	1.40
	6	1.55
	7	1.75
10	8	2.00
	9	2.30
	10	2.65
	11	3.00
	12	3.35
	13	3.70
	14	4.10
	15	4.55
	16	5.05

2¼ Inch.

	No.	
	8	$6.85
	9	6.95
	10	7.05
	11	7.25
5	12	7.90
	13	8.80
	14	9.80
	15	10.75
*	16	11.90
	17	13.00
	18	15.40
1	20	18.00
	22	20.95
	24	23.30

5 Inch.

	No.	
	16	$26.90
	17	29.60
	18	35.50
	20	40.70
½	22	47.60
	24	53.80
	26	62.60
	28	72.15
	30	82.95

⅞ Inch.

	No.	
	2	$1.40
	3	1.50
	4	1.55
	5	1.60
	6	1.65
	7	1.90
10	8	2.20
	9	2.50
	10	2.90
	11	3.35
	12	3.70
	13	4.10
	14	4.55
	15	5.05
	16	5.60

2½ Inch.

	No.	
	9	$9.40
	10	9.50
5	11	9.60
	12	9.70
	13	9.85
*	14	10.75
	15	11.85
	16	13.00
	17	14.30
1	18	16.95
	20	19.85
	22	23.00
	24	25.50

6 Inch.

	No.	
	16	$31.00
	17	34.05
	18	40.80
	20	46.80
½	22	54.75
	24	61.90
	26	72.95
	28	82.95
	30	93.35

1 Inch.

	No.	
	3	$1.65
	4	1.70
	5	1.75
	6	1.80
	7	2.10
	8	2.45
10	9	2.80
	10	3.15
	11	3.65
	12	4.10
	13	4.55
	14	5.05
	15	5.60
	16	6.65
5 *	18	7.40

2¾ Inch.

	No.	
	9	$11.50
	10	11.65
	11	11.80
	12	11.95
	13	12.10
1	14	12.25
	15	13.00
	16	14.20
	17	15.65
	18	18.40
	20	21.60
	22	25.00
½ *	24	28.00

The number of Gross in a package is indicated by small figures on the side, divided by a star (*).

Brass Screws, also Copper, Bronze or Phosphor Bronze, Bronzed or Lacquered Screws of the following varieties are invoiced from the above list at varying discounts, as follows:

Discounts

Brass . { Flat Head ..... % ; Round and Oval Head ..... % } | **Bronze Metal** { Flat Head ..... % ; Round and Oval Head ..... % }

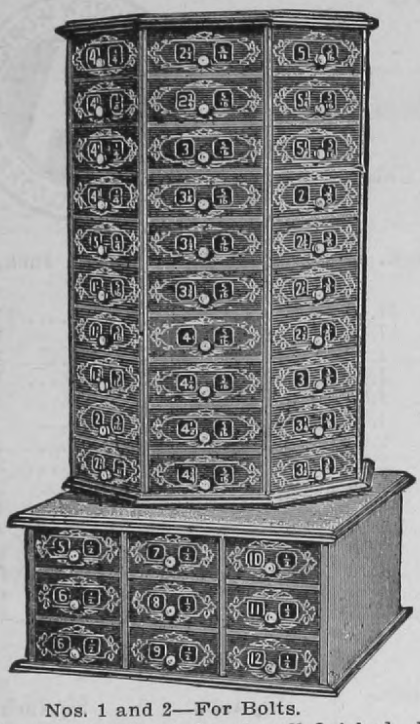
Nickel Plated. Flat and Round Head ..... %

IRON DRIVE SCREWS

Drive Screws are sold from Iron Wood Screw List on preceding page, and may be ordered for direct shipment only, as they are **not** carried in stock.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AMERICAN BOLT AND SCREW CASES

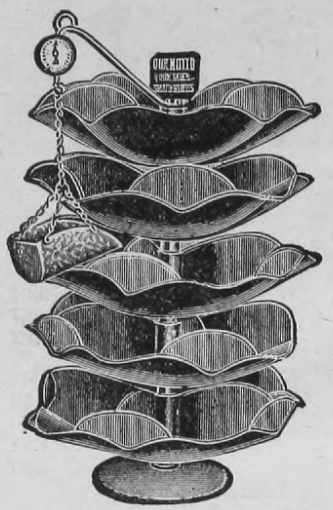


Nos. 1 and 2—For Bolts.

Nos. 1 to 4—For Screws.

Strongly constructed and well finished. Wood used is best seasoned Tennessee Poplar and Norway Pine. Finished in imitation Cherry. The Drawers are all provided with stops to prevent their removal from Case. Each Drawer holds a package of Bolts or Screws of the size and number printed on its front. The numbers can be changed to suit purchaser without extra charge.

NAIL BINS



No. 25—5 Sections.

This Nail Bin is the result of thoughts of hardware men. It saves space, time and nails; the bins are protected in front by wings which prevent nails from falling on the floor. Each compartment will hold about 140 pounds, which permits emptying a keg of nails into the compartment before it is empty.

No. 23—Three Sections, 15 compartments .....Each, $70.00
No. 24.—Four Sections, 20 compartments .....Each, 82.00
No. 25—Five Sections, 25 compartments .....Each, 95.00

Revolving Bolt Cases

No. 1— 98 Drawers. Height, 60 inches; Width, 30 inches .....Each, $65.30
No. 2—104 Drawers. Height, 65 inches; Width, 30 inches .....Each, 71.30

Contents of No. 1 Bolt Case.

Tire Bolts.

5/16 inch—1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3. ¼ inch—1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3. 5/16 inch—2, 2¼, 2½.

Carriage Bolts.

¼ inch—1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4, 4¼, 4½, 4¾, 5. 5/16 inch—1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4, 4¼, 4½, 4¾, 5, 5¼, 5½, 6. ⅜ inch—2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4, 4¼, 4½, 4¾, 5, 6. 7/16 inch—2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 8, 9, 10. ½ inch—2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 8, 9, 10, 11, 12.

Contents of No. 2 Bolt Case.

Same as No. 1, but with the following sizes in addition: 7/16 inch—7½, 8½, 9½. ½ inch—7½, 8½, 9½.

Revolving Screw Cases

No. 1—72 Drawers. Height, 33 inches; Width, 21 inches .....Each, $33.00
No. 2—80 Drawers. Height, 36 inches; Width, 21 inches .....Each, 37.50
No. 3—88 Drawers. Height, 39 inches; Width, 24 inches .....Each, 42.00
No. 4—96 Drawers. Height, 42 inches; Width, 25 inches .....Each, 46.00

Contents of No. 1 Screw Case.

½ inch—3, 4, 5, 6, 7.
⅝ inch—5, 6, 7, 8.
¾ inch—5, 6, 7, 8, 9.
⅞ inch—7, 8, 9, 10.

1 inch—6, 7, 8, 9, 10, 11, 12, 13, 14.
1¼ inch—7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch—8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch—9, 10, 11, 12, 13, 14, 15, 16, 17.

2 inch—10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch—12, 13, 14, 15, 16.
3 inch—16, 18, 20, 22.

Contents of No. 2 Screw Case.

⅜ inch—2, 3, 4.
½ inch—3, 4, 5, 6, 7.
⅝ inch—4, 5, 6, 7, 8.
¾ inch—4, 5, 6, 7, 8, 9, 10.

⅞ inch—6, 7, 8, 9, 10, 11.
1 inch—6, 7, 8, 9, 10, 11, 12, 13, 14.
1¼ inch—7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch—8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch—9, 10, 11, 12, 13, 14, 15, 16, 17.

2 inch—10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch—12, 13, 14, 15, 16.
3 inch—16, 18, 20, 22.

Contents of No. 3 Screw Case.

¼ inch—1, 2.
⅜ inch—2, 3, 4, 5.
½ inch—3, 4, 5, 6, 7.
⅝ inch—4, 5, 6, 7, 8, 9,

¾ inch—4, 5, 6, 7, 8, 9, 10, 11, 12.
⅞ inch—6, 7, 8, 9, 10, 11, 12.
1 inch—6, 7, 8, 9, 10, 11, 12, 13, 14, 15.
1¼ inch—7, 8, 9, 10, 11, 12, 13, 14, 15, 16.
1½ inch—8, 9, 10, 11, 12, 13, 14, 15, 16.

1¾ inch—9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
2 inch—10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch—12, 13, 14, 15, 16.
3 inch—16, 18, 20, 22.

Contents of No. 4 Screw Case.

¼ inch—1, 2.
⅜ inch—2, 3, 4, 5, 6.
½ inch—3, 4, 5, 6, 7, 8.
⅝ inch—4, 5, 6, 7, 8, 9, 10, 11.
¾ inch—4, 5, 6, 7, 8, 9, 10, 11, 12.

⅞ inch—6, 7, 8, 9, 10, 11, 12.
1 inch—6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.
1¼ inch—7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch—8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch—9, 10, 11, 12, 13, 14, 15, 16, 17.

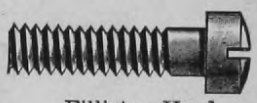
2 inch—10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch—12, 13, 14, 15, 16.
3 inch—16, 18, 20, 22.
3½ inch—16, 18, 20.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON MACHINE SCREWS

Flat Head.

Round Head.



Fillister Head.

List of Nov. 18, 1912. Price Per Gross

Threads to Inch	48 56 64	48 56	32, 36, 40		30 32 36	30 32	30 32 36	24, 30, 32		20 24	18 20 24	16, 18, 20		16 18	14 16 18	14 16
Nos.	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**14**	**16**	**18**	**20**	**24**	**30**
Decimal Diameter	.0842	.0973	.1105	.1236	.1368	.1500	.1631	.1763	.1894	.2158	.2421	.2684	.2947	.3210	.3737	.4526
Nearest Fractional Size, Inch	5/64	3/32	7/64	1/8	9/64—	9/64+	5/32	11/64	3/16	7/32	15/64+	17/64	19/64	21/64	3/8	29/64
Length, inches																
1/8	$0.30	$0.30	$0.30	$0.35	$0.35	$0.40	$0.40	....	....	....	....	....	....	....	....	.....
3/16	.30	.30	.30	.35	.35	.40	.40	$0.60	$0.60	....	....	....	....	....	....	.....
1/4	.30	.30	.30	.35	.35	.40	.40	.60	.60	$0.70	$0.85	....	....	....	....	.....
5/16	.32	.32	.32	.37	.37	.44	.44	.65	.65	.75	.90	$1.15	....	....	....	.....
3/8	.32	.32	.32	.37	.37	.44	.44	.65	.65	.75	.90	1.15	$1.50	$1.90	$2.30	.....
7/16	.34	.34	.34	.39	.39	.48	.48	.70	.70	.80	.95	1.20	1.60	2.00	2.40	.....
1/2	.34	.34	.34	.39	.39	.48	.48	.70	.70	.80	.95	1.20	1.60	2.00	2.40	.....
9/16	.37	.37	.37	.42	.42	.52	.52	.75	.75	.85	1.00	1.25	1.70	2.10	2.50	.....
5/8	.37	.37	.37	.42	.42	.52	.52	.75	.75	.85	1.00	1.25	1.70	2.10	2.50	.....
3/4	.41	.41	.41	.46	.46	.56	.56	.80	.80	.90	1.05	1.30	1.80	2.20	2.60	$4.00
7/8	.45	.45	.45	.50	.50	.60	.60	.85	.85	.95	1.15	1.40	1.90	2.30	2.70	4.25
1	....	....	.50	.55	.55	.65	.65	.90	.90	1.00	1.25	1.50	2.00	2.40	2.80	4.50
1 1/8	....	....	.55	.60	.60	.70	.70	1.00	1.00	1.10	1.35	1.60	2.20	2.60	3.00	5.00
1 1/4	....	....	.60	.65	.65	.75	.75	1.10	1.10	1.20	1.45	1.75	2.40	2.80	3.20	5.25
1 3/8	....	....	.65	.70	.70	.80	.80	1.20	1.20	1.30	1.55	1.90	2.60	3.00	3.40	5.75
1 1/2	....	....	.70	.75	.75	.85	.85	1.30	1.30	1.40	1.65	2.10	2.80	3.20	3.60	6.00
1 3/4	....	....	.90	.95	.95	1.05	1.05	1.50	1.50	1.60	1.85	2.50	3.20	3.60	4.20	6.65
2	....	....	1.10	1.15	1.15	1.25	1.25	1.70	1.70	1.80	2.20	2.90	3.60	4.00	4.60	7.35
2 1/4	....	....	....	1.25	1.25	1.45	1.45	1.90	1.90	2.20	2.60	3.30	4.00	4.40	4.80	8.00
2 1/2	....	....	....	....	....	1.65	1.65	2.20	2.20	2.50	2.80	3.50	4.40	4.90	5.30	8.90
2 3/4	....	....	....	....	....	1.90	1.90	2.50	2.50	2.90	3.20	4.00	4.90	5.40	5.90	9.85
3	....	....	....	....	....	2.30	2.30	2.90	2.90	3.50	3.80	4.50	5.60	6.00	7.40	11.00

Discounts

Flat Head ..... % **Round Head** ..... % **Fillister Head** ..... %

BRASS MACHINE SCREWS

List of Nov. 18, 1912. Price Per Gross

Threads to Inch	48 56 64	48 56	32, 36, 40		30 32 36	30 32	30 32 36	24, 30, 32		20 24	18 20 24	16, 18, 20		16 18	14 16 18	14 16
Nos.	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**14**	**16**	**18**	**20**	**24**	**30**
Decimal Diameter	.0842	.0973	.1105	.1236	.1368	.1500	.1631	.1763	.1894	.2158	.2421	.2684	.2947	.3210	.3737	.4526
Nearest Fractional Size, Inch	5/64	3/32	7/64	1/8	9/64—	9/64+	5/32	11/64	3/16	7/32	15/64+	17/64	19/64	21/64	3/8	29/64
Length, inches																
1/8	$0.32	$0.36	$0.36	$0.46	$0.46	$0.70	$0.70	....	....	....	....	....	....	....	....	.....
3/16	.32	.36	.36	.46	.46	.70	.70	$1.00	$1.00	....	....	....	....	....	....	.....
1/4	.32	.36	.36	.46	.46	.70	.70	1.00	1.00	$1.25	$1.65	....	....	....	....	.....
5/16	.34	.38	.38	.49	.49	.75	.75	1.05	1.05	1.35	1.75	....	....	....	....	.....
3/8	.36	.40	.40	.52	.52	.80	.80	1.10	1.10	1.45	1.85	$2.90	$3.70	$4.60	$5.50	.....
7/16	.38	.42	.42	.55	.55	.85	.85	1.15	1.15	1.55	2.00	3.05	3.90	4.80	5.60	.....
1/2	.40	.44	.44	.58	.58	.90	.90	1.25	1.25	1.65	2.15	3.20	4.10	5.00	5.75	.....
9/16	.43	.47	.47	.62	.62	.95	.95	1.35	1.35	1.75	2.30	3.35	4.30	5.25	6.30	.....
5/8	.46	.50	.50	.66	.66	1.00	1.00	1.45	1.45	1.85	2.45	3.50	4.50	5.50	6.50	.....
3/4	.52	.56	.56	.74	.74	1.10	1.10	1.65	1.65	2.05	2.75	3.80	4.90	6.00	6.70	.....
7/8	.58	.62	.62	.82	.82	1.20	1.20	1.85	1.85	2.25	3.05	4.10	5.30	6.50	7.40	.....
1	....	....	.70	.90	.90	1.30	1.30	2.05	2.05	2.45	3.35	4.40	5.70	7.00	8.50	$15.75
1 1/8	....	....	.80	1.05	1.05	1.45	1.45	2.20	2.20	2.65	3.55	4.65	6.00	7.50	9.00	.....
1 1/4	....	....	.90	1.20	1.20	1.60	1.60	2.35	2.35	2.85	3.75	4.90	6.30	8.00	9.90	18.75
1 3/8	....	....	1.00	1.35	1.35	1.75	1.75	2.50	2.50	3.05	3.95	5.20	6.60	8.50	11.50	.....
1 1/2	....	....	1.10	1.50	1.50	1.90	1.90	2.65	2.65	3.25	4.15	5.50	6.90	9.00	12.00	22.50
1 3/4	....	....	1.40	1.90	1.90	2.30	2.30	3.05	3.05	3.75	4.65	6.20	7.70	10.00	12.70	24.25
2	....	....	1.70	2.30	2.30	2.70	2.70	3.45	3.45	4.25	5.15	7.00	8.60	11.00	13.50	26.00
2 1/4	....	....	....	2.70	2.70	3.10	3.10	3.85	3.85	4.75	5.65	8.00	9.75	12.00	14.90	28.00
2 1/2	....	....	....	....	....	....	....	4.65	4.65	5.80	6.80	9.00	10.50	13.50	15.50	30.50
2 3/4	....	....	....	....	....	....	....	6.00	6.00	7.00	8.00	10.00	12.50	15.00	17.00	33.00
3	....	....	....	....	....	....	....	7.50	7.50	8.50	9.50	11.00	15.00	16.50	19.00	36.00

Discounts

Flat Head ..... % **Round Head** ..... % **Fillister Head** ..... %

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

IRON SET SCREWS

Case Hardened, Cup Points

NOTE:

Our stock is made in what is known as the "Standard Set Screw Head," that is, the height of head equals three-fourths the diameter of the body of the screw.

Square Head—List Price Per Hundred.

Threads to Inch	20	18	16	14	12 or 13	12	11	10	9	8	7	7
Diam. of Screw	¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞	1	1⅛	1¼
½	$ 1.80	$2.00	$2.35	.....	.....	.....	.....	.....	.....	.....	.....	.....
⅝	1.90	2.10	2.45	$2.80	$ 3.30	.....	.....	.....	.....	.....	.....	.....
¾	2.00	2.20	2.50	2.90	3.40	$ 5.00	$ 5.00	.....	.....	.....	.....	.....
⅞	2.10	2.30	2.60	3.00	3.60	5.50	5.50	.....	.....	.....	.....	.....
1	2.15	2.35	2.65	3.10	3.80	5.75	5.75	$10.00	.....	.....	.....	.....
1¼	2.30	2.50	2.85	3.50	4.30	6.50	6.50	11.00	$15.50	.....	.....	.....
1½	2.50	2.70	3.10	4.00	4.80	7.25	7.25	12.00	16.20	$22.00	.....	.....
1¾	2.75	3.00	3.50	4.50	5.40	8.00	8.00	12.80	17.70	24.00	$41.70	.....
2	3.25	3.50	4.00	5.15	6.00	8.80	8.80	13.60	19.20	26.00	45.00	$54.00
2¼	3.75	4.00	4.50	5.75	6.75	9.60	9.60	14.50	20.70	28.00	48.30	58.30
2½	4.25	4.50	5.00	6.35	7.50	10.40	10.40	15.40	22.20	30.00	51.60	62.60
2¾	4.75	5.00	5.50	6.75	8.25	11.20	11.20	16.30	23.70	32.00	54.90	66.90
3	5.25	5.50	6.00	7.20	9.00	12.00	12.00	17.30	25.20	34.00	58.20	71.20
3¼	.....	.....	.....	7.60	9.75	12.75	12.75	18.40	26.70	36.00	61.50	75.50
3½	.....	.....	.....	8.00	10.50	13.50	13.50	19.50	28.20	38.00	64.80	79.80
3¾	.....	.....	.....	8.50	11.25	14.30	14.30	20.75	29.70	40.00	68.10	84.10
4	.....	.....	.....	9.00	12.00	15.10	15.10	22.00	31.20	42.00	71.40	88.40
4¼	.....	.....	.....	.....	.....	.....	15.90	23.50	32.70	44.00	74.70	92.70
4½	.....	.....	.....	.....	.....	.....	16.70	25.00	34.20	46.00	78.00	97.00
4¾	.....	.....	.....	.....	.....	.....	.....	26.50	35.70	48.00	81.30	101.30
5	.....	.....	.....	.....	.....	.....	.....	.....	37.20	50.00	84.60	105.60
Add for each ¼ in.	$ 0.50	.60	.70	.80	.90	1.10	1.10	1.50	1.70	2.25	3.30	4.30

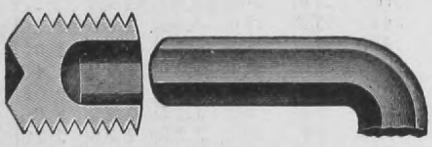
Length under Head to Extreme Point.

Packed—¼x¾ to ⅜x3 inch, 100 in a Box. Larger sizes 7/16x3½ inches, 50 in a Box. ½, 9/16 and ⅝x¾ to 2 inch, 50 in a Box. Other sizes, 25 in a Box.

Note.—U. S. Standard Thread will be shipped unless otherwise specified.

For Assortments of Set Screws, see following page.

SAFETY SET SCREWS



Hollow Head Cup Point, designed to replace the Headless and Square Head Set Screws. One length of each size is all that is required for any depth of hole. Made of steel drawn with a hexagonal hole which insures elasticity and prevents loosening during changes of temperature. One wrench with each box of screws.

Size, Inches	Threads to Inch	Per 100	Extra Wrenches Each	Size, Inches	Threads to Inch	Per 100	Extra Wrenches Each	Size, Inches	Threads to Inch	Per 100	Extra Wrenches Each
Diameter ¼ x 5/16 Length	20	$4.00	$0.02	Diameter 7/16 x ½ Length	14	$6.00	$0.04	Diameter ¾ x ¾ Length	10	$12.00	$0.06
5/16 x 5/16	18	4.00	.03	½ x ½	13	7.00	.05	¾ x 1	10	12.00	.06
5/16 x ⅜	18	4.00	.03	½ x ⅝	13	7.00	.05	⅞ x ⅞	9	15.00	.09
⅜ x ⅜	16	5.00	.04	9/16 x 9/16	12	8.00	.06	⅞ x 1⅛	9	15.00	.09
⅜ x ½	16	5.00	.04	⅝ x ⅝	11	10.00	.06	1 x 1	8	20.00	.12
7/16 x 7/16	14	6.00	.04	⅝ x ¾	11	10.00	.06	1 x 1¼	8	20.00	.12

Packed—¼ to ⅜ inch, 100; 7/16 and ½ inch, 50; 9/16 to 1 inch, 25 in a Box. One wrench in each Box.

Note.—In ordering state diameter and length. U. S. Standard Thread will be shipped unless otherwise specified.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

IRON CAP SCREWS

SQUARE HEAD

HEXAGON HEAD

FILLISTER HEAD

All Screws one inch and less in diameter, and less than four inches long, have threads three-fourths of their length. Larger sizes have threads half of their length.

Square and Hexagon Head.—List Price per 100.—U. S. Standard Threads.

Threads to Inch	20	18	16	14	12 or 13	12	11	10	9	8	7	7
Diam. of Screw	¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞	1	1⅛	1¼
¾	$ 3.00	$ 3.25	$ 3.75	$ 4.50	$ 5.70	.....	.....	.....	.....	.....	.....	.....
⅞	3.15	3.40	3.90	4.70	5.80	.....	.....	.....	.....	.....	.....	.....
1	3 25	3.50	4.00	4.90	5.90	$ 9.25	$ 9.25	.....	.....	.....	.....	.....
1¼	3.50	3.75	4.25	5.30	6.50	9.50	9.50	$12.50	.....	.....	.....	.....
1½	3.75	4.00	4.50	5.70	7.10	10 00	10.00	13.50	$18.40	.....	.....	.....
1¾	4.00	4.25	4.85	6.10	7.70	10.75	10.75	14.50	19.70	$22.75	.....	.....
2	4.25	4.85	5.20	6.50	8.30	11.50	11.50	15.50	21.00	25.00	$34.00	$38.50
2¼	4.70	5.35	5.55	7.15	8.90	12.60	12.60	16.50	22.40	27.25	36.75	42.00
2½	5.25	5.80	6.00	7.50	9.50	13.60	13.60	17.50	23.70	29.50	39.50	45.50
2¾	5.75	6.30	6.65	7.90	10.10	14.40	14.40	19.00	25.00	31.75	42.25	49.00
3	6.25	6.80	7.20	8.40	10.70	15.20	15.20	20.60	26.40	34.00	45.00	52.50
3¼	.....	.....	.....	9.15	11.50	16.00	16.00	22.10	28.20	36.25	47.75	56.00
3½	.....	.....	.....	9.75	12.30	17.30	17.30	23.70	30.00	38.50	50.50	59.50
3¾	.....	.....	.....	10.50	13.10	18.60	18.60	25.30	31.80	40.75	53.25	63.00
4	.....	.....	.....	11.10	13.90	19 90	19.90	26.90	33.60	43.00	56.00	66.50
4¼	.....	.....	.....	.....	.....	.....	21.20	28.50	35.40	45.25	58.75	70.00
4½	.....	.....	.....	.....	.....	.....	22.50	30.10	37.20	47.50	61.50	73.50
4¾	.....	.....	.....	.....	.....	.....	.....	31.70	39.00	49.75	64.25	77.00
5	.....	.....	.....	.....	.....	.....	.....	.....	40.80	52.00	67.00	80.50
Add for each ¼-in.	$0.40	.50	.60	.70	.80	1.30	1.30	1.60	1.80	2.25	2.75	3.50

Length under Head to Extreme Point.

Packed—¼x¾ to ⅜x2 inch, 100 in a Box; Larger sizes to 9/16x4 and ⅝x1 to ⅝x2, 50 in a Box. Other sizes 25 in a Box.
Note.—U. S. Standard Thread will be shipped unless otherwise specified.

Fillister Head.—List Price per 100.—U. S. Standard Threads.

Threads to Inch	40	24	20	18	16	14	12	12	11	10	9	8
Diam. of Screw	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞	1
¾	$ 2.00	$ 2.25	$ 2.50	$ 3.00	$ 3.50	$ 4.00	$ 5.00	.....	.....	.....	.....	.....
1	2.25	2.50	2.75	3.25	3.75	4.25	5.30	$ 6.60	.....	.....	.....	.....
1¼	2.50	2.75	3.00	3.50	4.00	4.50	5.60	6.90	$ 9.00	.....	.....	.....
1½	2.75	3.00	3.25	3.75	4.25	4.75	5.90	7.20	9.50	$12.00	.....	.....
1¾	3.00	3.25	3.50	4.00	4.50	5.00	6.20	7.50	10.00	12.50	$15.25	.....
2	3.25	3.50	3.75	4.35	5.00	5.50	6.75	8.00	10.75	13.00	16.00	$19.20
2¼	3.50	3.75	4.00	4.75	5.50	6.00	7.25	8.50	11.50	13.75	16.75	20.20
2½	3.75	4.00	4.25	5.15	6.00	6.50	7.75	9.00	12.00	14.50	17.50	21.25
2¾	.....	4.25	4.50	5.55	6.50	7.00	8.25	9.50	12.75	15.25	18.30	22.40
3	.....	.....	4.75	5.95	7.00	7.50	8.75	10.00	13.50	16.00	19.10	23.60
3¼	.....	.....	.....	6.35	7.50	8.00	9.25	10.50	14.25	16.75	20.00	24.85
3½	.....	.....	.....	.....	8.00	8.50	9.75	11.00	15.00	17.50	21.00	26.10
3¾	.....	.....	.....	.....	.....	9.00	10.25	11.50	15.75	18.25	22.00	27.35
4	.....	.....	.....	.....	.....	.....	10.75	12.00	16.50	19.00	23.00	28.60
4¼	.....	.....	.....	.....	.....	.....	.....	12.50	17.25	19.75	24.00	29.85
4½	.....	.....	.....	.....	.....	.....	.....	.....	18.00	20.50	25.00	31.10
4¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.25	26.00	32.35
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27.00	33.60
Add for each ¼-in.	$0.25	.25	.25	.40	.50	.50	.50	.50	.75	.75	1.00	1.25

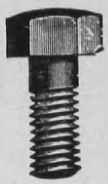
Length under Head to Extreme Point.

Packed—¼x¾ to ⅜x2 inch, 100 in a Box; Larger sizes to 9/16x4 and ⅝x1 to ⅝x2, 50 in a Box. Other sizes, 25 in a Box.
Note.—U. S. Standard Thread will be shipped unless otherwise specified.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

ASSORTED SET SCREWS

ASSORTED CAP SCREWS



Assortment of Steel Set Screws

Square Head, Cup Point, Case Hardened, U. S. Standard Thread.

Contents.

Size, inches.....	¼ x ½, ¾, 1	5/16 x ½, ¾, 1, 1¼	⅜ x ½	⅜ x ¾, 1, 1¼	⅜ x 1½
Number in Box...	3	3	3	10	5
Size, inches.....	7/16 x ¾, 1, 1¼, 1½	½ x ¾	½ x 1	½ x 1¼, 1½	½ x 1¾, 2
Number in Box...	3	5	8	5	3

No. 1—Ferry Assortment, U. S. Standard, consisting of 100 Set Screws as above ....Per Assortment, $.....

Packed—Each Assortment (100) in a Box.

Assortments of Steel Cap Screws

Hexagon Head, Cup Point, Case Hardened, U. S. Standard and S. A. E. Standard Thread.

Contents.

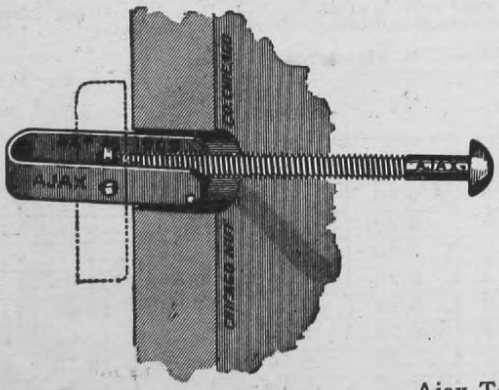
Size, inches.....	¼ x ½, ¾	5/16 x ¾, 1	⅜ x ¾	⅜ x 1	⅜ x 1¼, 1½	7/16 x ¾, 1, 1¼	½ x 1	½ x 1¼, 1½
Number in Box...	3	4	7	6	3	2	3	4

No. 2—Ferry Assortment, U. S. Standard, consisting of 50 Cap Screws as above.....Per Assortment, $.....

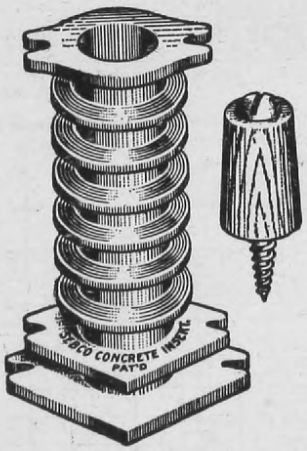
No. 3—Ferry Assortment, S. A. E. Standard consisting of 50 Cap Screws as above..Per Assortment, ...

Packed—Each Assortment (50) in a Box.

AJAX TOGGLE BOLTS



SEBCO CONCRETE INSERTS



Ajax Toggle Bolts

Used for fastening brackets, sink-work, molding or any other article to tile, hollow brick, marble or plastered partition. Quickly put in place; when inserted the head piece stays close to the bolt instead of flopping loosely and catching outside of the wall. When used only the head of the bolt is exposed, leaving the surplus thread inside of the wall.

Ajax Toggle Bolts { 3/16 x 3 inches.....Per 100, $3.60
1/4 x 4 inches.....Per 100, 4.40

Sebco Concrete Inserts

For fastening chairs to concrete floors of churches, theatres, schools and concert halls; invaluable for attaching hangers to ceilings, railings, window frames, door hangers, fire doors and shutters. The Insert consists of a malleable iron Anchor, with corrugations formed to firmly engage the concrete, and threaded for either bolts or screws, and a wooden plug to be used for attaching the Insert to the forms.

Inch	¼	⅜	½	⅝
Length of Insert, inches	1½	2	2½	2½
Number in Box	100	100	50	50
Threaded For Machine Bolts.....Per 100,	$9.00	11.00	15.00	19.00
For Lag Screws.....Per 100,	9.00	11.00	15.00	19.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

"SEBCO"—EXPANSION SHIELDS—"DIAMOND"

Lag or Coach Screw Type

Cut showing Shield only.

Cut showing bolt expanding the Shield.

Lag Screw Expansion Shields Only. Malleable Iron, for Use with Lag Screws

For Lag Screw, inches	¼	5/16	⅜	½	⅝	¾	⅞	1	1¼
Long Standard, inches	1½	2	2¾	3½	3½	3½	5	5	8
Short Standard, inches	....	1½	2	2	2	2	....	....	.....
Outside Diameter of Shield, inches	7/16	½	⅝	¾	⅞	1	1¼	1½	1⅞
Diameter of Drill required, inches	7/16	½	⅝	¾	⅞	1	1¼	1½	1⅞
Shields Only ..... Per 100,	$9.40	10.50	13.35	22.00	27.80	39.95	53.30	66.60	100.00

Packed—¼ to ½ inch 100; ⅝ to 1¼ inch 50 in a Box.

Note.—For Lag Screws, see Page 70.

"STAR"—SINGLE EXPANSION SHIELD—"KEYSTONE"

Machine Bolt Type

Cut showing Shield only.

Cut showing bolt and Shield ready for insertion.

Machine Bolt Single Expansion Shields Only, for Use with Machine Bolts

For Machine Bolts, inch	¼	5/16	⅜	7/16	½	⅝	¾	⅞	1
Length of Shield, inches	1	1½	1¾	1¾	1¾	2	3	3¾	3¾
Size Hole to receive Expansion, inches	½	9/16	11/16	13/16	⅞	1	1 3/16	1⅜	1 7/16
Drill required, inches	½	9/16	11/16	13/16	⅞	1	1 3/16	1⅜	1 7/16
Shields Only ..... Per 100,	$7.50	8.50	10.50	14.00	16.00	21.00	29.00	36.00	44.00

Packed—¼ to ½ inch 100; ⅝ to 1¼ inch 50 in a Box.

Note.—For Diamond Rapid Fire Drills, Star Drills and Sebco Drill Heads, see Index.

For Machine Bolts, see Page 69.

"SEBCO"—SCREW ANCHORS—"DIAMOND"

Wood Screw Type

Cut showing Anchor only.

Cut showing Screw expanding the Anchor.

Screw Anchors are made of Composition Metal in one piece and are so constructed that the screw cuts its own thread, thus allowing the use of all wood, machine and special screws.

Screw Anchors or Expansion Shields Only, for Use with Wood Screws

Size, inches	1/8 x ½	1/8 x 5/8	1/8 x ¾	3/16 x ½	3/16 x ¾	3/16 x 1	3/16 x 1 5/8	¼ x ½
For Screws, Nos	5 to 7	5 to 7	5 to 7	8 to 11	8 to 11	8 to 11	8 to 11	12 to 14
Outside Diam. of Anchor, inches	¼	¼	¼	5/16	5/16	5/16	5/16	⅜
Diam. of Drill required, inches	¼	¼	¼	5/16	5/16	5/16	5/16	⅜
Shields Only ..... Per 100,	$4.40	4.40	4.40	5.00	5.00	5.00	6.25	5.60
Size, inches	¼ x ¾	¼ x 1	¼ x 1½	¼ x 2	5/16 x ¾	5/16 x 1	5/16 x 1½	5/16 x 2
For Screws, Nos	12 to 14	12 to 14	12 to 14	12 to 14	15 to 18	15 to 18	15 to 18	15 to 18
Outside Diam. of Anchor, inches	⅜	⅜	⅜	⅜	7/16	7/16	7/16	7/16
Diam. of Drill required, inches	⅜	⅜	⅜	⅜	7/16	7/16	7/16	7/16
Shields Only ..... Per 100,	$5.60	5.60	8.00	10.00	6.25	6.25	10.00	13.00

Packed—100 in a Box.

Note.—For Wood Screws, see Pages 60 and 61.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CARRIAGE BOLTS

Common Carriage Bolts.

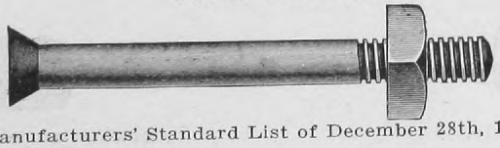
Manufacturers' Standard List of November 1st, 1912.

List Price Per Hundred.

3-16 and 1-4 Inch		5-16 Inch		3-8 Inch		7-16 Inch		1-2 Inch		9-16 Inch		5-8 Inch	
Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100
¾ to 1½	$1.00	1 to 1½	$1.40	1 to 1½	$1.90	1½	[illegible]	1½	....	1½	....	1½	....
1¾	1.10	1¾	1.52	1¾	2.06	1¾	2.40	1¾	....	1¾	....	1¾	....
2	1.10	2	1.52	2	2.06	2	2.40	2	....	2	....	2	....
2¼	1.20	2¼	1.64	2¼	2.22	2¼	2.60	2¼	....	2¼	....	2¼	....
2½	1.20	2½	1.64	2½	2.22	2½	2.60	2½	$3.25	2½	$5.75	2½	$5.75
2¾	1.30	2¾	1.76	2¾	2.38	2¾	2.80	2¾	3.53	2¾	6.13	2¾	6.13
3	1.30	3	1.76	3	2.38	3	2.80	3	3.53	3	6.13	3	6.13
3¼	1.40	3¼	1.88	3¼	2.54	3¼	3.00	3¼	3.81	3¼	6.51	3¼	6.51
3½	1.40	3½	1.88	3½	2.54	3½	3.00	3½	3.81	3½	6.51	3½	6.51
3¾	1.50	3¾	2.00	3¾	2.70	3¾	3.20	3¾	4.09	3¾	6.89	3¾	6.89
4	1.50	4	2.00	4	2.70	4	3.20	4	4.09	4	6.89	4	6.89
4¼	1.60	4¼	2.12	4¼	2.86	4¼	3.40	4¼	4.37	4¼	7.27	4¼	7.27
4½	1.60	4½	2.12	4½	2.86	4½	3.40	4½	4.37	4½	7.27	4½	7.27
4¾	1.70	4¾	2.24	4¾	3.02	4¾	3.60	4¾	4.65	4¾	7.65	4¾	7.65
5	1.70	5	2.24	5	3.02	5	3.60	5	4.65	5	7.65	5	7.65
5½	1.80	5½	2.36	5½	3.18	5½	3.80	5½	4.93	5½	8.03	5½	8.03
6	1.90	6	2.48	6	3.34	6	4.00	6	5.21	6	8.41	6	8.41
6½	2.00	6½	2.60	6½	3.50	6½	4.20	6½	5.49	6½	8.79	6½	8.79
7	2.10	7	2.72	7	3.66	7	4.40	7	5.77	7	9.17	7	9.17
7½	2.20	7½	2.84	7½	3.82	7½	4.60	7½	6.05	7½	9.55	7½	9.55
8	2.30	8	2.96	8	3.98	8	4.80	8	6.33	8	9.93	8	9.93
8½	2.40	8½	3.08	8½	4.14	8½	5.00	8½	6.61	8½	10.31	8½	10.31
9	2.50	9	3.20	9	4.30	9	5.20	9	6.89	9	10.69	9	10.69
9½	2.60	9½	3.32	9½	4.46	9½	5.40	9½	7.17	9½	11.07	9½	11.07
10	2.70	10	3.44	10	4.62	10	5.60	10	7.45	10	11.45	10	11.45
10½	2.90	10½	3.68	10½	4.94	10½	6.00	10½	8.01	10½	12.21	10½	12.21
11	2.90	11	3.68	11	4.94	11	6.00	11	8.01	11	12.21	11	12.21
11½	3.10	11½	3.92	11½	5.26	11½	6.40	11½	8.57	11½	12.97	11½	12.97
12	3.10	12	3.92	12	5.26	12	6.40	12	8.57	12	12.97	12	12.97
13	3.30	13	4.16	13	5.58	13	6.80	13	9.13	13	13.73	13	13.73
14	3.50	14	4.40	14	5.90	14	7.20	14	9.69	14	14.49	14	14.49
15	3.70	15	4.64	15	6.22	15	7.60	15	10.25	15	15.25	15	15.25
16	3.90	16	4.88	16	6.54	16	8.00	16	10.81	16	16.01	16	16.01
17	4.10	17	5.12	17	6.86	17	8.40	17	11.37	17	16.77	17	16.77
18	4.30	18	5.36	18	7.18	18	8.80	18	11.93	18	17.53	18	17.53
19	4.50	19	5.60	19	7.50	19	9.20	19	12.49	19	18.29	19	18.29
20	4.70	20	5.84	20	7.82	20	9.60	20	13.05	20	19.05	20	19.05

Packed—3/16 and ¼ inch, 100 in a Package; Other sizes to ½x7½ inches, 50 in a Package; Larger sizes, 25 in a Package.

TIRE BOLTS



Common Tire Bolts.

Manufacturers' Standard List of December 28th, 1899.

List Price Per Hundred.

3-16 Inch				1-4 Inch				5-16 Inch				3-8 Inch			
Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100
1	$0.60	3¾	$1.05	1	$0.95	3¾	$1.40	1	$1.40	3¾	$1.96	1	$2.20	3¾	$2.90
1¼	.60	4	1.10	1¼	.95	4	1.45	1¼	1.40	4	2.03	1¼	2.20	4	3.00
1½	.60	4¼	1.15	1½	.95	4¼	1.50	1½	1.40	4¼	2.10	1½	2.20	4¼	3.10
1¾	.65	4½	1.20	1¾	1.00	4½	1.55	1¾	1.40	4½	2.17	1¾	2.20	4½	3.20
2	.70	4¾	1.25	2	1.05	4¾	1.60	2	1.47	4¾	2.24	2	2.20	4¾	3.30
2¼	.75	5	1.30	2¼	1.10	5	1.65	2¼	1.54	5	2.31	2¼	2.30	5	3.40
2½	.80	5¼	1.35	2½	1.15	5¼	1.70	2½	1.61	5¼	2.38	2½	2.40	5¼	3.50
2¾	.85	5½	1.40	2¾	1.20	5½	1.75	2¾	1.68	5½	2.45	2¾	2.50	5½	3.60
3	.90	5¾	1.45	3	1.25	5¾	1.80	3	1.75	5¾	2.52	3	2.60	5¾	3.70
3¼	.95	6	1.50	3¼	1.30	6	1.85	3¼	1.82	6	2.59	3¼	2.70	6	3.80
3½	1.00	.....	....	3½	1.35	.....	.....	3½	1.89	....	....	3½	2.80	.....	....

Packed—One Hundred in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINE BOLTS

Square Heads and Nuts, Finished Points. **List Price Per Hundred.**

Manufacturers' Standard List of August 1st, 1912.

Length in. Inches	1-4 Inch	5-16 Inch	3-8 Inch	7-16 Inch	1-2 Inch	9-16 and 5-8 Inch	3-4 Inch	7-8 Inch	1 Inch	1 1-8 Inch	1 1-4 Inch
1½	$1.70	$2.00	$2.40	$2.80	$3.60	$ 5.20	$ 7.70	$10.50	$15.10	$22.50	$ 30.00
2	1.78	2.12	2.56	3.00	3.86	5.58	8.25	11.20	16.00	23.70	31.50
2½	1.86	2.24	2.72	3.20	4.12	5.96	8.80	11.90	16.90	24.90	33.00
3	1.94	2.36	2.88	3.40	4.38	6.34	9.35	12.60	17.80	26.10	34.50
3½	2.02	2.48	3.04	3.60	4.64	6.72	9.90	13.30	18.70	27.30	36.00
4	2.10	2.60	3.20	3.80	4.90	7.10	10.45	14.00	19.60	28.50	37.50
4½	2.18	2.72	3.36	4.00	5.16	7.48	11.00	14.70	20.50	29.70	39.00
5	2.26	2.84	3.52	4.20	5.42	7.86	11.55	15.40	21.40	30.90	40.50
5½	2.34	2.96	3.68	4.40	5.68	8.24	12.10	16.10	22.30	32.10	42.00
6	2.42	3.08	3.84	4.60	5.94	8.62	12.65	16.80	23.20	33.30	43.50
6½	2.50	3.20	4.00	4.80	6.20	9.00	13.20	17.50	24.10	34.50	45.00
7	2.58	3.32	4.16	5.00	6.46	9.38	13.75	18.20	25.00	35.70	46.50
7½	2.66	3.44	4.32	5.20	6.72	9.76	14.30	18.90	25.90	36.90	48.00
8	2.74	3.56	4.48	5.40	6.98	10.14	14.85	19.60	26.80	38.10	49.50
9	2.90	3.80	4.80	5.80	7.50	10.90	15.95	21.00	28.60	40.50	52.50
10	3.06	4.04	5.12	6.20	8.02	11.66	17.05	22.40	30.40	42.90	55.50
11	3.22	4.28	5.44	6.60	8.54	12.42	18.15	23.80	32.20	45.30	58.50
12	3.38	4.52	5.76	7.00	9.06	13.18	19.25	25.20	34.00	47.70	61.50
13	.....	.....	6.08	7.40	9.58	13.94	20.35	26.60	35.80	50.10	64.50
14	.....	.....	6.40	7.80	10.10	14.70	21.45	28.00	37.60	52.50	67.50
15	.....	.....	6.72	8.20	10.62	15.46	22.55	29.40	39.40	54.90	70.50
16	.....	.....	7.04	8.60	11.14	16.22	23.65	30.80	41.20	57.30	73.50
17	.....	.....	.....	.....	11.66	16.98	24.75	32.20	43.00	59.70	76.50
18	.....	.....	.....	.....	12.18	17.74	25.85	33.60	44.80	62.10	79.50
19	.....	.....	.....	.....	12.70	18.50	26.95	35.00	46.60	64.50	82.50
20	.....	.....	.....	.....	13.22	19.26	28.05	36.40	48.40	66.90	85.50
21	.....	.....	.....	.....	.....	.....	29.15	37.80	50.20	69.30	88.50
22	.....	.....	.....	.....	.....	.....	30.25	39.20	52.00	71.70	91.50
23	.....	.....	.....	.....	.....	.....	31.35	40.60	53.80	74.10	94.50
24	.....	.....	.....	.....	.....	.....	32.45	42.00	55.60	76.50	97.50
25	.....	.....	.....	.....	.....	.....	33.55	43.40	57.40	78.90	100.50
26	.....	.....	.....	.....	.....	.....	34.65	44.80	59.20	81.30	103.50
27	.....	.....	.....	.....	.....	.....	35.75	46.20	61.00	83.70	106.50
28	.....	.....	.....	.....	.....	.....	36.85	47.60	62.80	86.10	109.50
29	.....	.....	.....	.....	.....	.....	37.95	49.00	64.60	88.50	112.50
30	.....	.....	.....	.....	.....	.....	39.05	50.40	66.40	90.90	115.50

Packed—Sizes up to ½x10 inch inclusive, 50 in a package; larger sizes, 25 in a package.

Extras—The following extras are to be understood as part of the Machine Bolt List: Bolts with Hexagon Heads or Hexagon Nuts, 10% extra; if both Hexagon Heads and Hexagon Nuts, 20% extra; Joint Bolts with Oblong Nuts, Bolts with Tee Heads, Askew Heads, and Eccentric Heads, 10% extra.

BOLT ENDS

With Square Nuts. **List Price Per Pound.**

Manufacturers' Standard List of October 1, 1899.

Diameter, inches	5/16	3/8	7/16	½	5/8	¾	7/8	1	1⅛	1¼	1⅜	1½	1⅝	1¾	1⅞	2
Length, inches	6	7	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Weight, per 100 Bolts, lbs.	15	22	31	45	80	130	200	310	410	545	700	910	1120	1400	1710	2050
Per Pound	$0.20	.18	.16	.14	.12	.10	.10	.10	.10	.11	.11	.11	.12	.12	.12	.12

With Hexagon Nuts, 10 per cent. extra.

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COACH SCREWS

With Square Heads and Gimlet Points.

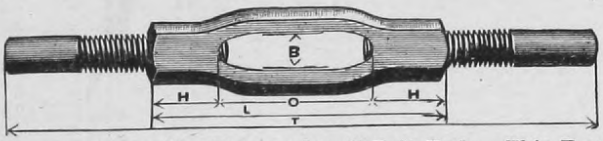
Manufacturers' Standard List of Coach and Lag Screws, with Square Heads. Adopted November 12, 1908.

Price Per Hundred.

Length Inches	1-4 and 5-16 Inch	3-8 Inch	7-16 Inch	1-2 Inch	9-16 and 5-8 Inch	3-4 Inch	7-8 Inch	1 Inch
1½	$2.25	$2.70	$3.15	$3.75	.....	.....	.....	.....
2	2.45	2.96	3.47	4.11	$ 6.00	.....	.....	.....
2½	2.65	3.22	3.79	4.47	6.50	$ 9.20	.....	.....
3	2.85	3.48	4.11	4.83	7.00	9.90	$15.00	.....
3½	3.05	3.74	4.43	5.19	7.50	10.60	16.00	$22.00
4	3.25	4.00	4.75	5.55	8.00	11.30	17.00	23.30
4½	3.45	4.26	5.07	5.91	8.50	12.00	18.00	24.60
5	3.65	4.52	5.39	6.27	9.00	12.70	19.00	25.90
5½	3.85	4.78	5.71	6.63	9.50	13.40	20.00	27.20
6	4.05	5.04	6.03	6.99	10.00	14.10	21.00	28.50
6½	.....	.....	6.35	7.35	10.50	14.80	22.00	29.80
7	.....	.....	6.67	7.71	11.00	15.50	23.00	31.10
7½	.....	.....	6.99	8.07	11.50	16.20	24.00	32.40
8	.....	.....	7.31	8.43	12.00	16.90	25.00	33.70
9	.....	.....	7.95	9.15	13.00	18.30	27.00	36.30
10	.....	.....	.....	9.87	14.00	19.70	29.00	38.90
11	.....	.....	.....	10.59	15.00	21.10	31.00	41.50
12	.....	.....	.....	11.31	16.00	22.50	33.00	44.10

Packed—Fifty in a Package—Hexagon Heads, 10% extra.

TURNBUCKLES



Wrought Iron, open hexagonal shape, complete with **Right** and **Left** Bolt Ends. This Turnbuckle contains 25 per cent more thread in the head than any other Turnbuckle made, and is **the only Buckle that has a perfect wrench hold.**

Dimensions. **B** Size—Diameter of Screw. **O**—Opening between heads, 5½ inches, first length for all sizes. **H**—Length of tapped heads. **L**—Length of Buckle, without Bolt Ends. **T**—Total length of Buckle and Bolt Ends.

Size B Inches	Price, Each	O Inches	H Inches	L Inches	T Inches	Weight, with Bolt Ends, Pounds
⅜	$0.40	5½	⅞	7¼	22	1.1
7/16	.42	5½	15/16	7 5/16	22	1.25
½	.45	5½	1	7½	22	2.
9/16	.48	5½	1 1/16	7 11/16	22	2.2
⅝	.50	5½	1⅛	7⅞	22	2.85
¾	.63	5½	1⅜	8¼	23	4.1
⅞	.75	5½	1½	8⅝	24	5.2
1	.88	5½	1 11/16	9	25	7.
1⅛	1.00	5½	1⅞	9⅜	25	8.4
1¼	1.25	5½	2 1/16	9¾	26	11.15
1⅜	1.38	5½	2¼	10⅛	27	14.1
1½	1.50	5½	2 7/16	10½	27	16.75
1⅝	1.75	5½	2⅝	10⅞	28	20.
1¾	2.00	5½	2⅞	11¼	28	23.25
1⅞	2.25	5½	3	11⅝	29	27.75
2	2.65	5½	3 3/16	12	29	32.75
2⅛	3.10	5½	3⅜	12⅜	29	37.75
2¼	3.50	5½	3 9/16	12⅝	30	45.
2⅜	4.00	5½	3¾	12⅞	31	47.
2½	4.50	5½	4	13½	32	60.
2⅝	5.00	5½	4⅛	13⅞	32	62.
2¾	5.50	5½	4⅜	14¼	33	77.
2⅞	6.00	5½	4⅝	14⅝	33	78.75
3	6.50	5½	4¾	15	34	83.

Above prices are for first or standard length Buckles, viz: 5½ inches clear between heads. Extra lengths furnished to order. Ordinary sizes and lengths carried in stock. Weights given are only approximate.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STOVE BOLTS

Flat Head.

Round Head.

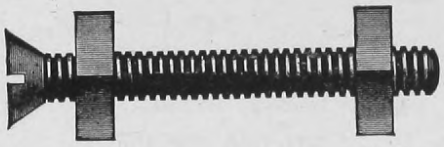
Manufacturers' Standard List of March 1, 1907.

Flat or Round Head. **Price Per Hundred.**

Length Inches	Diameter, Inch: 1/8, 5/32 and 3/16	7/32 and 1/4	5/16	3/8	Length Inches	Diameter, Inch: 5/32 and 3/16	7/32 and 1/4	5/16	3/8	Length Inches	Diameter, Inch: 9/16	7/32 and 1/4	5/16	3/8
3/8	$0.85	$1.20	$1.75	$2.65	1 3/4	$1.15	$1.55	$2.15	$3.20	4	$1.90	$2.40	$3.30	$5.00
1/2	.85	1.20	1.75	2.65	2	1.20	1.60	2.30	3.40	4 1/4	2.00	2.50	3.45	5.20
5/8	.85	1.20	1.75	2.65	2 1/4	1.25	1.70	2.40	3.60	4 1/2	2.10	2.60	3.60	5.40
3/4	.85	1.20	1.75	2.65	2 1/2	1.30	1.80	2.50	3.80	4 3/4	2.20	2.70	3.75	5.60
7/8	.90	1.25	1.80	2.70	2 3/4	1.40	1.90	2.60	4.00	5	2.30	2.85	3.90	5.80
1	.90	1.30	1.85	2.75	3	1.50	2.00	2.70	4.20	5 1/4	2.40	3.00	4.10	6.00
1 1/8	.95	1.35	1.90	2.85	3 1/4	1.60	2.10	2.85	4.40	5 1/2	2.50	3.15	4.30	6.20
1 1/4	1.00	1.40	1.95	2.90	3 1/2	1.70	2.20	3.00	4.60	5 3/4	2.60	3.30	4.50	6.40
1 3/8	1.05	1.45	2.00	3.00	3 3/4	1.80	2.30	3.15	4.80	6	2.75	3.45	4.70	6.60
1 1/2	1.10	1.50	2.05	3.10	...	...	...	...	...	...	...	...	...	...

Packed—One Hundred in a Package.

SINK BOLTS



With Two Nuts.

Manufacturers' Standard List of March 1, 1907.

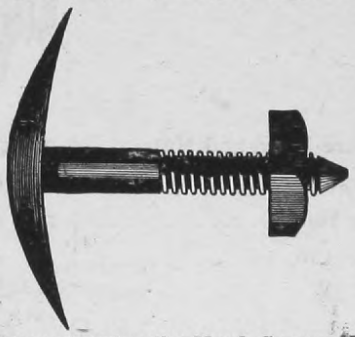
Length .....Inches, 2 1/4
1-4 inch .....Per 100, $2.20

Packed—One Hundred in a Package.

Nickel Plated Sink Bolts

Short, 1/4 x 7/8 in., with One Nut..... Per Dozen, $.....
Long, 1/4 x 2 in., with Two Nuts..... Per Dozen, ...

T HEAD SHAFT BOLTS

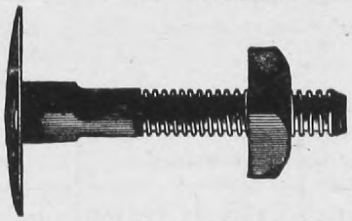


Round under the Head, Square Nut.

Length ....Inches,	1 1/2	1 3/4	2	3 1/2	4
1-4 inch, Per 100,	$3.20	3.30	3.40	4.00	4.20
5-16 inch, Per 100,	....	...	...	5.00	5.30

Packed—Fifty in a Package.

STEP BOLTS

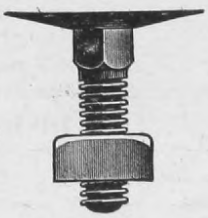


Rounded Head, Square Nut.

Length .....Inches,	1	1 1/4	1 1/2
1-4 inch.....Per 100,	$3.00	3.10	3.20
5-16 inch.....Per 100,	4.00	4.00	4.00
3-8 inch.....Per 100,	5.40	5.40	5.40
Length .....Inches,	1 3/4	2	2 1/4	2 1/2
1-4 inch....Per 100,	$3.30	3.40	3.50	3.60
5-16 inch....Per 100,	4.00	4.10	4.20	4.40
3-8 inch....Per 100,	5.40	5.40	5.60	5.80

Packed—One Hundred in a Package.

ELEVATOR BOLTS



No. 1.
Large Flat Countersunk Head.

No. 2.
Small Oval Head.

List Price per Hundred Any Style Head.

Length Inches,	3/4	7/8	1	1 1/8	1 1/4	1 1/2
3-16 inch.....Per 100,	$2.20	2.30	2.30	2.40	2.40	2.50
1-4 inch.....Per 100,	2.20	2.30	2.30	2.40	2.40	2.50
5-16 inch.....Per 100,	3.00	3.00	3.00	3.20	3.20	3.40
3-8 inch.....Per 100,	4.00	4.00	4.00	4.30	4.30	4.60

Packed—One Hundred in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

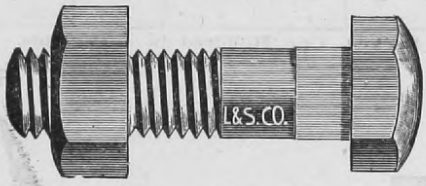
SLEIGH SHOE BOLTS

Sleigh Shoe Bolts take same List as Common Carriage Bolts. Prices on other than stock sizes listed below, may be taken from that list.

Length, inches	3	3½	4	4½	5	5½	6	6½	7	7½	8	9
5-16 inch.....Per 100,	$1.76	1.88	2.00	2.12	2.24	2.36	....	....	....	....	....	....
3-8 inch.....Per 100,	2.38	2.54	2.70	2.86	3.02	3.18	3.34	3.50	....	....	....	....
7-16 inch.....Per 100,	....	....	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.20
1-2 inch.....Per 100,	....	....	....	....	4.65	4.93	5.21	5.49	5.77	6.05	6.33	6.89

Packed—Fifty in a Package.

CANT HOOK BOLTS



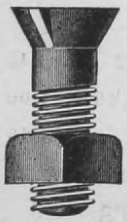
Steel Cant Hook Bolts.

With Square Head and Nut		
Length, inches..	1¾	2
7-16 inch, Per 100, $.....	.....	.....
1-2 inch, Per 100, ...	.....	.....

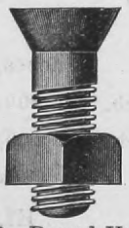
Square Head and Hexagon Nut	
Length, inches	1¾
7-16 inch, Per 100..... $.....	

With Hexagon Head and Nut		
Length, inches..	1¾	2
7-16 inch, Per 100, $.....	.....	.....
1-2 inch, Per 100, ...	.....	.....

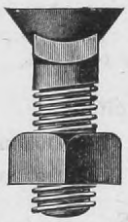
PLOW AND CULTIVATOR BOLTS



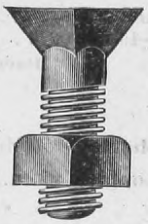
No. 1. Key Head.



No. 2. Round Head.



No. 3. Round Head, Square Shank.



No. 4. Square Head.

In ordering Plow Bolts, please state what style Heads are desired. Right Hand Threads will be sent unless otherwise specified.

List Price Per Hundred. Any Style Head.

5-16 Inch		3-8 Inch		7-16 Inch		1-2 Inch		9-16 Inch		5-8 Inch	
Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100	Inch	Per 100
1¼	$1.70	1¼	$2.00	1¼	$2.60	1¼	$3.50	1¼	$4.50	1¼	$5.70
1½	1.80	1½	2.10	1½	2.75	1½	3.70	1½	4.75	1½	6.00
1¾	1.90	1¾	2.20	1¾	2.90	1¾	3.90	1¾	5.00	1¾	6.30
2	2.00	2	2.30	2	3.05	2	4.10	2	5.25	2	6.60
2¼	2.10	2¼	2.40	2¼	3.20	2¼	4.30	2¼	5.50	2¼	6.90
2½	2.20	2½	2.50	2½	3.35	2½	4.50	2½	5.75	2½	7.20
2¾	2.30	2¾	2.60	2¾	3.50	2¾	4.70	2¾	6.00	2¾	7.50
3	2.40	3	2.70	3	3.65	3	4.90	3	6.25	3	7.80
3¼	2.50	3¼	2.80	3¼	3.80	3¼	5.10	3¼	6.50	3¼	8.10
3½	2.60	3½	2.90	3½	3.95	3½	5.30	3½	6.75	3½	8.40
3¾	2.70	3¾	3.00	3¾	4.10	3¾	5.50	3¾	7.00	3¾	8.70
4	2.80	4	3.10	4	4.25	4	5.70	4	7.25	4	9.00

Packed—Furnished in packages of twenty-five or fifty Bolts. We do not break packages.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOT PRESSED NUTS

SQUARE

Blank.

In Ordering, State Size of Bolt.

HEXAGON

Tapped.

United States Standard List, January 1st, 1906.

Square.							Hexagon.						
Size of Bolt In.	Blank Per 100 Pounds	Tapped. U. S. St'd Th'd Per 100 Pounds	Tapped. U. S. St'd Th'd Number of Threads	Width Inches	Thickness Inches	Diam. of Hole Inches	Size of Bolt In.	Blank Per 100 Pounds	Tapped. U. S. St'd Th'd Per 100 Pounds	Tapped. U. S. St'd Th'd Number of Threads	Width Inches	Thickness Inches	Diam. of Hole Inches
1/4	$13.00	$15.00	20	1/2	1/4	3/16	1/4	$20.00	$22.50	20	1/2	1/4	3/16
5/16	12.00	13.50	18	19/32	5/16	1/4	5/16	18.00	20.00	18	19/32	5/16	1/4
3/8	10.50	11.60	16	11/16	3/8	19/64	3/8	14.00	15.60	16	11/16	3/8	19/64
7/16	10.00	10.90	14	25/32	7/16	11/32	7/16	13.00	14.30	14	25/32	7/16	11/32
1/2	9.00	9.70	13	7/8	1/2	13/32	1/2	11.20	12.20	13	7/8	1/2	13/32
9/16	9.00	9.60	12	31/32	9/16	29/64	9/16	11.20	12.10	12	31/32	9/16	29/64
5/8	8.70	9.20	11	1 1/16	5/8	1/2	5/8	10.50	11.20	11	1 1/16	5/8	1/2
3/4	8.50	8.90	10	1 1/4	3/4	5/8	3/4	10.00	10.60	10	1 1/4	3/4	5/8
7/8	8.40	8.80	9	1 7/16	7/8	47/64	7/8	9.90	10.50	9	1 7/16	7/8	47/64
1	8.40	8.80	8	1 5/8	1	27/32	1	9.90	10.50	8	1 5/8	1	27/32
1 1/8	8.40	8.80	7	1 13/16	1 1/8	15/16	1 1/8	9.90	10.50	7	1 13/16	1 1/8	15/16
1 1/4	8.40	8.80	7	2	1 1/4	1 1/16	1 1/4	9.90	10.50	7	2	1 1/4	1 1/16
1 3/8	8.50	9.00	6	2 3/16	1 3/8	1 5/32	1 3/8	10.00	10.70	6	2 3/16	1 3/8	1 5/32
1 1/2	8.80	9.40	6	2 3/8	1 1/2	1 9/32	1 1/2	10.30	11.10	6	2 3/8	1 1/2	1 9/32
1 5/8	9.00	9.70	5 1/2	2 9/16	1 5/8	1 25/64	1 5/8	10.50	11.40	5 1/2	2 9/16	1 5/8	1 25/64
1 3/4	9.30	10.00	5	2 3/4	1 3/4	1 1/2	1 3/4	10.80	11.70	5	2 3/4	1 3/4	1 1/2
1 7/8	9.50	10.30	5	2 15/16	1 7/8	1 5/8	1 7/8	11.00	12.00	5	2 15/16	1 7/8	1 5/8
2	9.70	10.60	4 1/2	3 1/8	2	1 23/32	2	11.20	12.30	4 1/2	3 1/8	2	1 23/32
2 1/8	10.00	11.00	4 1/2	3 5/16	2 1/8	1 27/32	2 1/8	11.70	12.90	4 1/2	3 5/16	2 1/8	1 27/32
2 1/4	10.00	11.10	4 1/2	3 1/2	2 1/4	1 31/32	2 1/4	11.70	13.00	4 1/2	3 1/2	2 1/4	1 31/32
2 3/8	10.30	11.50	4	3 11/16	2 3/8	2 5/64	2 3/8	12.20	13.60	4	3 11/16	2 3/8	2 5/64
2 1/2	10.50	11.80	4	3 7/8	2 1/2	2 11/64	2 1/2	12.40	13.90	4	3 7/8	2 1/2	2 11/64
2 3/4	11.00	12.40	4	4 1/4	2 3/4	2 27/64	2 3/4	13.00	14.60	4	4 1/4	2 3/4	2 27/64
3	11.50	13.00	3 1/2	4 5/8	3	2 5/8	3	13.50	15.20	3 1/2	4 5/8	3	2 5/8

Note.—For Net Prices, deduct from above list prices per 100 pounds as follows:

Square, for **Full** Kegs of 200 pounds.....Deduct, $.....

Hexagon, for **Full** Kegs of 200 pounds.....Deduct, ...

Net Extras—For less than Keg lots of 200 pounds.

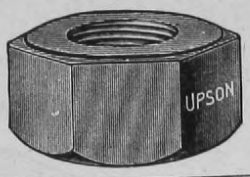
For 100 to 199 Pounds inclusive.....Add per 100 Pounds, $0.25 Net
For 50 to 99 Pounds inclusive.....Add per 100 Pounds, .50 Net
For 10 to 49 Pounds inclusive.....Add per 100 Pounds, .75 Net
For 5 to 9 Pounds inclusive.....Add per 100 Pounds, 1.00 Net
For 1 to 4 Pounds inclusive.....Add per 100 Pounds, 2.00 Net

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SEMI-FINISHED HEXAGON NUTS

U. S. Standard Thread.

In ordering, State Size of Bolt.



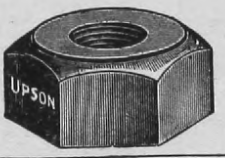
Size of Bolt Inches	Width Inches	Thickness Inches	Number of Threads	Each	Size of Bolt Inches	Width Inches	Thickness Inches	Number of Threads	Each
1/4	1/2	1/4	20	$0.02	1 1/4	2	1 1/4	7	$0.33
5/16	9/32	5/16	18	.02 1/2	1 3/8	2 3/16	1 3/8	6	.49
3/8	11/16	3/8	16	.03 1/4	1 1/2	2 3/8	1 1/2	6	.69
7/16	25/32	7/16	14	.03 3/4	1 5/8	2 9/16	1 5/8	5 1/2	.93
1/2	7/8	1/2	13 or 12	.04 1/2	1 3/4	2 3/4	1 3/4	5	1.30
9/16	31/32	9/16	12	.05 1/2	1 7/8	2 15/16	1 7/8	5	1.70
5/8	1 1/16	5/8	11	.06 1/2	2	3 1/8	2	4 1/2	2.15
11/16	1 5/32	11/16	11	.08 1/2	2 1/4	3 1/2	2 1/4	4 1/2	3.10
3/4	1 1/4	3/4	10	.08 1/2	2 1/2	3 7/8	2 1/2	4	4.75
7/8	1 7/16	7/8	9	.12	2 3/4	4 1/4	2 3/4	4	6.30
1	1 5/8	1	8	.17 1/2	3	4 5/8	3	3 1/2	9.90
1 1/8	1 13/16	1 1/8	7	.24	.....	.....	.....	.....	.....

Packed—1/4 to 3/8 inch 100—7/16 to 1 inch, 50 in a Box.

SEMI-FINISHED HEXAGON "JAM" NUTS

U. S. Standard Threads.

In Ordering, State Size of Bolt.



Size of Bolt Inch	Width Inches	Thickness Inch	Number of Threads	Each	Size of Bolt Inch	Width Inches	Thickness Inch	Number of Threads	Each	Size of Bolt Inch	Width Inches	Thickness Inch	Number of Threads	Each
1/4	1/2	3/16	20	$0.02	1/2	7/8	5/16	13 or 12	$0.04 1/2	3/4	1 1/4	7/16	10	$0.08 1/2
5/16	19/32	7/32	18	.02 1/2	9/16	31/32	11/32	12	.05 1/2	7/8	1 7/16	1/2	9	.12
3/8	11/16	1/4	16	.03 1/4	5/8	1 1/16	3/8	11	.06 1/2	1	1 5/8	9/16	8	.17 1/2
7/16	25/32	5/16	14	.03 3/4	11/16	1 5/32	13/32	11	.08 1/2	.....	.....	.....	.....	.....

Packed—1/4 to 3/8 inch 100—7/16 to 1 inch, 50 in a Box.

Square.

STOVE BOLT NUTS

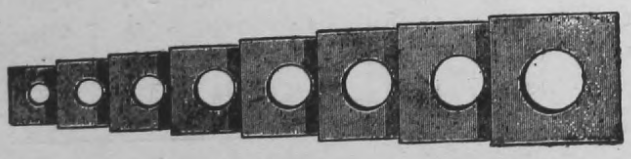
Cold Pressed and Tapped.

Hexagon.

Size Inch	Number of Threads	Price Per Hundred		Size Inch	Number of Threads	Price Per Hundred	
		Square	Hexagon			Square	Hexagon
1/8	32	$0.18	$0.28	1/4	18	$0.28	$0.50
5/32	28	.18	.28	5/16	18	.50	.85
3/16	24	.20	.30	3/8	16	.64	1.00
7/32	22	.22	.35	.....	.....	.....	.....

Packed—100 in a Box.

MACHINE SCREW NUTS



Square.

Hexagon.

Price Per Gross.

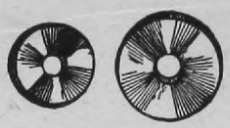
Nos.	Number of Threads	Square Cold Punched and Tapped		Hexagon Chamfered, Trimmed and Tapped		Nos.	Number of Threads	Square Cold Punched and Tapped		Hexagon Chamfered, Trimmed and Tapped	
		Iron	Brass	Iron	Brass			Iron	Brass	Iron	Brass
4	32, 36, 40	$0.23	$0.72	$0.36	$1.08	18	16, 18	$0.62	$1.88	$0.94	$2.81
6	30, 32	.23	.72	.36	1.08	20	16, 18	.82	2.45	1.22	3.67
8	30, 32	.26	.80	.40	1.22	22	16, 18	.93	2.70	1.44	4.32
10	24, 30, 32	.29	.87	.43	1.30	24	14, 16	1.06	3.17	1.58	4.75
12	20, 24	.32	.94	.48	1.44	26	14, 16	1.20	3.60	1.80	5.40
14	20, 24	.36	1.08	.55	1.66	28	14, 16	1.35	4.10	2.02	6.05
16	16, 18, 20	.48	1.44	.72	2.16	30	14, 16	1.50	4.55	2.30	6.91

Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

PLAIN LOCK WASHERS

BRASS WASHERS



Plain Lock Washers

Size of Bolt Inch	Size of Steel Inch	Per 1000 List Price	Per 1000 Net Price	Size of Bolt Inch	Size of Steel Inch	Per 1000 List Price	Per 1000 Net Price	Size of Bolt Inch	Size of Steel Inch	Per 1000 List Price	Per 1000 Net Price
3/16	1/16x3/64	$1.65	$.....	3/8	5/32x1/16	$5.30	$.....	9/16	3/16x1/16	$ 8.35	$.....
1/4	5/64x1/16	2.80	.....	7/16	5/32x1/16	6.10	.....	5/8	3/16x3/32	10.25	.....
5/16	1/8x1/16	3.90	.....	1/2	3/16x1/16	7.50	.....	3/4	3/16x3/32	11.95	.....
.....	.....	.....	.....	.....	.....	.....	.....	7/8	1/4x3/32	16.40	.....

Packed—3/16 to 9/16 inch, One Thousand in a Package; 5/8 to 7/8 inch, Half Thousand.

Note.—We do not break packages.

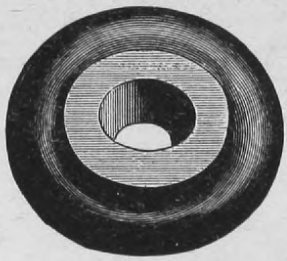
Assortment—3/16 to 5/8 inch, 42 Washers in a Metal Box.....Per Dozen Boxes, $.....

Brass Washers

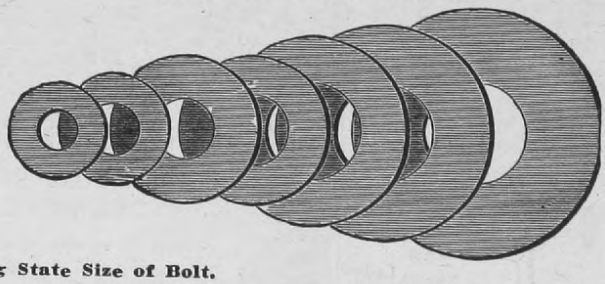
For Bolt, inch.....	1/8	3/16	1/4	1/4	5/16	3/8	3/8	1/2	5/8	3/4
Outside Diameter, inches.....	1/4	1/2	1/2	5/8	3/4	1	3/4	1 3/8	1 3/4	2
Thickness, inch.....	.025	.050	.050	.065	1/16	1/16	1/16	No. 12	No. 10	No. 10
Per 1000.....	$.....									

Note.—Numbers referred to indicate Brown & Sharpe Gauge.

CAST WASHERS



WROUGHT WASHERS



In Ordering State Size of Bolt.

Cast Iron Washers

Ogee Pattern									
Size of Bolt, inches.....	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	All Sizes Per Pound
Size of Hole, inches.....	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	
Diameter, inches	2 1/2	2 3/4	3	3 1/2	4	4 1/2	5	6	
Thickness, inches	11/16	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4	
Weight..... Each, Pounds,	1/2	5/8	3/4	1 1/4	1 5/8	2 1/4	3	5	$.....

Special Sizes made to order.

Wrought Washers—In Kegs

Manufacturers' Standard List of Wrought Iron and Steel Washers, January 20, 1910.

Size of Bolt	Size of Hole	Diameter	Thickness Wire Gauge	List per 100 Pounds	Size of Bolt	Size of Hole	Diameter	Thickness Wire Gauge	List per 100 Pounds
3/16	1/4	9/16	No. 18	$14.00	1	1 1/16	2 1/2	No. 8	$9.00
1/4	5/16	3/4	No. 16	12.20	1 1/8	1 1/4	2 3/4	No. 8	9.00
5/16	3/8	7/8	No. 16	11.40	1 1/4	1 3/8	3	No. 8	9.20
3/8	7/16	1	No. 14	10.50	1 3/8	1 1/2	3 1/4	No. 7	9.20
7/16	1/2	1 1/4	No. 14	9.80	1 1/2	1 5/8	3 1/2	No. 7	9.20
1/2	9/16	1 3/8	No. 12	9.40	1 5/8	1 3/4	3 3/4	No. 7	9.50
9/16	5/8	1 1/2	No. 12	9.30	1 3/4	1 7/8	4	No. 7	9.50
5/8	11/16	1 3/4	No. 10	9.20	1 7/8	2	4 1/4	No. 7	9.50
3/4	13/16	2	No. 9	9.10	2	2 1/8	4 1/2	No. 7	9.50
7/8	15/16	2 1/4	No. 8	9.00	2 1/4	2 3/8	4 3/4	No. 5	10.50
					2 1/2	2 5/8	5	No. 4	10.50

For Net Prices, deduct from above list, for full kegs of 200 lbs.....Per 100 Pounds, $.....

Net Extras—For less than Keg Lots of 200 Pounds.

For 100 to 199 Pounds, inclusive.....Add Per 100 Pounds, $0.25 Net
For 50 to 99 Pounds, inclusive.....Add Per 100 Pounds, .50 Net
For 10 to 49 Pounds, inclusive.....Add Per 100 Pounds, .75 Net
For 5 to 9 Pounds, inclusive.....Add Per 100 Pounds, 1.00 Net
For 1 to 4 Pounds, inclusive.....Add Per 100 Pounds, 2.00 Net

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

SPRING COTTERS

Manufacturers' Standard List.
July 21, 1911.

Price Per Thousand.

Full Size Cut of 5/16x2 inch.

Length from Point to Neck under Eye.	Diam. 3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	1/4	5/16	3/8	7/16	1/2	5/8
1/2	$3.50	$4.00	$ 5.00	$ 6.00	$ 7.00	$ 8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
3/4	4.15	4.75	5.85	7.00	8.15	9.30	$11.10	$12.00	.....	.....	.....	.....	.....	.....	.....
1	4.80	5.50	6.70	8.00	9.30	10.60	12.80	14.00	$18.00	$20.00	$32.50	.....	.....	.....	.....
1 1/4	5.45	6.25	7.55	9.00	10.45	11.90	14.50	16.00	20.80	23.50	37.50	.....	.....	.....	.....
1 1/2	6.10	7.00	8.40	10.00	11.60	13.20	16.20	18.00	23.60	27.00	42.50	$ 72.00	.....	.....	.....
1 3/4	6.75	7.75	9.25	11.00	12.75	14.50	17.90	20.00	26.40	30.50	47.50	79.20	$108.00	.....	.....
2	7.40	8.50	10.10	12.00	13.90	15.80	19.60	22.00	29.20	34.00	52.50	86.40	119.50	$148.50	.....
2 1/4	....	....	10.95	13.00	15.05	17.10	21.30	24.00	32.00	37.50	57.50	93.60	131.00	163.50	.....
2 1/2	....	....	11.80	14.00	16.20	18.40	23.00	26.00	34.80	41.00	62.50	100.80	142.50	178.50	.....
2 3/4	....	....	.....	.....	.....	.....	24.70	28.00	37.60	44.50	67.50	108.00	154.00	193.50	.....
3	....	....	.....	.....	.....	.....	26.40	30.00	40.40	48.00	72.50	115.20	165.50	208.50	$384.00
3 1/4	....	....	.....	.....	.....	.....	.....	.....	.....	51.50	77.50	122.40	177.00	223.50	404.00
3 1/2	....	....	.....	.....	.....	.....	.....	.....	.....	55.00	82.50	129.60	188.50	238.50	424.00
3 3/4	....	....	.....	.....	.....	.....	.....	.....	.....	58.50	87.50	136.80	200.00	253.50	444.00
4	....	....	.....	.....	.....	.....	.....	.....	.....	62.00	92.50	144.00	211.50	268.50	464.00
5	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	257.50	328.50	544.00
6	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	388.50	644.00

Number of Spring Cotters in a Box

3/32x 1/2 to 2	1000	5/32x2 to 2 1/2	500	13/16x1 3/4 to 2 1/2	500	5/16x1	500
7/64x 1/2 to 2	1000	11/64x 1/2 to 1 3/4	1000	13/64x2 3/4 to 3	250	5/16x1 1/4 to 2 3/4	250
1/8x 1/2 to 2	1000	11/64x2 to 2 1/2	500	7/32x1 to 1 3/4	500	5/16x3, 3 1/4	200
1/8x2 1/4, 2 1/2	500	3/16x 3/4 to 1 1/2	1000	7/32x2 to 3	250	5/16x3 1/2, 3 3/4	150
9/64x 1/2 to 1 3/4	1000	3/16x1 3/4 to 2 3/4	500	1/4x1 to 1 3/4	500	5/16x4	100
9/64x2 to 2 1/2	500	3/16x3	250	1/4x2 to 3 3/4	250	Other Sizes	In Bulk
5/32x 1/2 to 1 3/4	1000	13/64x 3/4 to 1 1/2	1000	1/4x4	150		

Note.—The number in a package on certain sizes may vary from different manufacturers.
Brass Spring Cotters in all sizes can be furnished promptly from factory. **Prices on Application.**

ASSORTMENTS OF SPRING COTTERS

No. 1.

For the Agricultural trade, assorted as follows:

Ten each, 3/32x3/4 and 1, 1/8x1 and 1 1/4, 3/16x1 1/4 and 1 1/2, 1/4x1 3/4 and 2, and 5/16x2 and 2 1/2. Put up in a neat Pasteboard Box.

No. 1—Assortment, 100 assorted sizes in a box.

.....Per Dozen Boxes, $.....

No. 5.

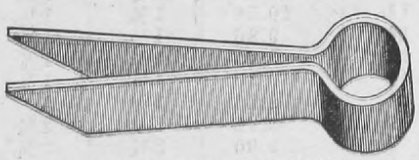
For the Automobile trade, assorted as follows:

Ten only, 1/16x1/2; 20 only, 1/16x1 1/4; 15 only, 3/32x1/2; 10 each, 3/32x3/4, 1 and 1 1/4; 15 only, 1/8x3/4; 10 only, 1/8x1 inches. Put up in a round, metal bound, heavy Pasteboard Box with Screw Top.

No. 5—Assortment, 100 assorted sizes in a box.

.....Per Dozen Boxes, $.....

FLAT SPRING KEYS



Manufacturers' Standard List of July 21, 1911.

Length, inches	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2
3/8 inch Wide....Per 1000,	$39.00	44.50	50.00	55.50	61.00	66.50	72.00	77.50	.....	.....
1/2 inch Wide....Per 1000,	52.00	58.00	64.00	70.00	76.00	82.00	88.00	94.00	.....	.....
5/8 inch Wide....Per 1000,	.....	.....	78.00	84.50	91.00	97.50	104.00	110.50	117.00	123.50
3/4 inch Wide....Per 1000,	.....	.....	.....	104.00	111.00	118.00	125.00	132.00	139.00	146.00

Packed—In Kegs, from 1000 to 2000 in a Keg.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD TAPER PINS

Tapers ¼ inch to the foot. Price Per Hundred.

Nos.	0	1	2	3	4	5	6	7	8	9	10
Diameter at Large End	.156	.172	.193	2.19	2.50	2.89	3.41	4.09	4.92	5.91	7.06
Approximate Fractional Size, Inches	5/32	11/64	3/16	7/32	1/4	19/64	11/32	13/32	1/2	19/32	23/32
Length, Inches.											
¾	$1.80	$2.00	$2.10	$2.30	$2.50	$2.75	$3.00	.....	.....	.....	.....
1	2.05	2.25	2.35	2.55	2.75	3.00	3.25	$3.75	.....	.....	.....
1¼	2.30	2.50	2.60	2.80	3.00	3.25	3.50	4.00	$4.65	.....	.....
1½	2.55	2.75	2.85	3.05	3.25	3.50	3.75	4.25	5.00	$7.00	$ 9.00
1¾	2.80	3.00	3.10	3.30	3.50	3.75	4.00	4.50	5.40	7.50	9.50
2	.....	3.25	3.35	3.55	3.75	4.05	4.35	4.75	5.80	8.00	10.00
2¼	.....	.....	3.60	3.80	4.00	4.40	4.75	5.25	6.25	8.60	10.75
2½	.....	.....	.....	4.05	4.25	4.75	5.20	5.75	6.75	9.20	11.50
2¾	.....	.....	.....	4.30	4.50	5.10	5.70	6.25	7.25	9.80	12.25
3	.....	.....	.....	4.55	4.75	5.45	6.25	6.75	7.80	10.50	13.25
3¼	.....	.....	.....	.....	.....	.....	6.75	7.25	8.40	11.20	14.25
3½	.....	.....	.....	.....	.....	.....	7.25	7.75	9.00	11.90	15.25
3¾	.....	.....	.....	.....	.....	.....	7.75	8.25	9.60	12.60	16.25
4	.....	.....	.....	.....	.....	.....	8.25	8.75	10.20	13.30	17.25
4¼	.....	.....	.....	.....	.....	.....	.....	.....	10.80	14.00	18.25
4½	.....	.....	.....	.....	.....	.....	.....	.....	11.40	14.70	19.25
4¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.40	20.25
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.10	21.25
5¼	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.80	22.25
5½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.25
5¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.25
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.25

STEEL BALLS

These Balls are made from a superior grade of Carbon Crucible Steel, the composition of which is free from such admixtures that will not respond to our treatment in producing uniformity of quality in the finished products. Guaranteed free from imperfections and boxed according to gauged sizes. The tolerance in these balls is between the limits of one thousandth of an inch over and under size.

Diameter, inch	1/16	3/32	1/8	5/32	3/16	7/32	9/32	1/4	5/16	11/32	3/8
Per 100	$....	....	....	....	....	....	....	....	....	....	....
Per 1000	$....	....	....	....	....	....	....	....	....	....	....
Diameter, inch		7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1
Per 100		$....	....	....	....	....	....	....	....	....	....
Per 1000		$....	....	....	....	....	....	....	....	....	....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

IRON RIVETS, ANY STYLE HEAD—Furnished on Special Orders

Flat Head.

Oval Head.

Countersunk Head.

Cone Head.

Wagon Box Head.

List of March 19, 1913. Price Per Pound in 5 and 10 Pound Boxes.

Size of Wire	LENGTH, INCHES																
	1 in. and Longer	7/8	3/4	5/8 and 1/2	15/32	7/16	13/32	3/8	11/32	5/16	9/32	1/4	7/32	3/16	5/32	1/8	3/32
7/16 in.	$0.19	.19½	.19½	.20	....	....	....	....	....	....	....	....	....	....	....	....	....
3/8 in.	.19	.19½	.19½	.20	.21	....	....	....	....	....	....	....	....	....	....	....	....
11/32 in.	.19½	.20	.20	.20½	.21	.21	....	....	....	....	....	....	....	....	....	....	....
5/16 in.	.19½	.20	.20	.20½	.21	.22	.22	.22	....	....	....	....	....	....	....	....	....
No. 1	.20	.20½	.20½	.21	.22	.23	.23	.23	.23	....	....	....	....	....	....	....	....
No. 2	.20	.20½	.20½	.21	.22	.23	.23	.23	.23	.24	....	....	....	....	....	....	....
No. 3	.20	.20½	.20½	.21	.22	.23	.23	.23	.23	.24	.24	.24	....	....	....	....	....
¼ in.	.20	.20½	.20½	.21	.22	.23	.23	.23	.23	.24	.24	.24	.25	.25	....	....	....
No. 4	.21	.21½	.21½	.22	.23	.23	.24	.24	.24	.24	.24	.24	.25	.25	.26	....	....
No. 5	.21	.21½	.21½	.22	.23	.24	.24	.24	.24	.25	.26	.26	.27	.27	.28	.28	.29
No. 6	.21	.21½	.21½	.22	.23	.24	.24	.25	.25	.26	.26	.27	.28	.29	.29	.29	.30
3/16 in.	.21	.21½	.21½	.22	.23	.24	.24	.25	.25	.26	.26	.27	.28	.29	.30	.31	.32
No. 7	.21	.21½	.22	.23	.24	.24	.24	.25	.25	.26	.26	.27	.28	.29	.30	.31	.32
No. 8	.22	.22½	.22½	.23	.24	.25	.25	.26	.26	.27	.27	.28	.29	.30	.31	.32	.33
No. 9	.23	.23½	.23½	.24	.25	.26	.26	.27	.27	.29	.29	.29	.30	.31	.33	.35	.36
No. 10	.24	.24½	.24½	.25	.26	.27	.28	.29	.31	.33	.34	.34	.36	.39	.41	.43	.44
No. 11	.25	.25½	.25½	.26	.28	.30	.32	.33	.34	.36	.37	.37	.39	.43	.46	.48	.51
No. 12	.26	.26½	.26½	.27	.30	.32	.34	.35	.36	.38	.40	.41	.42	.47	.51	.56	.61
No. 13	.30	.30½	.30½	.31	.33	.36	.39	.40	.41	.43	.45	.46	.47	.51	.56	.61	.66
No. 14	.32	.32½	.32½	.33	.36	.41	.44	.46	.51	.56	.58	.61	.64	.64	.66	.69	.71

Note.—Rivets made from smaller wire than No. 14 all lengths list 80 cts. per lb.—3/32 in. diameter take No. 13 list.—1/8 in. take No. 11 list.—5/32 in. take No. 8 list,—7/32 in. take No. 5 list, and 9/32 in. take No. 2 list.

List Extras.—For Shoulder and Pointed Rivets add 2 cts. per lb. to List Price for each specialty, excepting Pointed Hame, Caster and Sucker Rod. Intermediate lengths and diameters take List Price of nearest smaller size.

Net Extras.—For Tin Plating or Copper Plating, add 1½ cents per lb. to net price. For Metallic Tinning, add 3½ cents per lb. to net price. When "Tinned" Rivets are ordered, Metallic Tinned are furnished. For Bright Polishing Rivets after annealing, add 25 cents net extra per cwt.

List Rebates.—For 25 and 50 lb. boxes, deduct 2 cents. For 100 lb. boxes, deduct 3 cents, and for 100 and 200 lb. kegs, deduct 4 cents per lb. from List Prices.

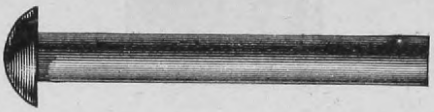
ROUND HEAD RIVETS—Approximate Number in One Pound

Length Inches	DIAMETER.													
	3/8"	0	5/16"	1	2	3	¼"	4	5	6	3/16"	7	8	9
3/8	..	..	..	..	..	..	..	..	..	154	188	221	256	334
½	32	42	51	57	65	75	80	89	108	131	159	185	215	278
5/8	29	37	45	50	57	67	70	78	94	114	138	158	185	238
¾	26	33	41	45	51	59	63	70	84	101	122	139	163	208
7/8	24	30	37	41	46	54	57	63	75	91	109	123	145	185
1	22	28	34	37	42	49	52	57	68	82	98	111	131	166
1 1/8	20	26	31	34	39	45	47	53	63	75	90	101	119	151
1 ¼	19	24	29	32	36	42	44	49	58	69	83	93	109	138
1 3/8	18	22	27	29	33	39	41	45	54	64	76	86	101	127
1 ½	17	21	25	28	31	37	38	42	51	59	71	80	94	119
1 ¾	15	18	22	24	27	33	34	40	44	55	63	70	82	104
2	13	17	20	22	25	29	30	35	40	47	56	62	73	92
2 ¼	12	15	18	19	22	27	28	32	36	42	50	56	66	83
2 ½	11	14	17	18	20	24	25	29	33	39	46	50	60	75
2 ¾	10	13	15	17	19	22	23	26	30	36	42	46	55	67
3	9	12	14	15	17	21	22	24	28	33	39	43	51	64
3 ¼	8 ½	11	13	14	16	19	20	23	26	31	36	40	47	59
3 ½	8	10 ½	12	13 ½	15	18	19	21	24	29	34	38	44	55
3 ¾	7 ½	9 ¾	11 ¾	12 ¾	14	17	18	20	23	27	32	35	41	52
4	7 ¼	9 ¼	11	12	13	16	17	18	21	25	30	33	38	49
4 ¼	7	8 ¾	10 ½	11 ¼	12 ¾	15	16	17	20	24	..	..	..	..
4 ½	6 ½	8 ¼	10	10 ¾	12	14	15	16	19	23	..	..	..	..
4 ¾	6 ¼	8	9 ¼	10	11 ½	13 ¾	14 ¾	15 ¾	18	22	..	..	..	..
5	6	7 ½	9	9 ¾	11	13	14	15	17	21	..	..	..	..
5 ¼	5 ¾	7 ¼	8 ½	9 ¼	10 ½	12 ½	13 ½	14 ½	16 ½	20	..	..	..	..
5 ½	5 ½	7	8 ¼	9	10	12	13	14	16	19	..	..	..	..
5 ¾	5 ¼	6 ¾	7 ¾	8 ½	9 ½	11 ½	12 ½	13 ½	15	18	..	..	..	..
6	5	6 ½	7 ½	8 ¼	9 ¼	11	12	13	14	17	..	..	..	..

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SOFT STEEL RIVETS

OVAL HEAD CARRIAGE RIVETS

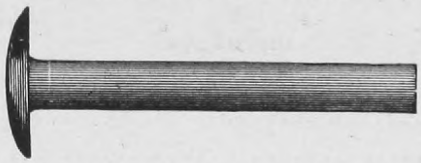


Stock Sizes and List Prices Per Pound.

Length, inches.....	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1⅜
3-16 inch....Per Pound,	$0.25	.22	.22	.21½	.21½	.21	....	.21	....
1-4 inch....Per Pound,	.23	.21	.21	.20½	.20½	.20	....	.20	....
5-16 inch....Per Pound,	....	.20½	.20½	.20	.20	.19½	.19½	.19½	.19½
3-8 inch....Per Pound,	....	.20	.20	.19½	.19½	.19	....	.19	....
Length, inches	1½	1¾	2	2¼	2½	2¾	3	3½	4
3-16 inch....Per Pound,	$0.21	.21	.21	.21	.21	.21	.21	.21	.21
1-4 inch....Per Pound,	.20	.20	.20	.20	.20	.20	.20	.20	.20
5-16 inch....Per Pound,	.19½	.19½	.19½	.19½	.19½	.19½	.19½	....	....
3-8 inch....Per Pound,	.19	.19	.19	.19	.19	....	.19	....	....

Package—For Discount, Package and List Rebates, see below.

WAGON BOX HEAD



Stock Sizes and List Prices Per Pound.

Wagon Box Head Rivets

Length, inches	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3	3½	4
3-16 inch.....Per Pound,	$0.21½	.21	.21	.21	.21	.21	.21	.21	.21	.21	....	....
1-4 inch.....Per Pound,	.20½	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20

Package—For Discount, Package and List Rebates, see below.

COUNTERSUNK HEAD RIVETS

1 inch—No. 6.

Stock Sizes and List Price Per Pound.

Length, inches	½	⅝	¾	⅞	1
No. 6 Wire Gauge.....Per Pound,	$0.22	.22	.21½	.21½	.21

DISCOUNTS.

On 5 and 10 Pound Lots..... .....%

On 25 and 50 Pound Lots..... .....%

On Full Kegs of 100 Pounds..... .....%

List Rebates.—For 25 and 50 lb. lots deduct 2 cents per pound from list prices.

For 100 lb. kegs deduct 4 cents per pound from list prices.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

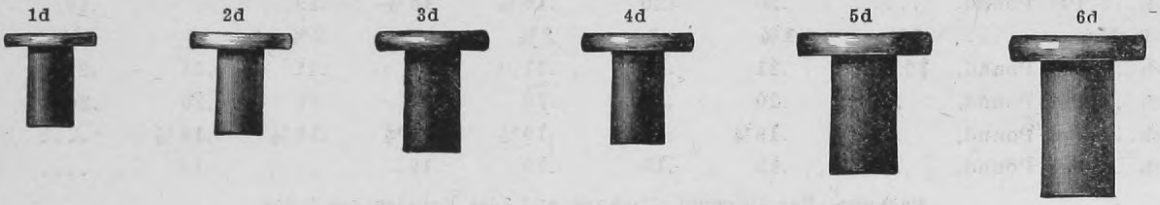
FLAT HEAD RIVETS

Stock Sizes and List Prices Per Pound.

Length, inches	¾	⅞	1	1¼	1½
3-8 inch .....Per Pound,	$0.19½	.19½	.19	.19	.19

Package—For Discount, Package and List Rebates, see below.

COOPERS' RIVETS



List of January 8, 1904. Price Per Pound.

Sizes	1d	2d	3d	4d	5d	6d
Per Pound	$0.21	.20½	.20	.20	.20	.20

DISCOUNTS.

On 5 and 10 Pound Lots..... .....%

On 25 and 50 Pound Lots..... .....%

On Full Kegs of 100 Pounds..... .....%

List Rebates.—For 25 and 50 lb. lots deduct 2 cents per pound from list prices.

For 100 lb. kegs deduct 4 cents per pound from list prices.

CONE HEAD

BOILER AND STRUCTURAL RIVETS

BUTTON HEAD

Cone Head Boiler Rivets

In 100 Pound Kegs Only.

Base Price...Per 100 Pounds, $.....	
½ x ⅞ and 1 inch...Advance,	$1.00
½ x 1⅛ to 1¾ inch.....	.75
½ x 2 inch	.50
⅝ x 1 inch	.65
⅝ x 1⅛ to 1¾ inch.....	.40
⅝ x 2 to 4 inch.....	.15
¾ x 1¼ to 1¾ inch.....	.25
¾ x 2 to 4½ inch.....	Base
⅞ x 1¾ inch	.25
⅞ x 2 to 5 inch.....	Base
⅞ x 6 inch	.25
1 x3 to 5 inch.....	Base
1 x6 inch	.25

Button Head Structural Rivets

In 100 Pound Kegs Only.

Base Price...Per 100 Pounds, $.....	
½ x 1 inch .....Advance,	$1.00
½ x 1¼ to 1¾ inch.....	.75
½ x 2 to 3 inch.....	.50
⅝ x 1 inch	.65
⅝ x 1¼ to 1¾ inch.....	.40
⅝ x 2 to 3 inch.....	.15
¾ x 1 inch	.50
¾ x 1¼ to 1¾ inch.....	.25
¾ x 2 to 5 inch.....	Base

Stock Sizes of Cone Head Boiler Rivets.

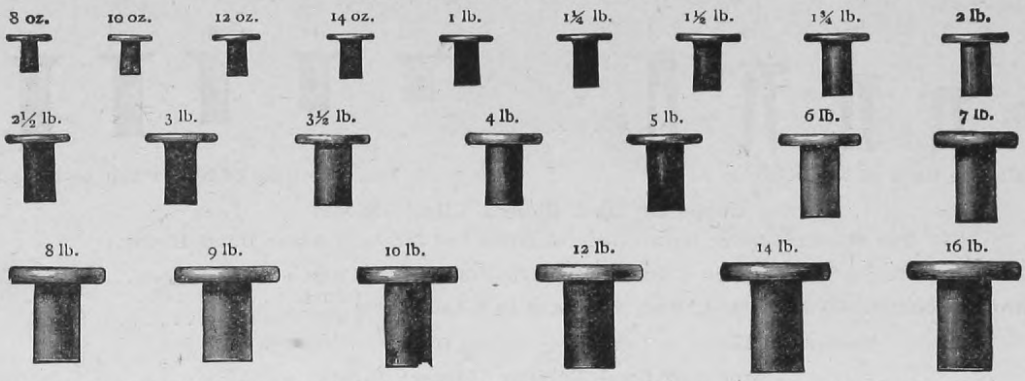
½ x.....								⅞	1	1⅛	1¼	1⅜	1½	1¾	and	2	inches
⅝ x.....		1	1⅛	1¼	1⅜	1½	1⅝	1¾	2	2¼	2½	2¾	3	3½	and	4	inches
¾ x.	1¼	1⅜	1½	1⅝	1¾	2	2⅛	2¼	2⅜	2½	2¾	3	3¼	3½	3¾	4	4¼ and 4½	inches
⅞ x.....					1¾	2	2¼	2½	2¾	3	3¼	3½	4	4½	5	and	6	inches
1 x.....											3	3½	4	4½	5	and	6	inches

Stock Sizes of Button Head Structural Rivets.

½ x				1	1¼	1½	1¾	2	2¼	2½	2¾ and 3	inches
⅝ x				1	1¼	1½	1¾	2	2¼	2½	2¾ and 3	inches
¾ x			1	1¼	1½	1¾	2	2¼	2½	2¾	3 and 3½	inches

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TINNERS' RIVETS



Manufacturers' Standard List on Tinners' Flat Head Iron Rivets, Adopted March 19, 1913.

1,000 in a Package

Sizes	8-oz.	10 oz.	12 oz.	14 oz.	1 lb.	1¼ lb.	1½ lb.	1¾ lb.	2 lb.	2½ lb.	3 lb.
Black, Per 1000	$0.22	.24	.26	.28	.29	.32	.37	.41	.44	.56	.62
Tinned, Per 1000	.31	.35	.39	.43	.47	.54	.64	.72	.79	1.00	1.15

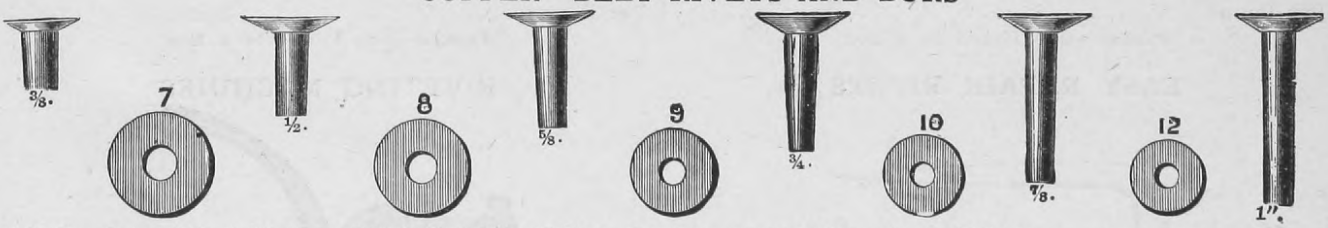
Sizes	3½ lb.	4 lb.	5 lb.	6 lb.	7 lb.	8 lb.	9 lb.	10 lb.	12 lb.	14 lb.	16 lb.
Black, Per 1000	$0.72	.79	1.00	1.12	1.31	1.50	1.68	1.77	2.06	2.40	2.77
Tinned, Per 1000	1.34	1.49	1.88	2.17	2.54	2.90	3.26	3.52	4.16	4.85	5.57

In 100 Pound Kegs

Sizes	8 oz.	10 oz.	12 oz.	14 oz.	1 lb.	1¼ lb.	1½ lb.	1¾ lb.	2 lb.	2½ lb.	3 lb.
Length, Inch	5/32	11/64	3/16	3/16	13/64	7/32	15/64	1/4	17/64	9/32	5/16
Black.....Per Pound,	$0.38	.34	.31	.29	.26	.23	.22	.21	.20	.20	.19

Sizes	3½ lb.	4 lb.	5 lb.	6 lb.	7 lb.	8 lb.	9 lb.	10 lb.	12 lb.	14 lb.	16 lb.
Length, Inch	21/64	11/32	3/8	25/64	13/32	7/16	29/64	15/32	½	33/64	17/32
Black.....Per Pound,	$0.19	.18	.18	.17	.17	.17	.17	.16	.15½	.15½	.15½

"COPPER" BELT RIVETS AND BURS



Full Size Cuts of No. 8 Rivets and Full Size Cuts of Burs, showing corresponding sizes of Rivets.

Manufacturers' Standard List.

Uniform Lengths—In One Pound Boxes

No. 7—3/8, 1/2, 5/8, 3/4, 7/8 or 1 in.....Per lb., $0.49
No. 8—3/8, 1/2, 5/8, 3/4, 7/8 or 1 in.....Per lb., .50
No. 9—3/8, 1/2, 5/8, 3/4, 7/8 or 1 in.....Per lb., .52
No. 10—3/8, 1/2, 5/8, 3/4, 7/8 or 1 in.....Per lb., $0.54
No. 12—1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8 or 1 in..Per lb., .58

Uniform Lengths—In Half Pound Boxes

No. 9½—Size 9, 3/8, 1/2, 5/8, 3/4, 7/8 or 1 in.....Per lb., $0.55

Assorted Lengths—In Half and Quarter Pound Boxes

No. 80—Size 8, in ½ lb. Boxes, 3/8 to 3/4 in. Per lb., $0.56
No. 90—Size 9, in ½ lb. Boxes, 3/8 to 3/4 in. Per lb., .58
No. 100—Size 10, in ½ lb. Bxs., 3/8 to 3/4 in. Per lb., $0.60
No. 090—Size 9, in ¼ lb. Bxs., 3/8 to 3/4 in. Per lb., .60

"COPPER" BELT RIVETS ONLY

Copper Belt Rivets Only, **Uniform** Lengths....
No. 77—Size 7, in 1 lb. Boxes, ½ in.....Per lb., $0.49
No. 88—Size 8, in 1 lb. Boxes, ½, 5/8, 3/4 or 1 in....Per lb., .50

COPPERED "IRON" BELT RIVETS AND BURS

Uniform Lengths—In One Pound Boxes

No. 09—Size 9, 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1⅛ in.....Per lb., $0.37

Assorted Lengths—In Half and Quarter Pound Boxes

No. 18—Size 8, in ½ lb. Boxes, 3/8 to 3/4 in. Per lb., $0.44
No. 19—Size 9, in ½ lb. Boxes, 3/8 to 3/4 in. Per lb., .45
No. 019—Size 9, in ¼ lb. Bxs., 3/8 to 3/4 in. Per lb., $0.49

Number of Copper Belt Rivets and Burs in One Pound

Length, inches	1/4	3/8	1/2	5/8	3/4	7/8	1	1¼	1½	Burs
No. 7	211	171	150	132	110	97	91	72	63	368
No. 8	284	227	178	156	136	116	100	88	71	417
No. 9	365	276	228	184	169	156	133	113	99	620
No. 10	411	336	275	223	206	180	162	...	...	820

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SLOTTED CLINCH RIVETS

Full Size Cuts of No. 9—Style A.

TUBULAR HARNESS RIVETS

Full Size Cuts of Nos. 1 and 2—Style R.

Coppered Steel Slotted Clinch Rivets

The Standard Rivet for all General Work and for Auto Brake Band Lining.

No. 9A—Assorted 4/16 to 8/16 inch, 100 in a Paper Box, 12 Boxes in a Carton.....Per Carton, $0.60

No. 09A—Uniform Lengths, 50 in a Paper Box, 12 Boxes in a Carton

Inch	4/16	6/16	8/16
Per Carton	$0.48	.52	.52

Packed—12 Boxes in a Carton—A Rivet Holder enclosed in each box.

Japanned Steel Tubular Harness Rivets

No. 1—Assorted 3/16 to 8/16 inch, **50** in a Paper Box, 12 Boxes in a Carton.....Per Carton, $0.45

No. 2—Assorted 3/16 to 8/16 inch, **100** in a Paper Box, 12 Boxes in a Carton.....Per Carton, .80

No. 01—Uniform Lengths, 50 in a Paper Box, 12 Boxes in a Carton

Inch	4/16	6/16	8/16
Per Carton	$0.68	.72	.86

Packed—12 Boxes in a Carton—A Rivet Holder enclosed in each box.

Note.—Special Prices on above rivets in Bulk, Nickel or Copper Plated and Japanned finish furnished on application.

IRON RIVETING BURS

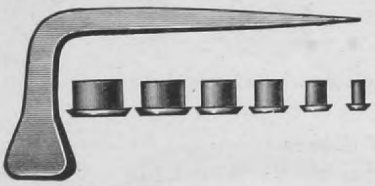
No. 9. No. 8. No. 7. 3/16 inch. 1/4 inch.

Tinned				Black		
Nos.	7	8	9	Inch	3-16	1-4
Per Pound	$.....	.....	.....	Per Pound	$.....	.....

Packed—One Pound in a Box.

Packed—One Pound in a Box.

EASY REPAIR RIVETS



For mending holes in granite, iron, tinware, etc. Made from a composition of metals specially prepared for this purpose. No heating required. Put up 20 in a box, assorted, six sizes, with Reaming Tool.

Easy Repair Rivets.....Per Dozen Boxes, $1.60

Packed—One Dozen Boxes in a Carton.

RIVETING MACHINES

No. 500.

Simple in construction and operation. Cast Iron, with Steel Plunger. Japanned, with Gold Bronzed Trimmings.

No. 500—Hub Riveting Machines.....Per Dozen, $7.50

Packed—In Open Stock.

No. 1.

Upper Lever adjusts machine, Lower Lever sets rivet.

No. 1—Monarch Riveting Machines...Per Dozen, $9.50

Packed—Quarter Dozen in a Box.

RIVETING MACHINES

Cast Iron, Japanned, with Steel Plungers; sets both Tubular and Split Rivets perfectly.

Gem.

Very powerful, adjusts to all lengths automatically.

Gem Riveting Machines.....Per Dozen, $12.50

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POINTED BELT HOOKS

No. 9.

No. 10.

No. 11.

No. 12.

No. 13.

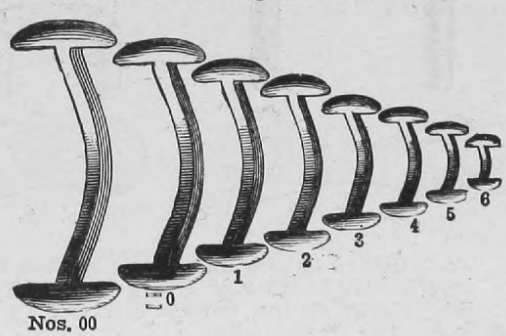
Bright Steel Pointed Belt Hooks

Nos.	4	5	6	7	8	9	10	11	12	13	14
Inches	2⅜	2⅛	1¾	1½	1⅜	1⅛	1	15/16	⅞	9/16	¾
Per 100	$1.40	1.10	.85	.60	.50	.40	.35	.30	.28	.26	.24

Packed—Nos. 4 and 5, 100; 6 to 8, 200; 9 and 10, 300; 11 to 14, 500 in a Box.

IMPROVED BELT STUDS

Blake Genuine Improved Belt Studs



Nos. 00

Nos.	00	0	1	2
Per 100	$2.50	2.00	165	1.25
Nos.	3	4	5	6
Per 100	$0.90	.80	.70	.60

Packed—100 in a Box, with Directions on the Box.

JONES BELT HOOKS

No. 6.

No. 7.

No. 8.

No. 9.

Made of best Norway Iron. Beveled Points lie flat on Belt, clinch perfectly, prevent wear of Pulleys and jumping of Belt when passing over Pulleys.

Nos.	1	2	3	4	5	6	7	8	9	10
Inches	2¼	2	1⅞	1 11/16	1 9/16	1⅜	1 3/16	1	⅞	¾
Per 100	$3.00	2.00	1.60	1.40	1.10	.85	.60	.50	.40	.35

Packed—No. 1, 100; Nos. 2 to 4, 200; Nos. 5 to 7, 250; Nos. 8 to 10, 500 in a Box.

CLIMAX BELT HOOKS

Nos. 1 to 3.

A perfect fastener for all kinds of belts, so constructed that they grasp the belt transversely, insuring a very strong hold without cutting the belt or pulling out.

No. 1—For all widths of 3 and 4 Ply Belts.... Per 100, $2.00

No. 2—For all widths of 5 and 6 Ply Belts.... Per 100, 2.50

No. 3—For all widths of 7 and 8 Ply Belts.... Per 100, 3.00

Packed—100 in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LX BELT HOOKS

No. B14.

No. B15.

No. B16.

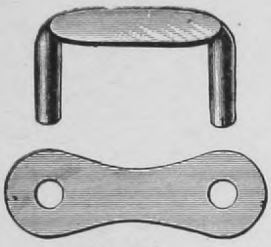
No. B17.

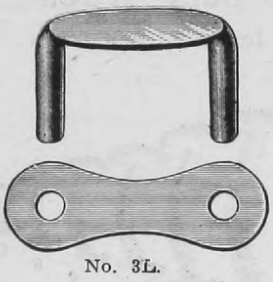
Style B, for Round Belts. Especially adapted for sewing machine belts.

Nos.	B14	B15	B16	B17	B18
For Belts, inch	3/8	5/16 or 3/8	1/4 or 5/16	7/32 or 1/4	5/16
Per 1000	$3.00	2.50	2.25	2.00	2.00

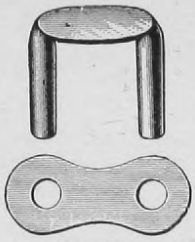
Packed—Nos. B14 to B17, 500; No. B18, 1,000 in a Box.

SMITH'S PATENT BELT FASTENERS


No. 3S.


No. 3L.

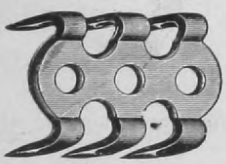
No. 4S.

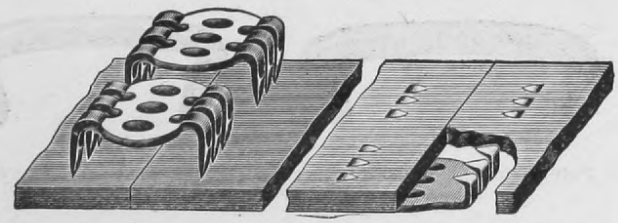

No. 4L.

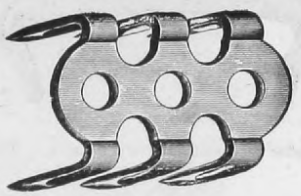
No. 00 —With Rivets 3/4 inch long. For Stitched Canvas and widest Rubber Belts.....Per 100, $2.50
No. 1 —With Rivets 1/2 inch long. For Double Leather or Heavy Rubber Belts.....Per 100, 2.00
No. 2 —With Rivets 1/2 inch long. For Woven Cotton Belts only.....Per 100, 1.75
No. 3S —Short, with Rivets 1/2 inch long. For Thick Belts.....Per 100, 1.50
No. 3L —Long, with Rivets 3/4 inch long. For very Thick Belts.....Per 100, 1.50
No. 3EL—Extra Long, with Rivets 7/16 inch long. For thin Rubber or 4-Ply Rubber Belts.....Per 100, 1.50
No. 4S —Short, with Rivets 1/4 inch long. For Single Leather Belts.....Per 100, 1.25
No. 4L —Long, with Rivets 1/2 inch long. For double Leather Belts.....Per 100, 1.25

Packed—No. 00, 50; Other Nos., 100 in a Box.

20TH CENTURY STEEL BELT LACING


No. A1.



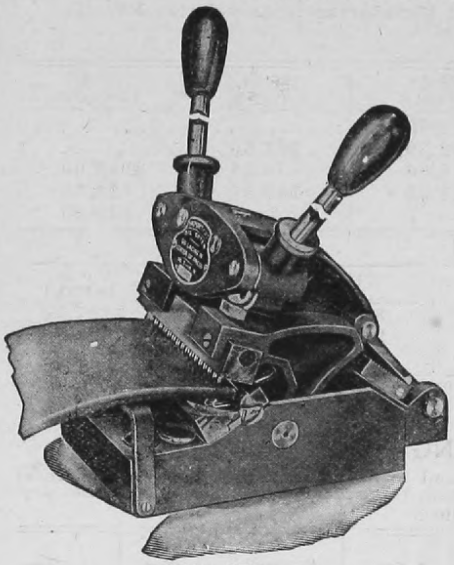

No. 1.

No. A1 —5/8 x 15/16, 1 1/4, 1 1/2 and 1 3/4 inches, for Light Single Leather Belts.....Per Box, $1.25
No. 1 —3/4 x 13/16, 1 7/8, 2 1/4 and 2 3/4 inches, for Medium Heavy Single Leather Belts.....Per Box, 1.50
No. 2 —7/8 x 17/16, 2, 2 1/2 and 2 7/8 inches, for Extra Heavy and Wide Single, also Light Double Belts.....Per Box, 2.00
No. 3 —1x17/16, 2, 2 1/2 and 2 7/8 inches, for Double Leather Belt.....Per Box, 2.50
No. 4—1 11/32x17/16 inches, **3 points only**, for Heavy Double Leather Belts.....Per Box, 3.00
No. 10 —5/8 x15/16, 1 1/4, 1 1/2 and 1 3/4 inches, for 2 Ply Rubber or Cotton Belts.....Per Box, 1.10
No. 11 —7/8 x17/16, 2, 2 1/2 and 2 7/8 inches, for 3 Ply Rubber or Cotton Belts.....Per Box, 1.65
No. 12 —1x1 3/8, 2, 2 1/2 and 2 7/8 inches, for 4 Ply Rubber or Cotton Belts.....Per Box, 2.20
No. 12S—Special 1 3/8 x1 1/2 inches, **3 points only**, for Extra Heavy 4 Ply Rubber or Cotton Belts.....Per Box, 2.50
No. 13 —1 1/2 x17/16 inches, **3 points only**, for 5 Ply Rubber or Cotton Belts.....Per Box, 2.75
No. 14 —1 3/4 x1 1/2 inches, **3 points only**, for 6 to 7 Ply Rubber or Cotton Belts.....Per Box, 3.30
No. 15 —2x1 7/8 inches, **3 points only**, for 8 to 10 Ply Rubber or Cotton Belts.....Per Box, 3.85
No. 17 —2 1/2 x2 3/8 inches, **3 points only**, for all kinds of Belts, 5/8 to 3/4 inch thick.....Per Box, 4.95
No. 19 —Jumbo, 3x3 inches, **3 points only**, for Largest and Heaviest Belts, 3/4 to 1 inch thick.....Per Box, 6.05

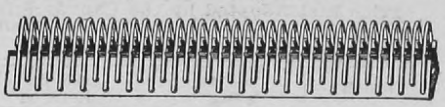
Packed—Put up in boxes containing a sufficient quantity to lace 100 inches of belt. Nos. A1, 1, 2, 3, 10, 11 and 12 are packed assorted lengths in a box, while Nos. 4, 12S, 13, 14, 15, 17 and 19 are packed one size only in a box.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

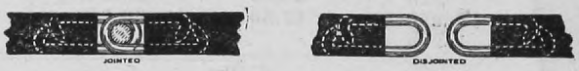
CLIPPER BELT LACER AND CARDED HOOKS



No. 3T.



Section of Carded Hooks.
Ready to slip into tool.



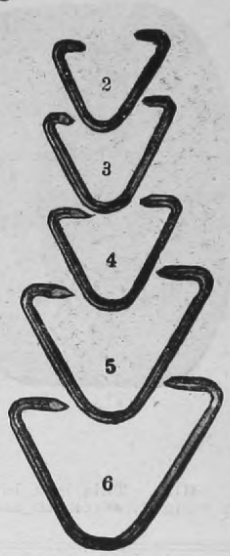
Twisted Rawhide or Fibro Waterproof Pins.
12 Inches Long.

Can be cut to suit requirements. Put up in bundles of 24 12 inch Pins assorted as follows:

Assorted { 3 No. 13 | 5 No. 12 | 6 No. 11 | 5 No. 10 | 3 No. 9 | 2 No. 8

All orders filled as above, unless otherwise specified.

Any of the following sizes furnished separately if desired.



Actual Size of Hooks.

No. 3T—6 inch Tool Complete, no Hooks; Weight, 20 pounds	Each,	$20.00
No. 2H—Hooks, Carded, for Thin Belts over small sized pulleys	Per 1,000,	1.00
No. 3H—Hooks, Carded, Special for Thin Belts over Medium sized pulleys	Per 1,000,	1.25
No. 4H—Hooks, Carded, for Belts not over ¼ inch thick	Per 1,000,	1.25
No. 5H—Hooks, Carded, for Belts not over ⅜ inch thick	Per 1,000,	1.50
No. 6H—Hooks, Carded, for Belts not over 7/16 inch thick	Per 1,000,	1.75
No. 13R—Rawhide Pins, 6/64 inch, for No. 2 Hooks	Per Bundle of 24,	.70
No. 12R—Rawhide Pins, 7/64 inch, for No. 3 Hooks	Per Bundle of 24,	.70
No. 11R—Rawhide Pins, 8/64 inch, for No. 4 Hooks	Per Bundle of 24,	.70
No. 10R—Rawhide Pins, 9/64 inch, for No. 5 Hooks	Per Bundle of 24,	.80
No. 9R—Rawhide Pins, 10/64 inch, for No. 6 Hooks	Per Bundle of 24,	.90
No. 8R—Rawhide Pins, 11/64 inch, for No. 6 Hooks	Per Bundle of 24,	1.00
No. 7R—Rawhide Pins, 12/64 inch, for Heavy Belts	Per Bundle of 24,	1.20
No. 5R—Rawhide Pins, 14/64 inch, for Extra Heavy Belts	Per Bundle of 24,	1.60
No. AR—Assorted Sizes of Rawhide Pins; Nos. 8 to 13 inclusive	Per Bundle of 24,	.75
No. 13F—Fibro Waterproof Pins, 6/64 inch, for No. 2 Hooks	Per Bundle of 24,	.35
No. 12F—Fibro Waterproof Pins, 7/64 inch, for No. 3 Hooks	Per Bundle of 24,	.35
No. 11F—Fibro Waterproof Pins, 8/64 inch, for No. 4 Hooks	Per Bundle of 24,	.35
No. 10F—Fibro Waterproof Pins, 9/64 inch, for No. 5 Hooks	Per Bundle of 24,	.40
No. 9F—Fibro Waterproof Pins, 10/64 inch, for No. 6 Hooks	Per Bundle of 24,	.45
No. 8F—Fibro Waterproof Pins, 11/64 inch, for No. 6 Hooks	Per Bundle of 24,	.50
No. 7F—Fibro Waterproof Pins, 12/64 inch, for Heavy Belts	Per Bundle of 24,	.60
No. 5F—Fibro Waterproof Pins, 14/64 inch, for Extra Heavy Belts	Per Bundle of 24,	.70
No. AF—Assorted Sizes of Fibro Waterproof Pins; Nos. 8 to 13 inclusive	Per Bundle of 24,	.40

"Fibro" Waterproof pins (being brittle) are not practical on quarter-turn belts. Belts shifted quickly from tight to loose pulley by shifter. Belts running on cone pulleys or belts that are liable to climb a flange.

Nos. 0 to 2.

WIRE BELT LACING

For lacing light, medium and heavy machine belts; makes a smooth joint no thicker than any other part of the belt.

No. 0—For Belts 1 to 2½ inches wide	Per 100 Feet,	$2.00
No. 1—For Single Belts 5 inches and under	Per 100 Feet,	2.00
No. 2—For Single Belts wider than 5 in. and Double Belts under 8 in.	Per 100 Feet,	2.00
No. 3—For Double Belts over 8 inches wide	Per 100 Feet,	2.00

Packed—Fifty Feet in a Package.

BELT COUPLINGS

LX Improved Belt Couplings for Round Belts or Cords.

Diameter, inch	1/8	3/16	¼	9/32	
Per Dozen	$3.00	2.50	2.00	2.50	
Diameter, inch	5/16	⅜	7/16	½	9/16
Per Dozen	$2.50	3.00	3.50	4.00	5.00

Packed—One Dozen in a Box.

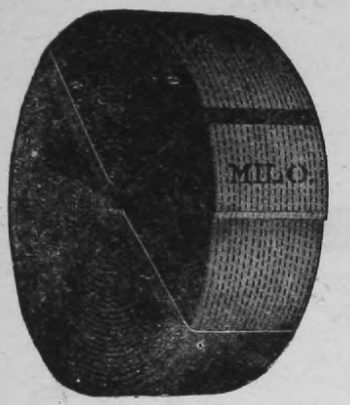
LACE CUTTERS

Will cut Lacings from 3/16 to ¾ inch in width of any thickness. Japanned Iron Body, well tempered Blade.

Empire Lace Cutters.....Per Dozen, $6.00

Packed—One-twelfth Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN



ENDLESS CANVAS THRESHER BELTS

Grain King—Same quality as Milo described below.

Price List Adopted by the Canvas Stitched Belt Manufacturers Association Effective October 1st, 1917.

4 Ply

Width	50 ft. Length	75 ft. Length	100 ft. Length	125 ft. Length	150 ft. Length
5 inch	$27.50	$40.50	$53.00	.....	.....
6 inch	32.50	47.50	62.50	$77.50	.....
7 inch	38.00	55.50	73.00	90.50	$108.00
8 inch	43.50	63.50	83.50	103.50	123.50
9 inch	.....	.....	.....	.....	139.00

5 Ply

Width	125 ft. Length	150 ft. Length	160 ft. Length
7 inch	$113.50	$135.50	.....
8 inch	129.00	154.00	$164.00
9 inch	.....	174.00	185.50

6 Ply

Width	150 ft. Length	160 ft. Length
8 inch	$185.00	$197.00
9 inch	208.00	221.50

Note—In ordering endless thresher belts it must be understood the belts measure three feet shorter than lengths specified on endless belt list above. The above sizes are standard, all other sizes must be made to order.

RED STITCHED CANVAS BELTING

Milo. This is a high grade stitched canvas belt, guaranteed to run straight and to be of even thickness and uniform in weight, strength and service. Made of tightly woven heavy duck with all stretch removed before it leaves the factory.

List Price Per Foot—Effective October 1st, 1912.

Width Inches	4-Ply	5-Ply	6-Ply	8-Ply	10-Ply	Width Inches	4-Ply	5-Ply	6-Ply	8-Ply	10-Ply
1	$0.12	.....	.....	.....	.....	15	$1.65	$2.06	$2.48	$3.30	$4.13
1½	.18	.....	.....	.....	.....	16	1.76	2.20	2.64	3.52	4.40
2	.24	$0.30	$0.36	.....	.....	18	1.98	2.48	2.97	3.96	4.95
2½	.30	.38	.45	.....	.....	20	2.20	2.75	3.30	4.40	5.50
3	.35	.44	.53	.....	.....	22	2.42	3.03	3.63	4.84	6.05
3½	.39	.49	.59	.....	.....	24	2.64	3.30	3.96	5.28	6.60
4	.43	.54	.65	$0.86	.....	26	3.12	3.90	4.68	6.24	7.80
4½	.47	.59	.71	.94	.....	28	3.36	4.20	5.04	6.72	8.40
5	.51	.64	.77	1.02	.....	30	3.60	4.50	5.40	7.20	9.00
6	.60	.75	.90	1.20	.....	32	3.84	4.80	5.76	7.68	9.60
7	.70	.88	1.05	1.40	.....	34	4.08	5.10	6.12	8.16	10.20
8	.80	1.00	1.20	1.60	.....	36	4.32	5.40	6.48	8.64	10.80
9	.90	1.13	1.35	1.80	.....	38	4.94	6.18	7.41	9.88	12.35
10	1.00	1.25	1.50	2.00	.....	40	5.20	6.50	7.80	10.40	13.00
11	1.10	1.38	1.65	2.20	.....	42	5.46	6.83	8.19	10.92	13.65
12	1.20	1.50	1.80	2.40	$3.00	44	5.72	7.15	8.58	11.44	14.30
13	1.43	1.79	2.15	2.86	3.58	46	5.98	7.48	8.97	11.96	14.95
14	1.54	1.93	2.31	3.08	3.85	48	6.24	7.80	9.36	12.48	15.60

Milo—Adapted to work in Brick Yards, Quarries and all general out-door service.....Discount, ...%

Junior—Adapted for light farm service.....Discount, ...%

ALFALFA BELTING

Alfalfa is a solid woven fabric Belt. It is unlike stitched canvas, having no stitches to come apart. Does not deteriorate with age, has a greater tensile strength than leather and costs less than cheap rubber. Alfalfa Belting is green in color. The treatment to produce this color is not an oil paint but a special mixture the component parts of which serve the purpose of creating a face or smooth surface which renders the belt less liable to slip and consequently adds to its transmitting power.

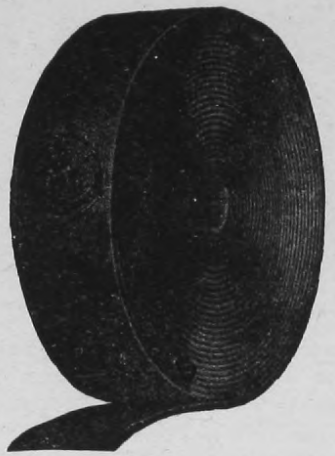
List Price Per Foot—Effective January 15th, 1917.

Width Inches	3-Ply	4-Ply	5-Ply	6-Ply	8-Ply	10-Ply	Width Inches	4-Ply	5-Ply	6-Ply	8-Ply	10-Ply
1	$0.09	$0.14	....	....	....	....	16	$1.35	$1.72	$2.10	$2.93	$3.68
1½	.12	.17	....	....	....	....	18	1.50	1.92	2.33	3.23	4.05
2	.15	.20	$0.32	$0.45	....	....	20	1.73	2.18	2.63	3.53	4.43
2½	.18	.23	.35	.48	....	....	22	2.03	2.48	2.93	3.90	4.88
3	.22	.27	.39	.51	$0.62	....	24	2.33	2.78	3.24	4.28	5.40
3½	.25	.30	.44	.54	.68	....	26	2.63	3.00	3.54	4.65	5.85
4	.29	.35	.47	.57	.75	....	28	2.85	3.23	3.90	5.03	6.30
4½	.32	.39	.50	.62	.83	....	30	3.15	3.60	4.28	5.40	6.75
5	.34	.42	.54	.66	.87	$1.20	32	3.38	3.90	4.50	5.78	7.20
5½	.37	.45	.57	.71	.93	1.28	34	3.60	4.20	4.88	6.15	7.65
6	.40	.50	.62	.75	.98	1.43	36	3.75	4.50	5.25	6.53	8.10
7	....	.57	.72	.87	1.13	1.65	38	3.98	4.80	5.55	6.90	8.55
8	....	.66	.83	.98	1.28	1.80	40	4.20	5.10	5.85	7.28	9.00
9	....	.75	.92	1.10	1.50	2.10	42	4.35	5.40	6.08	7.65	9.45
10	....	.84	1.04	1.23	1.73	2.40	44	4.50	5.63	6.30	8.18	9.90
12	....	.99	1.25	1.50	2.03	2.70	48	4.80	6.00	7.20	8.70	10.80
14	....	1.17	1.47	1.80	2.40	3.30	....	....	....	....	....	....

Alfalfa Belting.....Discount, ...%

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RUBBER BELTING



Bull Dog Friction Surface Rubber Belting is the best we have to offer. It is made with one idea in view: to supply the **BEST BELT MADE** where **quality** is the first consideration. Its reputation is based on its record which will bear the strictest investigation. No drive too hard. No service too severe.

.....Discount, ...%

Perfection Friction Surface **High Speed** Rubber Belting. The best belt made where small pulleys are used, as motors, dynamos, woodworking machinery, fans, high speed pumps, etc. Does not stretch, grips pulleys firmly and will take the place of leather in most all cases.....Discount, ...%

Senate Friction Surface Rubber Belting. A strong and serviceable belt for all ordinarily difficult service. Made from heavy duck, and with a high grade friction. Adapted for all general factory service.....Discount, ...%

Bison Friction Surface Rubber Belting. A good all-around general purpose belt. Made with medium weight of duck and with good friction. Adapted to all ordinary service .....Discount, ...%

Vigo Friction Surface Rubber Belting. A cheap belt, manufactured for competitive purposes. Adapted for light agricultural service. A good value for the money, but we do not recommend it except for light service....Discount .....%

List Prices Per Foot on Rubber Belting

Effective May 1, 1910.

Width Inches	2-ply	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
1½	$0.13	$0.15	$0.19	$0.23	.....	.....	.....
2	.18	.20	.25	.31	$0.37	.....	.....
2½	.22	.25	.31	.38	.46	.....	.....
3	.26	.30	.37	.45	.55	.....	.....
3½	.30	.35	.43	.53	.65	.....	.....
4	.34	.40	.50	.61	.75	$0.86	.....
4½	.38	.45	.55	.69	.84	.96	.....
5	.42	.50	.61	.76	.91	1.06	.....
6	.50	.60	.72	.89	1.08	1.25	$1.44
7	.59	.70	.84	1.04	1.25	1.46	1.68
8	.67	.80	.96	1.19	1.44	1.68	1.92
9	.76	.90	1.07	1.34	1.60	1.88	2.16
10	.84	1.00	1.20	1.49	1.77	2.09	2.40
11	.92	1.10	1.32	1.63	1.96	2.29	2.62
12	1.00	1.20	1.43	1.78	2.15	2.50	2.85
13	1.10	1.30	1.56	1.95	2.34	2.73	3.12
14	1.19	1.40	1.69	2.11	2.54	2.96	3.39
15	1.28	1.52	1.83	2.28	2.74	3.19	3.65
16	1.37	1.65	1.96	2.44	2.94	3.42	3.92
18	1.55	1.87	2.22	2.77	3.33	3.88	4.44
20	1.74	2.09	2.49	3.10	3.73	4.35	4.97
22	1.94	2.33	2.77	3.47	4.16	4.85	5.54
24	2.16	2.60	3.08	3.85	4.62	5.39	6.16
26	2.38	2.86	3.39	4.23	5.08	5.93	6.78
28	2.60	3.12	3.70	4.62	5.54	6.47	7.39
30	2.82	3.39	4.00	5.00	6.00	7.00	8.00
32	3.04	3.65	4.31	5.39	6.47	7.55	8.62
34	3.26	3.92	4.62	5.78	6.93	8.09	9.24
36	3.48	4.18	4.93	6.16	7.39	8.62	9.86
38	3.70	4.44	5.24	6.55	7.85	9.16	10.47
40	3.92	4.71	5.55	6.93	8.32	9.70	11.09
42	4.14	4.97	5.85	7.32	8.78	10.24	11.70
44	4.36	5.24	6.16	7.70	9.24	10.78	12.32
46	4.58	5.50	6.47	8.08	9.70	11.32	12.94
48	4.80	5.76	6.73	8.47	10.16	11.86	13.55
50	5.02	6.03	7.08	8.85	10.63	12.40	14.17
52	5.22	6.29	7.39	9.24	11.09	12.94	14.78
54	5.46	6.56	7.70	9.63	11.55	13.48	15.40
56	5.68	6.82	8.01	10.01	12.01	14.01	16.02

Note.—On Endless Rubber Belts 12 inch and under charge 3 feet extra. Belts over 12 inches in width charge 3 times the width of the belt.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BUHL LEATHER BELTING

How to Order Belting

Important—In ordering belting specify as below.

1—State the Exact Length.

2—**Grade.** State whether Heart, GraKnight, GraKnight Dynamo, Extra Short Lap, Pryzoak, Cylinder, Special Planer, Neptune or Spartan.

3—**Ply.** State whether Single, Double or Three-Ply.

4—**Width.** State the exact width.

5—**Ends.** State whether belt is to be shipped "Endless," or "Square Ends," or "and lap," or (what means the same thing as the last) "lap extra." State exact net distance around pulleys. Do not give length including lap, for we determine and allow proper additional length for the lap.

6—**Laps.** State if other than cemented lap is required. We recommend and guarantee laps cemented only.

7—**Finish.** State whether oil dressed or regular finish is required.

8—**Remarks.** For best results state conditions under which belt is to operate, when conditions are other than ordinary.

How to Secure the Correct Belt

The following questions are compiled to enable us to furnish the best belt for your conditions. It is imperative that we have this information if we are to furnish the most efficient belt.

1. What does the belt drive?
2. Distance center to center of shafts?
3. Diameter and width of driving pulley?
4. Diameter and width of driven pulley?
5. Revolutions per minute of receiving pulley?
6. Least and greatest horse-power the belt is expected to transmit?
7. What kind of drive? Is it horizontal, vertical or inclined? If inclined what angle to horizontal?
8. Is tight or driving side of belt top or bottom?
9. State if any special conditions exist, such as hand or automatic shipper, idler, flange pulleys, taper cone pulleys, step cone pulleys?
10. Is belt subject to heat, dampness, steam, oil, or acid fumes?
11. Was previous belt single or double, and what grade?
12. How were the ends fastened?
13. How long did it run?
14. If previous belt failed, what was its final condition as indicating reason for failure?

Part of the information may be readily shown by a rough sketch.

Leather Belting Price List

Adopted November 21, 1906.

Width Inches	Price per Lineal Foot Single	Double	Width Inches	Price per Lineal Foot Single	Double	Width Inches	Price per Lineal Foot Single	Double	Width Inches	Price per Lineal Foot Single	Double
½	$0.12	$0.24	4½	$1.08	$2.16	19	$4.56	$9.12	42	$10.08	$20.16
⅝	.15	.30	5	1.20	2.40	20	4.80	9.60	44	10.56	21.12
¾	.18	.36	5½	1.32	2.64	21	5.04	10.08	46	11.04	22.08
⅞	.21	.42	6	1.44	2.88	22	5.28	10.56	48	11.52	23.04
1	.24	.48	6½	1.56	3.12	23	5.52	11.04	50	12.00	24.00
1¼	.30	.60	7	1.68	3.36	24	5.76	11.52	52	12.48	24.96
1½	.36	.72	8	1.92	3.84	25	6.00	12.00	54	12.96	25.92
1¾	.42	.84	9	2.16	4.32	26	6.24	12.48	56	13.44	26.88
2	.48	.96	10	2.40	4.80	27	6.48	12.96	60	14.40	28.80
2¼	.54	1.08	11	2.64	5.28	28	6.72	13.44	64	15.36	30.72
2½	.60	1.20	12	2.88	5.76	29	6.96	13.92	68	16.32	32.64
2¾	.66	1.32	13	3.12	6.24	30	7.20	14.40	72	17.28	34.56
3	.72	1.44	14	3.36	6.72	32	7.68	15.36	76	18.24	36.48
3¼	.78	1.56	15	3.60	7.20	34	8.16	16.32	80	19.20	38.40
3½	.84	1.68	16	3.84	7.68	36	8.64	17.28	84	20.16	40.32
3¾	.90	1.80	17	4.08	8.16	38	9.12	18.24	.....	.....	.....
4	.96	1.92	18	4.32	8.64	40	9.60	19.20	.....	.....	.....

Note.—Three-ply Belting Three Times the List for Single Belting.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL LEATHER BELTING

Note.—On every ten feet of "Buhl" Heart, GraKnight and GraKnight Dynamo Belting appears the individual brand Trade Mark and the stamp "Guaranteed First Quality."

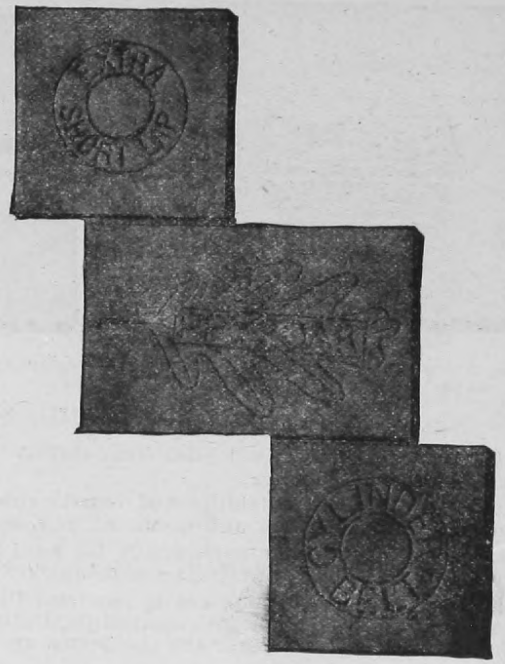
"Buhl" First Quality Brands

Heart, GraKnight and **GraKnight Dynamo** are all brands of strictly first quality belting cut from center stock of the choicest Oak Tanned leather. These three brands differ only in the weight and consequent thickness of the leather used in their construction..... %

"Buhl" Heart is first quality center stock belting made in all plies. Singles weigh from 16 to 18 ounces per square foot, doubles from 29 to 33 ounces per square foot, varying according to width. The many years of successful service of Heart Belting in thousands of plants bear testimony to the superior workmanship and high quality center stock entering into its construction. Wherever heavy belting is required, full dependence may be placed upon the "Heart Brand."..... %

"Buhl" GraKnight is First Quality center stock belting made in all plies. Singles weigh from 14 to 16 ounces per square foot and doubles from 26 to 29 ounces per square foot, varying according to width. The very name GraKnight is a sufficient guarantee that nothing but choice center stock enters into its makeup..... %

"Buhl" GraKnight Dynamo is First Quality center stock belting furnished principally in doubles. Singles weigh from 12 to 14 ounces per square foot and doubles from 22 to 26 ounces per square foot, varying according to width. GraKnight Dynamo Belting is constructed especially for use on high speed machinery, such as motors, fans, blowers, generators, etc. It is of uniform thickness, well balanced, and can be depended upon for long and efficient service. Discount..... %



Note.—On every ten feet of "Buhl" Extra Short Lap, Pryzoak and Cylinder Belting appears the individual Brand Trade Mark.

"Buhl" Second Quality Brands

Extra Short Lap and **Pryzoak** are what we term second quality brands of belting. They are cut from a good selection of side stock Oak Tanned leather. These two brands differ only in the weight of leather used in their construction.

"Buhl" Extra Short Lap is made in both singles and doubles, but not over 6″ in width. Singles weigh from 16 to 18 ounces per square foot and doubles from 29 to 33 ounces per square foot, varying according to width. Extra Short Lap Belting is used with great success under conditions where the work does not require strictly first quality belting.

Discount ..... %

"Buhl" Pryzoak is made in both singles and doubles, but not over 6″ in width. Singles weigh from 14 to 16 ounces per square foot and doubles from 26 to 29 ounces per square foot varying according to width.

Discount ..... %

"Buhl" Cylinder Belting is made from selected well stretched Oak Tanned shoulders. Although this brand is made in both singles and doubles, it is used principally in doubles. Cylinder Belting is carefully constructed and well adapted for light work. It is a very popular belting for agricultural purposes in general.

Discount ..... %

We Guarantee that the leather used in the construction of the foregoing brands of belting is Oak Tanned by the long-time process, and is absolutely free from any ingredients for quickening the process or increasing the weight; if any defects, either in material or workmanship, appear in our belting when used under proper mechanical conditions, we agree, if notified promptly, to replace or repair such defective parts without cost to the purchaser.

For List Prices on all the above Belting, see page 88.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL LEATHER BELTING

Note.—On every ten feet of Buhl Spartan, Neptune and Special Planer Belting appears the individual Brand Trade Mark and the stamp "Guaranteed First Quality."

BUHL SPARTAN BELTING

This belting is made in all plies from leather tanned particularly to withstand the effects of steam, water, oil, heat, and gas or acid fumes.

It possesses unusual pliability and tensile strength, thus enabling it to grip the pulley perfectly and transmit a maximum amount of power at a minimum of cost for operation.

Spartan Belting is made particularly for hard service—for use wherever the requirements are extremely exacting—for use under those conditions which quickly ruin ordinary belting.

It is especially adapted for use in Saw and Planing Mills, Wood Workng Plants, Paper and Pulp Mills, Iron and Steel Mills, Forging Plants, Cement Mills, Cotton and Woolen Mills, Bleacheries and Dye Houses, Tanneries, Canning Factories, and wherever the conditions are unusual and extremely severe.

Discount .....%

Buhl Spartan Guarantee

We guarantee that Buhl Spartan Belting will withstand to a greater extent than any other belting, exposure to either hot or cold air, water, steam, oil, gases or acid fumes.

That owing to its unusual pliability and very high coefficient of friction, it will transmit power with less tension on the bearings, thus making a material reduction in the load due to friction;

That under proper mechanical conditions it will transmit power with greater economy than any other material in use;

That it will, when used under the same conditions, outwear any other belting material, saving loss of time and cost of replacement;

If any defects, either in material or workmanship, appear in Buhl Spartan Belting when used under proper mechanical conditions, we agree, if notified promptly, to replace or repair such defective parts without cost to the purchaser.

WATERPROOF LEATHER BELTING

Buhl Neptune

The **Pioneer** Waterproof Leather Belting, brought out in 1902. It is strictly first quality belting, made in all plies and cut from center stock of the choicest Oak Tanned Leather. It is put together with our Neptune brand of cement which is absolutely impervious to water.

Buhl Neptune Belting is made for use wherever dampness or water is present, for exposure to rain, snow and other climatic conditions. It has been wholly submerged in water for hours and days at a time—frozen solid in ice—it has always stood the test. While Buhl Neptune Belting is made primarily for use in damp and wet places, it has proved very efficient for use on such difficult drives as are found on high speed woodworking machinery.

Discount .....%

Buhl Special Planer

A Special Waterproof Belt, strictly first quality, and cut from center stock of the choicest Oak Tanned leather. It is extra heavy in weight, averaging 19 to 24 ounces per square foot, made in single thickness only, and not over 4" in width. It is designed particularly for heavy work with high speed and small pulleys, such as side and top heads of planers, emery wheel drives, linter drives for cottonseed oil mills, gin drives for cotton gins, flour mill drives, cones, spindles and spinning frames in cotton and woolen mills.

Discount .....%

Buhl Neptune and Special Planer Guarantee

We guarantee that the leather used in the construction of Buhl Neptune and Special Planer Belting is Oak Tanned by the long-time process and is absolutely free from any ingredients for quickening the process or increasing the weight.

We further guarantee that both brands are absolutely waterproof, that the laps will not loosen, nor will the plies come apart even if wholly submerged in water.

If any defects, either in material or workmanship, appear in Buhl Neptune or Special Planer Belting when used under proper mechanical conditions, we agree if notified promptly, to replace or repair such defective parts without cost to the purchaser.

For List Prices on all the above Belting, see page 88.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LEATHER BELTING

Solid Round Leather Belting

All our brands of Solid Round Leather Belting are made in sizes from ⅛ to ⅜ inches in diameter, inclusive, and are furnished on 100, 200, 500 and 1000 foot spools as desired.

Oak Tanned Round Belting is made from stretched No. 1 Center Stock. This stock is of superior tensile strength and wearing quality.

Spartan Round Belting is made from the same specially tanned leather as Buhl Spartan Flat Leather Belting. It possesses the same characteristics of extreme toughness, great strength and unusual flexibility, enabling the belting to hug the pulley tightly and transmit a maximum of power. The Spartan Trade Mark appears on every spool.

Inch	⅛	3/16	¼	5/16	⅜
Oak Tanned.....Per Lineal Foot, $					
Spartan.....Per Lineal Foot,					

Note.—Prices quoted on Application.

Twist Leather Belting

Twist Leather Belting, made from either Oak or Spartan Leather, can be had in any diameter from 1/16 inch upwards. Small sizes are furnished on spools; larger sizes in coils.

Inch	⅛	3/16	¼	5/16	⅜	½	⅝	¾	⅞	1
Per Lineal Foot	$0.08	.12	.17	.22	.27	.38	.48	.60	.80	.96

Oak Tanned.....**Discount.**.....% Spartan.....**Discount.**.....%

Patent Round Leather Belting

Patent Round Leather Belting, in sizes from ⅜ to 1½ inches, can be had in both Oak and Spartan Leather.

Inch	7/16	½	⅝	¾	⅞	1	1⅛	1¼	1½
Per Lineal Foot	$0.36	.38	.48	.60	.80	.96	1.10	1.15	1.40

Oak Tanned.....**Discount.**.....% Spartan.....**Discount.**.....%

LACE LEATHER

Royal Worcester Lace Leather

Made from hides taken from young animals and carefully selected to secure freedom from cuts, grubs and other imperfections. The absence of chemicals insures long life for the lacing, in that it will not deteriorate nor harden with age. It further insures its satisfactory use in any climate as it will neither gather moisture nor mildew in damp weather.

Crescent Lace Leather

This is the regular white lace, more commonly called "Rawhide," and is the best of its kind that the market affords.

Kelton-Bruce—Original Indian Tanned Lace Leather

The resistance of this leather to the harmful effects of time and climate, its uniformity in thickness, excellent tensile strength, and durability, have made this lace the recognized Standard of Tanned Lace Leather.

Royal Worcester, Crescent and Indian Tanned Brands of Lace Leather are used as lacings for belting, automobile boots and hoods, foot balls, basket balls, boots, snow shoes, etc. Furnished in light, medium and heavy weight leather as desired.

Brands	Crescent	Royal Worcester	Indian Tanned
Light Weight, Small Sides.....Per Square Foot	$.....	.....	.....
Medium Weight, Medium Sides.....Per Square Foot	.....	.....	.....
Heavy Weight, Large Sides.....Per Square Foot	.....	.....	.....

Sizes—Small Sides contain 12 to 15 Square Feet; Medium 16 to 19 Square Feet; and large 19 to 24 Square Feet.

Hand-Cut Lacings

These laces are put up in bundles containing 100 feet each, in widths from ¼ to ¾ inches inclusive, and can be had in the Royal-Worcester, Crescent and Indian Tanned Brands.

We supply cut lace as follows, unless otherwse specified.

¼ inch and 5/16 inch wide.....Light Weight
⅜ inch and 7/16 inch wide.....Medium Weight
½ inch and wider.....Heavy Weight

Inch	¼	5/16	⅜	7/16	½	⅝	¾	⅞	1
Per 100 Lineal Feet	$2.50	3.00	3.75	4.50	5.50	6.50	7.50	9.50	11.00

Royal Worcester.....**Discount.**.....% Crescent.....**Discount.**.....% Indian Tanned.....**Discount.**.....%

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BELT CEMENT

Royal Worcester Belt Cement.

Neptune Belt Cement.

Royal Worcester Belt Cement

Superior in quality, unusually tenacious, and will not deteriorate with age or extremes of climate. Sets very quickly, enabling a belt to be put in operation with the least possible delay. Prepared in gelatine form and for use should be reduced with hot water to the consistency of light molasses.

Royal Worcester Belt Cement { In one Pound Cans.....Per Pound, $..... / In Five Pound Cans.....Per Pound, ...

Neptune Belt Cement

Neptune Cement not only possesses wonderful adhesive qualities but is absolutely unaffected by dampness or weather. Furnished in liquid form ready for use.

Neptune Belt Cement, in One Pound Cans.....Per Pound, $.....

BELT PRESERVATIVE

Royal Worcester Belt Preservative.

BELT DRESSING

Star Bar Belt Dressing.

Royal Worcester Belt Preservative

This dressing penetrates and preserves the fibres of leather. Will keep belts in a pliable condition, prevent slippage, prolong life, enable belting to grip the pulleys firmly and to transmit power efficiently.

Royal Worcester Belt Preservative { In Half Gallon Pails.....Each, $..... / In Gallon Pails.....Each, ...

Star Bar Belt Dressing

The best dressing in stick form for quickly stopping belt slippage. It is economical and easily and quickly applied to the belt while in motion.

Star Belt Dressing, in One Pound Bars.....Each, $.....

BELT DRESSING

Stephenson.

A Belt Dressing which does not gum or glaze; preserves and softens the leather. It will give perfect adhesion to Leather, Canvas or Rubber Belts.

Stephenson's Belt Dressing in one Pound Sticks

.....Per Pound $.....

Packed—25 Bars in a Case.

Dixon's

Superior to soap, tar and vegetable or animal oils. Equally satisfactory for Leather, Rubber, Canvas or Fabric Belting. Stops all slipping instantly and increases efficiency of belts that are too narrow for the load. Put up in cylindrical bars, 2x8 inches.

Dixon's Belt Dressing { Per case of 25 Bars.....$6.75 / Single bars .....Each,.....

Packed—25 Bars in a Case.

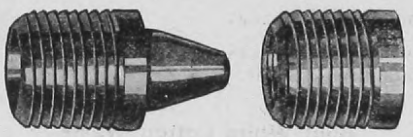
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LEATHER FILLET

Crown Leather Fillet. The upper row of figures shows the length of the straight or short side, the lower row of figures shows the length of the curved or long side.

Nos.	1	2	3	4	5	6	7	8	10	12	14	16
Inch	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Per 100 Feet	$2.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	10.00	12.00	14.00	16.00

PATTERN MAKERS' DOWEL PINS



Crescent Improved Screw Thread Pattern Makers' Dowel Pins. Made from Steel or Brass with a special screw or ratchet thread, slightly tapered toward the end, and are easily withdrawn whenever necessary. Plenty of bearing surface and close fitting are features of the utmost importance. As the different parts fit correctly they are of necessity interchangeable and also accurately centered.

Number	Pin	Bit	Number in a Box	Price per 100 Pair, Steel or Brass
1	1/8	3/16	100	$ 2.50
1 1/2	3/16	1/4	100	3.00
2	1/4	5/16	100	3.50
3	5/16	7/16	50	5.50
3 1/4	3/8	9/16	50	7.00
4	7/16	5/8	50	8.00
5	1/2	11/16	50	11.00

Pattern Makers' Dowel Pins { **Steel** ..... Discount, ...%
Brass ..... Discount, ...%

BELT AWLS

No. 67—Steel Belt Awls, one dozen in a box..... Per Dozen, $2.60

Packed—One Dozen in a Box.

GASKET OR WASHER CUTTERS

Cincinnati.

For cutting gaskets from 4 to 20 inches in diameter. Knives are made of tempered steel and adjusted by means of knurled head thumb screws. The Cutter is made of malleable iron, japanned, with polished gauge.

Cincinnati Washer Cutters.....Per Dozen, $.....

Packed—Half Dozen in a Box.

Woodward's.

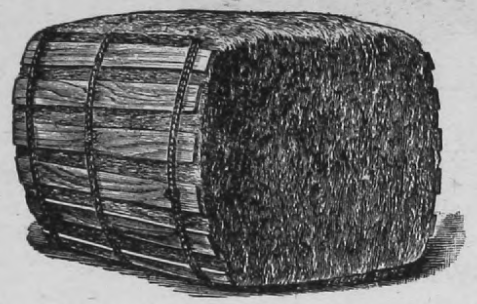
Will cut gaskets or washers from 1/4 to 2 3/4 inches, inclusive.

Woodward's Improved Washer Cutters, Bronzed Finish.....Per Dozen, $.....

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OAKUM, COTTON WASTE AND MINERAL WOOL



Spun Navy Oakum in 50 pound Bales. Per Bale, $.....
Plumber's Oakum in 50 pound Bales. Per Bale, ...
Note.—Sold in full Bales only—We do not break Bales.

Buhl White Cotton Waste

No. 10—True Blue High Grade Furniture, in Bales of about 150 pounds.....Per Pound, $.....
No. 20—Special Extra High Grade Polishing, in Bales of about 150 pounds.....Per Pound, ...
No. 30—Extra Rubbing—F Grade, in Bales of about 150 pounds .....Per Pound, ...
No. 40—Standard Wiping—No. 1 Grade, in Bales of about 150 pounds.....Per Pound, ...
No. 040—Standard Wiping—No. 1 Grade, in Bales of 50 pounds .....Per Pound, ...
No. 50—Competition Wiping—No. 2 Grade, in Bales of about 150 pounds.....Per Pound, ...
Note.—Cotton Waste sold in full Bales only—We do not break Bales.

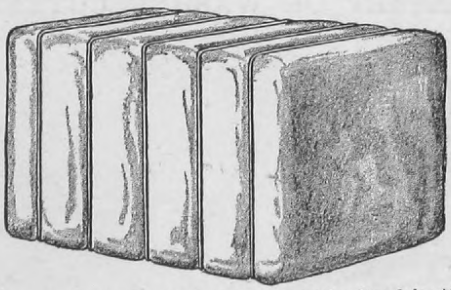
Buhl Colored Cotton Waste

No. 60—Reliable—No. 1 Grade, in bales of about 150 pounds .....Per Pound, $.....
No. 70—Economy—No. 2 Grade, in Bales of about 150 pounds .....Per Pound, ...
No. 070—Economy—No. 2 Grade, in Bales of 50 pounds..... Per Pound, ...
No. 80—Competition—No. 3 Grade, in Bales of about 150 pounds.....Per Pound, ...
Note.—Cotton Waste sold in full Bales only—We do not break Bales.

Mineral Wool

Rock Mineral Wool, in 50 pound Bags, for Fireproofing; also Hot or Cold Insulation.....Per Bag, $.....
Note—Sold in full Bags only—We do not break Bags.

WIPING RAGS



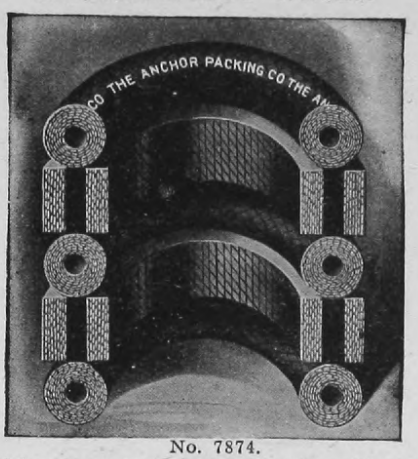
These are put through a steam cleaning and sterilizing process and all objectionable features such as buttons, hooks, eyes, etc., are removed.

No. 1—White Wiping Rags, in Bales of about 225 pounds.....Per Pound, $.....
No. 2—Bear White Wiping Rags, in Bales of about 225 pounds.....Per Pound, ...
No. 3—Colored Wiping Rags, in Bales of about 225 pounds.....Per Pound, ...
Note.—Sold in full Bales only—We do not break Bales.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ANCHOR PACKINGS

ANKORITE HOT WATER



No. 7874.

This Packing is so constructed that it will automatically contract and expand without screwing up the gland hard. Used for outside packed plungers. Has long life and is practically frictionless. **Made** to order in sets to fill the stuffing-box.

No. 7874—Hot Water Packing.....Per Pound, $2.00

Note—In ordering give Diameter of Gland, Diameter of Rod and Depth of stuffing-box. **Order** by sets. One set constitutes enough for one stuffing-box.

WATERPROOF HYDRAULIC

No. 350.

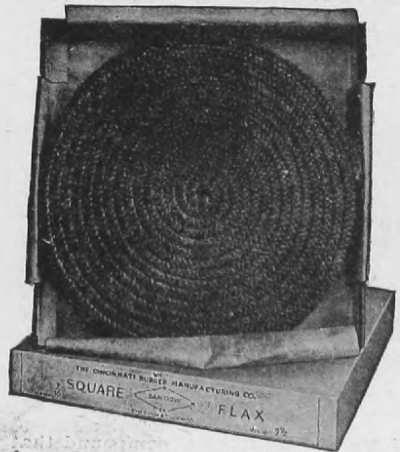
Made of the finest grade long fibre and lubricated with a water-proof compound that adds greatly to its elasticity and life.

Size—¼, ⅜, ½, ⅝, ¾, ⅞, 1 inch.

No. 350—Ankorite.....Per Pound, $1.25

Note—In ordering state whether desired Hard, Medium or Soft. **Package**—In 12 ft. Coils, 3 Coils to each Box.

SQUARE FLAX



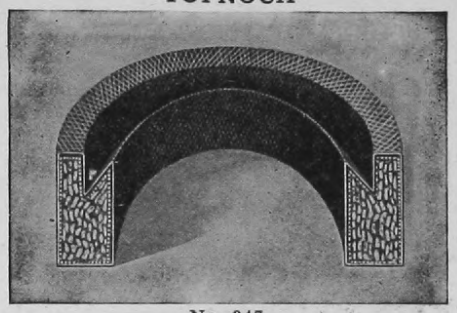
Braided from long fibre and lubricated with a special compound, making an excellent packing for hydraulic use.

Size—⅛, 3/16, ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾, 13/16, ⅞, 15/16, 1, 1 1/16, 1 ⅛, 1 3/16, 1 ¼, 1 5/16, 1 ⅜, 1 7/16, 1 ½ inches.

No. 383—Standard Square Flax.....Per Pound $1.00

Package—In 12 ft. Coils, 3 Coils to each Box.

"TOPNOCH"



No. 347.

This Packing is for hot water, oil, brine, lime juice, acids, and equally valuable for inside packed pistons. Each ring is placed with back to gland and with the notch toward the pressure. Never use a wrench, as it would crowd the ring ahead back into the notch of the ring following. When first applied, the packing might leak, but will adjust itself as soon as it can expand. **Made** to order and furnished with or without metal lugs.

No. 347—Coil Form with Notch on inside.....

.....Per Pound, $2.00

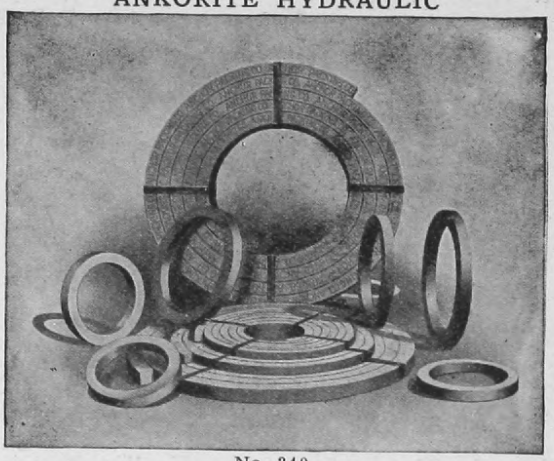
No. 147—Ring Form with Notch on inside.....

.....Per Pound, $2.00

Note—In ordering state whether desired for Hot or Cold Water, Inside Pistons, or Outside Plunger Pumps. Specify Diameter of Gland, Diameter of Rod and Depth of Stuffing-box.

Ring Form—When Ring Form is desired order by sets. One set constitutes enough for one stuffing-box.

ANKORITE HYDRAULIC



No. 340.

Square Hydraulic Duck Packing.

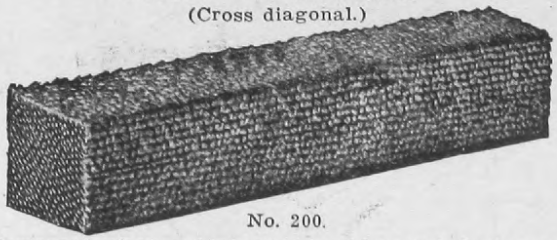
Size—3/16, ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾, 13/16, ⅞, 15/16, 1 inch.

No. 334—With Wax Thread Stitching..Per Pound, $2.00
No. 339—For Cold Water.....Per Pound, 1.00
No. 340—For Hot Water .....Per Pound, 2.00
No. 344—With Rubber Back .....Per Pound, 1.00

Package—In 12 ft. Coils, 3 Coils to each Box.

ANKORITE "CENTURY"

(Cross diagonal.)



No. 200.

Composed of very high-grade rubber and duck, so constructed that each side is a wearing surface, and automatically allows for contraction and expansion. For low or medium pressure steam, hot or cold water, ammonia, etc.

Size—¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾ inch.

No. 200—Century in **Spiral** Form....Per Pound, $2.00
No. 100—Century **Ring** Form.....Per Pound, 2.00

Ring Form—When Ring Packing is desired order by sets. One set constitutes enough for one stuffing-box.

Package—In 12 ft. Coils, 3 Coils to each Box.

UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

PACKINGS

PALMETTO TWIST

A long, Fibre Asbestos Packing, Lubricated and Graphited. Used on Valve Stems and other small glands. An ideal Packing for Globe Valves, Blow-off Cocks, Injectors, etc.

Size—⅛, 3/16, ¼ inch—Twisted.
Palmetto Twist—On One Pound Spools, All Sizes .....Per Pound, $2.00
Packed—Each Spool in a Separate Dust Proof Box.

PALMETTO SELF-LUBRICATING

Palmetto.

Designed especially to meet the exacting conditions of superheat steam, air and ammonia. Made of material that cannot char or burn.

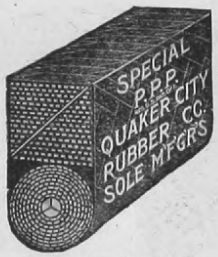
Size, ¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, ¾, 7/8, 1 inch.
Palmetto Round Braid—All Sizes.....Per Pound, $2.00

P. P. P. ROD PACKING

P. P. P. Regular.

Cushion is made of yielding absorbent materials, which take up the oil that may be put on the rod or fed to the box by other means, and let it down to the rod evenly and regularly. For steam pressures of 100 pounds or less, ordinary water pressures, cold or warm; low ammonia pressures, valve stems, etc.

Size—¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, ¾, 13/16, 7/8, 15/16, 1 inch.
No. 182—P. P. P. Regular—All Sizes..Per Pound, $1.25

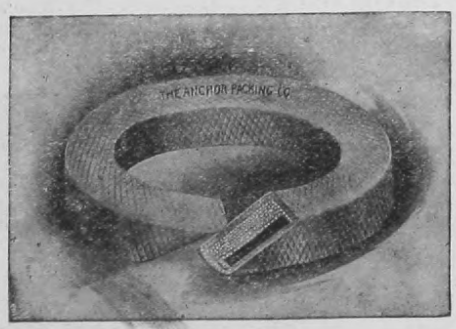


P. P. P. Special.

Cushion is round and less yielding than that in the Regular Style. For steam pressures over 100 pounds (when not superheated); high ammonia pressures; high hydraulics, very hot water, air pumps, valve stems, etc.

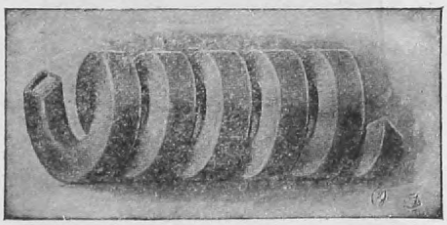
Size—¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, ¾, 13/16, 7/8, 15/16, 1 inch.
No. 183—P. P. P. Special—All Sizes...Per Pound, $1.50

ANKORITE HIGH PRESSURE



No. 110.

Note—We recommend this packing to be carried in stock for Steam. Especially for Piston Rods of Engines. Made in Ring Form if desired.



No. 210 Spiral.

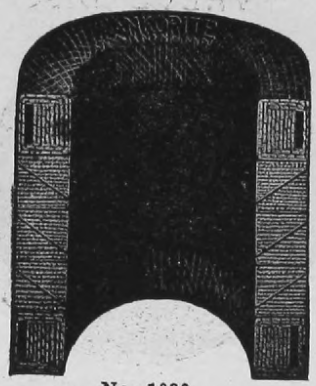
Made of the finest grade long fibre Canadian asbestos, thoroughly lubricated with a special compound that will stay in the packing, and which adds to its elasticity and durability. It has a non-vulcanizing gum back, which acts as a cushion.

Size—3/16, ¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, ¾, 13/16, 7/8, 15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4 inch.
No. 110—Ring Style, All Sizes, To order.....Per Pound, $2.00
No. 210—Spiral Style, All Sizes, To order.....Per Pound, 2.00
Ring Form—When Ring Form is desired order by sets. One set constitutes enough for one stuffing-box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ANCHOR PACKINGS

ANKORITE DUPLEX



No. 1030.

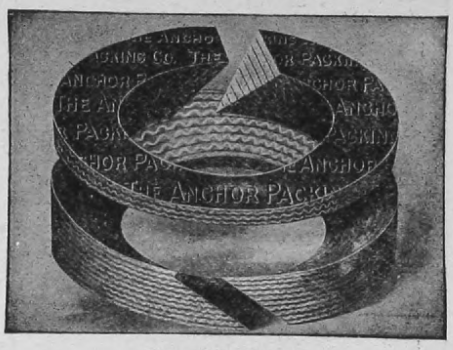
This is a combination of our High Pressure and Diagonal Rings, put up in sets to exactly fill the Stuffing Box. It is one of the best packings for every class of work against medium steam pressure.

No. 1030—Ankorite Duplex.....Per Pound, $2.00

Note—In ordering give inside and outside diameter of ring and number of rings required or depth of Stuffing Box. **Furnished** on special orders only.

Order by sets. One set constitutes enough for one Stuffing Box.

ANKORITE STANDARD



No. 136. Ring.

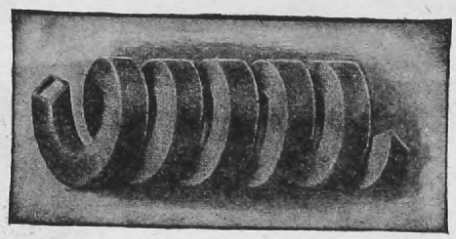
A ring of this design enables it to adapt itself to rods out of line, and is specially valuable when used in combination with other packings to overcome condensation and to render sufficient expansion.

No. 136—Sectional Ring.....Per Pound, $1.20

Note.—Made to order and in quantities to cover specifications.

ANKORITE STANDARD

No. 135. Ring.



No. 235. Spiral.

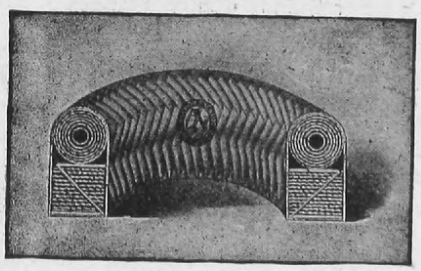
Made of the finest grade long-fibre Canadian asbestos, thoroughly lubricated with a special compound that will stay in the packing, and which adds to its elasticity and durability.

Size—$\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1, $1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{3}{16}$, $1\frac{1}{4}$ inch.

No. 135—Ring Style.....Per Pound, $1.20

No. 235—Spiral Style.....Per Pound, 1.20

LAFAYETTE DIAGONAL



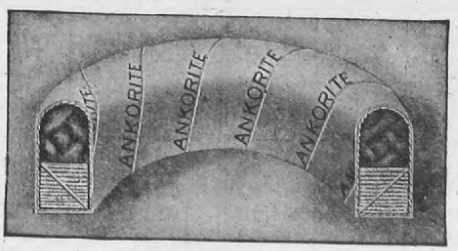
No. 395. Coil.

This Packing is recommended for mine pumps and for general purposes where a packing is required that will meet all conditions.

Size—$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1, $1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{3}{16}$, $1\frac{1}{4}$ inch.

No. 395—Lafayette.....Per Pound, $1.60

SEDGLEY DIAGONAL



No. 396. Coil.

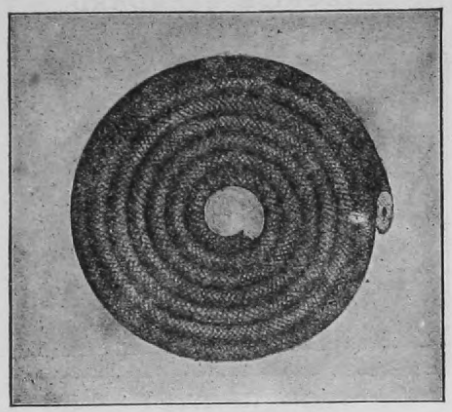
A Low Pressure Diagonal Packing recommended for general low pressure service.

Size—$\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1, $1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{3}{16}$, $1\frac{1}{4}$ inch.

No. 396—Sedgley.....Per Pound, $1.20

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CAPSTAN GUM CORE PACKINGS



No. 359 (Round) Coil.
No. 360 (Oval) Coil.

Made with best quality, oblong rubber core, which is surrounded by braided jackets of flax yarn, and is thoroughly lubricated throughout. Furnished with graphited surface when requested.

Size—¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾, 13/16, ⅞, 15/16, 1 inch.

No. 359—Round Gum Core.....Per Pound, $1.20
No. 360—Oval Gum Core.....Per Pound, 1.20

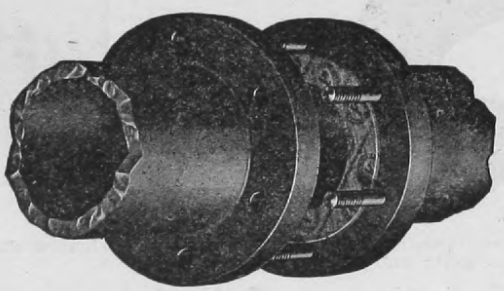
ANKORITE SUPERHEAT VALVE DISC

This Disc is for High Pressure and Superheat and will also give splendid service under any and all conditions.

Size, Inches	Each	Size, Inches	Each
¼	$0.06	1½	$0.24
⅜	.08	2	.36
½	.08	2½	.48
¾	.10	3	.80
1	.12	3½	1.00
1¼	.18	4	1.20

Note.—These discs are made to fit all valves. When ordering specify whether discs are for Jenkins, Powell, Crane, etc., valves.

RING GASKETS



Note.

Specify whether gaskets are to be used on Standard or extra heavy flanges.

Red Sheet Ring Gaskets

or

"Tauril" High Press Sheet Ring Gaskets

For Extra Heavy Pipe Flanges

Pipe Size Inside and Outside Measurements	Tauril Per Gasket 1/16 inch Thick	Red Sheet Per Gasket 1/16 inch Thick	Pipe Size Inside and Outside Measurements	Tauril Per Gasket 1/16 inch Thick	Red Sheet Per Gasket 1/16 inch Thick
1 x 2¾	$0.08	$0.08	8x12½	$0.75	$0.42
1¼ x 3¼	.10	.08	9x13	.85	.48
1½ x 3⅞	.12	.08	10x14¼	1.00	.55
2 x 4⅜	.15	.09	12x16⅝	1.25	.70
2½ x 5⅛	.19	.12	14x19⅛	1.65	1.00
3 x 5⅞	.24	.15	15x20¼	1.80	1.05
3½ x 6½	.27	.16	16x21¼	2.10	1.20
4 x 7⅛	.33	.18	18x23½	2.40	1.35
4½ x 7¾	.35	.21	20x25⅝	2.75	1.45
5 x 8½	.45	.25	22x27¾	3.00	1.55
6 x 9⅞	.55	.30	24x30⅜	3.50	1.90
7 x11	.70	.40			

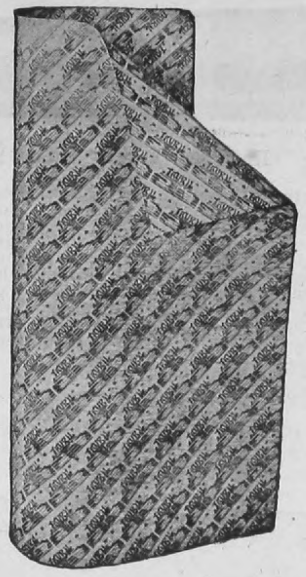
For Standard Pipe Flanges

Pipe Size Inside and Outside Measurements	Tauril Per Gasket 1/16 inch Thick	Red Sheet Per Gasket 1/16 inch Thick	Pipe Size Inside and Outside Measurements	Tauril Per Gasket 1/16 inch Thick	Red Sheet Per Gasket 1/16 inch Thick
¾ x2⅛	$0.06	$0.04	7x10	$0.50	$0.32
1 x2 9/16	.06	.04	8x11	.55	.35
1¼ x2 15/16	.08	.06	9x12½	.65	.40
1½ x3⅜	.10	.06	10x13⅜	.80	.48
2 x4⅛	.12	.08	12x16⅛	1.00	.60
2½ x4⅞	.15	.10	14x17¾	1.25	.75
3 x5⅜	.19	.12	15x19	1.50	.85
3½ x6⅜	.25	.16	16x20¼	1.75	.95
4 x6⅞	.30	.18	18x21⅝	1.90	1.10
4½ x7	.32	.20	20x23⅞	2.10	1.20
5 x7¾	.35	.24	22x26	2.50	1.25
6 x8¾	.41	.28	24x28¼	2.80	1.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ANCHOR PACKINGS AND GASKETS

TAURIL SHEET PACKING



Tauril.

(Original Patent. High Press Sheet).

Tauril is strictly a high pressure sheet, but will give guaranteed service when used against superheat, liquids and chemicals. **Made** in sheets 40x120 inches.

Thickness—1/32, 1/16, 1/8 inch.

Tauril Sheet Packing.....Per Pound, $2.00

HIGH PRESSURE SHEET PACKING

No. 425.

This Sheet Packing is a combination of long fibre asbestos chemically treated with India rubber and compressed under intense pressure. No. 424 is identical with No. 425 except that there is graphite used throughout its construction, **Made** in sheets 40x120 inches.

Thickness—1/32, 1/16, 1/8 inch.

No. 424—Graphited High Pressure....Per Pound, $2.00

No. 425—Plain High Pressure.....Per Pound, 2.00

TUBULAR GASKET

No. 606.

Composed of high grade Red Compound. Will not harden under any degree of heat or blow out under high pressure and can be taken out and repeatedly replaced if graphited on one side.

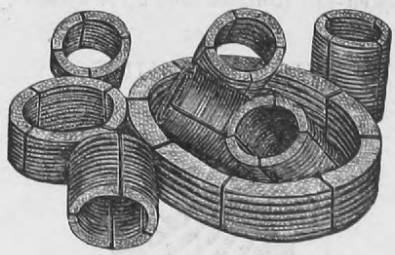
Size, 1/4, 3/8, 1/2, 5/8, 3/4 inch.

No. 602—Asbestos Tubular .....Per Pound, $1.50

No. 604—Metal Insertion Tubular....Per Pound, 1.00

No. 606—Red Rubber Tubular.....Per Pound, .80

ASBESTOS GASKET



No. 600.

Made from long-fibre asbestos, combined with brass wire insertion. They are folded and joined in such a manner as to be proof against the highest steam pressures and may be used over and over. Made in any size for Manhole, Handhole, or mud drum. Furnished, if desired, with graphited finish.

No. 600—H. P. Asbestos Manhole Gasket..Pound, $1.50

Note—In ordering Round Gaskets give Inside and Outside Diameters and on Oval Gaskets give Long and Short Inside Diameters.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHEET PACKINGS

BUHL RED

Red Sheet Packing

Buhl Red Sheet Packing is light in weight, goes farther, gives better results and resists the action of steam, oil and ammonia better than any other Red Sheet Packing on the market. By facing packing with plumbago, lampblack, etc., joints can be broken and gasket removed without injury. Will not harden in stock.

Thickness, inches	1/32	1/16	3/32	1/8
Width, inches	36	36	36	36

Buhl Red Sheet Packing, All Sizes. Per Pound, $.....

Packed—In Rolls of about 100 Pounds.

CLOTH INSERTED

Cloth Inserted Sheet Packing

A satisfactory rubber and cloth packing for cold water joints. Furnished with cloth inside.

Thickness, inches.....	1/16	3/32	1/8
Width, inches.....	36	36	36
Per Pound.....	$.....	.....	.....

Packed—In Rolls of about 100 Pounds.

WICK PACKING

Asbestos Wick Packing

In ¼ and ½ pound Balls.....Per Pound, $.....

Candle Wicking

In ¼ pound Balls.....Per Pound, $.....

BUSCO

Wire Inserted Sheet Packing

"Busco" Red and Black Sheet Packing

A Wire Inserted Asbestos Sheet, for Gas and Gasoline Engines for Stationary-Marine or Motor Serivce. This packing is made from Asbestos yarn, with fine brass wire inserted, woven into a dense firm cloth, possessing great strength. It is saturated with a Heat-resisting Composition to resist the action of the water from the cooling jacket. It is pliable, compressible, easily cut and unusually thin, being only about 1/32" thick. Supplied in rolls 40" wide and weighs approximately 4 pounds per square yard. **Graphited** on one side, red on other side and ready for immediate application.

Full Rolls of 250 lbs., per pound.....$2.00
Half Rolls of 125 lbs., per pound..... 2.00

Note.—Can also be furnished in 1/16 inch.

RAINBOW

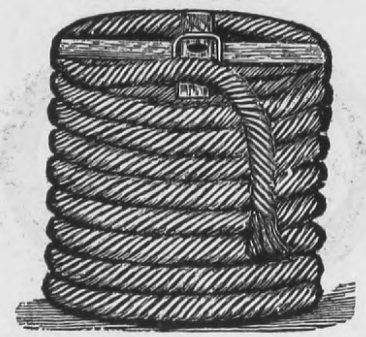
Rainbow Sheet Packing

Makes an air, steam, hot or cold water joint equally well. Is a non-conductor, and is particularly adapted to packing expansion or superheated steam joints as it does not burn or char.

Thickness, inches.....	1/16	1/8
Width, inches.....	36	36
Weight per Square Yard, pounds.....	6¾	13
Per Pound.....	$1.00	1.00

Packed—Half Rolls, 125 Pounds; Full Rolls, 250 Pounds.

HEMP PACKING



Italian.

Made from a coarse, long fibre Italian Hemp, strands twisted together in the form of a rope; for low service pumps, threshing machines, etc., also low speed engines and river boats for packing steam boxes.

Italian Hemp Packing .....Per Pound, $0.40
American Hemp Packing.....Per Pound, .30

Packed—In Coils of about 25 and 50 Pounds.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RUBBER PUMP VALVES

Note.—Made to order and according to definite specifications.

Medium Hard Cold Water Valves

No. 712—Medium Valve for cold water, very tough. Excellent valve for water works, pressure up to 200 pounds.....Per Pound, $1.50

No. 777W—A very stiff compound, absolutely guaranteed for water works or large crank and fly wheel pumps up to 200 pounds pressure.....Per Pound, 1.50

Note—In ordering specify temperature, pressure, Diameter of Valve, thickness and size of hole; and also specify No. 777W for Mine service.

Hard Hot Water Valves

No. 700—High Grade hard valve for hot water up to 450 pounds pressure, 212 degrees temperature, also for acids, oils, etc.....Per Pound, $1.50

Note—In ordering specify temperature, pressure, Diameter of Valve, thickness and size of hole.

Condenser Valves

No. 725—Soft Red or Gray Condenser Valves.....Per Pound, $2.00

CORRUGATED MATTING

This style of Matting commends itself for general use in halls, passageways, stairways, around billiard tables, etc., on account of its neat appearance. It is soft and yielding to the step, making a practically noiseless surface. It is invaluable for use as stair treads, as it prevents danger from slipping.

Width, inches	36	36
Thickness, inch	3/32	1/8
Per Square Yard.....	$.....	

Package—50 Yards in a Roll, generally sold 36 inches wide. Other widths can be furnished promptly on special orders.

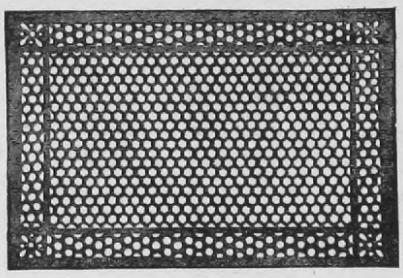
CIRCULAR MATS

Circular Rubber Mats

For use under cuspidors, flower pots, water pitchers, etc.

Inches ...	6	9	12	15	18
Per Dozen, $.....	.....	.....	.....	.....	.....

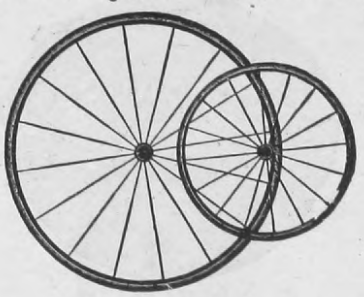
PERFORATED MATS



These Mats are largely used in public buildings, elevators, railway cars, steamboats, or where there is constant traffic and severe service. Very durable, easily cleaned and attractive in appearance. **Furnished** in any length but not wider than 68 inches. Large mats divide into sections of not over 20 square feet. For irregular shaped mats always send pattern. Black letters 25c per letter; White letters 50c per letter.

Thickness, inch.....	1/4	3/8	1/2
Per Square Foot..... $.....	.....	.....	.....

CALCUTT'S QUICK REPAIR TIRES



Calcutt's Quick Repair Tires

For use on baby carriages, velocipedes, tricycles, etc., made of an extra grade of rubber, especially adapted for this purpose by its extreme durability. Calcutt's Tires save time and labor. There is no need to remove wheels, as the tires are put on instantaneously, permitting a customer to wait for his re-tired wheels. Each box contains sufficient couplings for putting on tires.

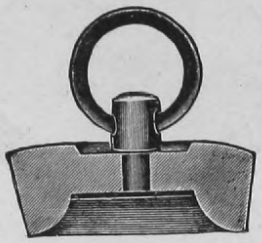
Calcutt's Quick Repair Tires..					
	Thickness, inches	3/8	1/2	5/8	3/4
	Feet in a box.....	50	50	25	25
	Couplings in a Box.....	30	30	15	15
	Per Foot ..... $.....	.....	.....	.....	.....

Package—Sold in Full Boxes only—We do not break Boxes.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BASIN AND BATH STOPPERS

Nos. 101 to 109.

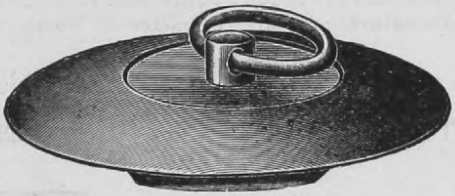


Sectional View.

Nos.	101	102	103	104	105	106	107	108	109
Diameter, Inches	¾	⅞	1	1⅛	1¼	1⅜	1½	1¾	2
Per Dozen, $									

Packed—One Dozen in a Box.

SUCTION STOPPERS



Nos. 111 and 112.

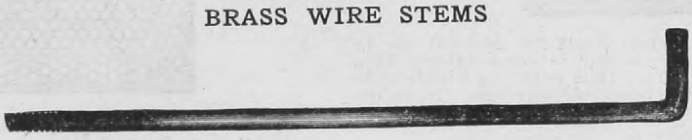
No. 111—Basin Stopper.....Per Dozen, $.....

No. 112—Bath Stopper.....Per Dozen, ...

No. 113—Flat Sink Stopper.....Per Dozen, ...

Packed—One Dozen in a Box.

BRASS WIRE STEMS



No. 135.

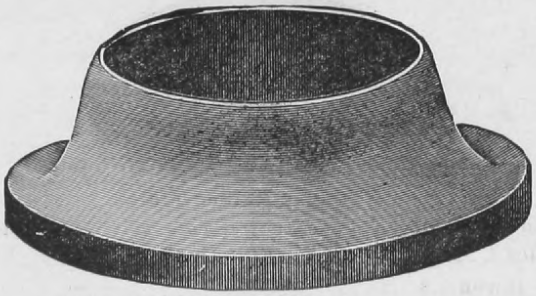
No. 135—Brass Wire Stem for Tank Balls.....Per Dozen, $.....

Packed—In Open Stock.

TANK BALLS

Nos. 122 and 123.

SINK GASKETS



No. 405.

Tank Balls

Reinforced hard top, extra quality soft bottom. Black Rubber.

No. 122—Diameter 2½ inches, for Low Tanks.....Per Dozen, $.....

No. 123—Diameter 2¾ inches, for Low Tanks.....Per Dozen, ...

Packed—One Dozen in a Box.

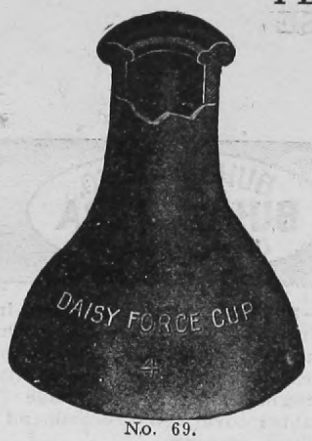
Sink Gaskets

No. 405—Sink Gaskets.....Per Dozen, $.....

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PLUMBERS' FORCE CUPS



No. 69.

Made of the best grade of rubber, guaranteed not to become hard, the bead on the inside of cup fits the groove in the handle, doing away with cement, clamps, etc.

No. 69—Diameter of Cup 4 inches. Fitted with 42 inch Handle.....Per Dozen, $5.30

No. 6.

The Ribbed construction makes possible a larger working area, which means greater efficiency. Cups are snappy and quick acting, due to the rib strengthened walls.

No. 6—Gray Ribbed, Diameter of Cup 6 inches, 42 inch Handle.....Per Dozen, **$11.00**

BUMPERS

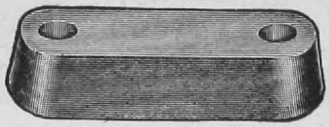
TACK

Nos. 511 to 513.

Nos.	511	512	513
Diameter, inches	5/8	1/2	3/8
Per 100.....	$.....	.....	.....

Packed—In Open Stock.

BAR



No. 463.

No.	463
Length, inches	1 5/8
Height, inches	3/8
Per 100	$.....

Packed—In Open Stock.

ROUND

No. 473.

No. 474.

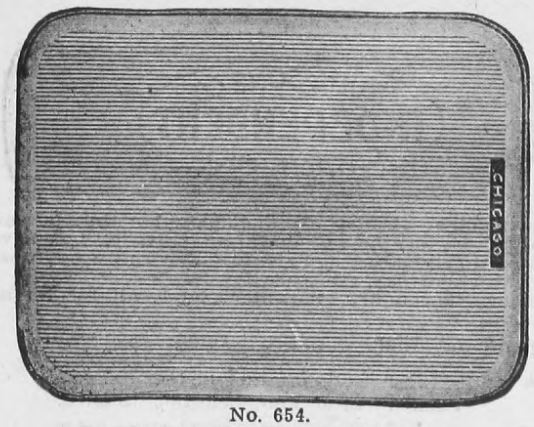
No. 475.

No. 477.

Nos.	473	474	475	477
Base, inches	23/32	3/4	3/4	15/16
Height, inches	13/32	9/16	1/2	11/32
Per 100.....	$.....	.....	.....	.....

Packed—In Open Stock.

DRAIN BOARD MATS

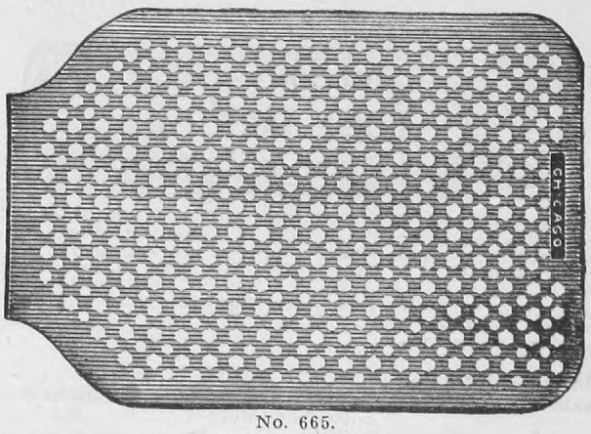


No. 654.

Solid, with Bead on Edge.

No. 654—For 18x24 inch Drain Board..Each, $.....

Packed—In Open Stock.



No. 665.

Perforated.

No. 665—For 18x20 inch Drain Board..Each, $.....

Packed—In Open Stock.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

RUBBER GARDEN HOSE

In 50-foot Lengths

Bull Dog—7 Ply. The original multiple fabric garden hose made with seamless rubber tube or lining, seven plies of fine, firmly woven fabric (vulcanized together with a very high grade friction or cement) and a rubber cover. The strength, durability and general merit of this hose have made for it a national reputation. This hose has been extensively advertised and is generally demanded where a high-grade hose is appreciated. We recommend it for any service and for the highest pressure.

"Bull Dog"—Inch	⅝
Black—7-ply, Per Foot	$.....

Packed—In 50 Foot Lengths, Coupled.

Buhl Extra—7 Ply. What its name implies; Strictly High Grade. Intended to meet the demand for a high class article. It is made with an elastic and strong seamless rubber tube, seven plies of fine, firmly woven fabric, thoroughly impregnated with high grade "friction" and a strong pliable rubber cover. We recommend it for any service, and for highest pressure.

Buhl Extra—Inch	⅝	¾
Black—7 Ply, Per Foot	$.....	.....

Packed—In 50 Foot Lengths, Coupled.

Samoset—6 Ply. An exceptional value and the most popular medium priced hose on the market. Made six plies of strong fabric, and a strictly good durable tube and cover. Equal to others' best.

Samoset—Inch	⅝	¾
Black—6 ply, Per Foot	$.....	.....

Packed—In 50 Foot Lengths, Coupled.

Good Luck—6 Ply. Made with six plies of strong fabric and a good durable tube and cover. The Good Luck Hose is extensively advertised. An exceptional value and the most popular medium priced hose on the market.

Good Luck—Inch	⅝
Black—6 ply, Per Foot	$.....

Packed—In 50 Foot Lengths, Coupled.

Red Chief—5 Ply. A special grade to meet demands for a red covered hose, of medium price, and yet reliable in every respect as to quality of materials and manner of construction. Made five plies and strong enough for all average pressure. An attractive hose from every standpoint.

Red Chief—Inch	⅝	¾
Red—5 ply, Per Foot	$.....	.....

Packed—In 50 Foot Lengths, Coupled.

Lone Jack—5 Ply. A distinct leader in our line. There is nothing on the market that can equal it in real value. The quality is much higher than the price at which we sell it would indicate. Made with five plies of good quality fabric, and firstclass tube and cover. Will withstand the pressure of any city and suits that class of trade desiring the very best low priced hose obtainable.

Lone Jack—Inch	½	⅝	¾	1
Black—5 Ply, Per Foot	$.....	.....	.....	.....

Packed—In 50 Foot Lengths, ½, ⅝ and ¾ inch, Coupled; 1 inch **Not** Coupled.

Independent—4 Ply. An indispensable link in our line. While not by any means our highest grade, it is nevertheless an entirely satisfactory value; Especially for those who do not wish to pay the price for the better grades. Made four plies, thoroughly guaranteed, and suitable for all low pressures.

Independent—Inch	½	⅝	¾
Black—4 ply, Per Foot	$.....	.....	.....

Packed—In 50 Foot Lengths, Coupled.

Competition—3 Ply. Unbranded and unguaranteed. As durable as any hose that can be sold at the price.

Competition—¾ inch, Black—3 Ply ..... **Per Foot, $.....**

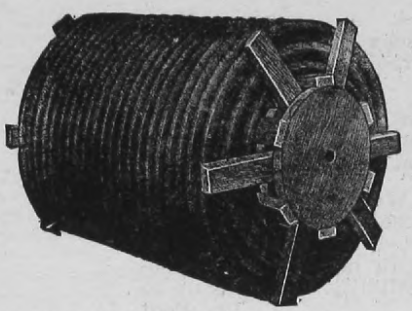
Packed—In 50 Foot Lengths, **Not** Coupled.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

RUBBER GARDEN HOSE

In Continuous Lengths—On 500 Foot Reels.

Particularly desirable for the dealer as the continuous length feature eliminates the question of remnants.



Continuous Double Braided, **Double** Fabric, **Moulded** Rubber Hose. No cotton duck whatever is used in this hose but the insertions are continuous throughout its entire length and are braided from cotton yarns of great tensile strength; each ply is separate in itself, with a distinct layer of rubber between. The inner tube and cover are seamless and compounded into a particularly tough and durable stock. As the hose is vulcanized under very high steam pressure the rubber is thoroughly forced through the meshes of the insertions, making separation impossible. This method of construction gives a hose of much greater working strength than the wrapped duck construction.

Non-Kink, Smooth Cover. The features of this hose are, continuous lengths, which can be cut and coupled in any length desired by the user. **Seamless** construction; every strand of cotton is continuous, and there are no seams in either cotton or rubber. Being moulded under high pressure, both internal and external, it does not easily kink. Made with thick durable inner tube, two separate and independent braids of hard twisted cotton (between which is a distinct layer of rubber) and a plain smooth rubber cover. A hose within a hose, and superior to all hose of similar construction.

Non-Kink—Inch	½	⅝	¾
Black—2 Ply Continuous Braided Fabric.....Per Foot, $	.....	.....	.....

Packed—On 500 Foot Reels, **Not** Coupled.

Rock Rib, Corrugated Cover. The same as Non-Kink Hose, but with corrugated cover. The latest in hose construction. The peculiar form of cover and construction makes the hose as **non-kink-proof**, as is possible, and the extra thickness takes the wear and abrasion.

Rock Rib—Inch	½	⅝	¾
Black—2 Ply Continuous Braided Fabric.....Per Foot, $	.....	.....	.....

Packed—500 Feet on a Reel, **Not** Coupled.

"Vim"—Smooth Cover.

"Vigilant"—Corrugated Cover.

Both Vim and Vigilant are a high grade continuous length hose similar to Non-Kink and Rock Rib in construction, all plies being braided continuous and possessing the same **Non-Kink feature**, but are made of a less costly compound in the tube and cover. Popular in price but far above the average grade.

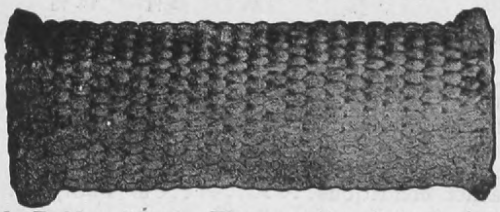
Vim—Inch	½	⅝	¾
Black—Per Foot $	.....	.....	.....

Packed—500 Feet on a Reel, **Not** Coupled.

Vigilant—Inch	½	⅝	¾
Black—Per Foot $	.....	.....	.....

Packed—500 Feet on a Reel, **Not** Coupled.

COTTON GARDEN HOSE



Rival—Rubber Lined. Woven cotton hose is frequently preferred to rubber hose, because it is very light in weight and more easily handled. It will resist all ordinary pressure and if given good care will last many seasons.

Rival—Inch	¾
Black—Per Foot $	.....

Packed—In 50 Foot Lengths, Coupled.

WIRE WINDING

Wire Winding protects the hose from chafing and rough usage. For this purpose the best quality steel wire is used, so tempered and applied that it will not spring away from the hose when a section is cut.

Inch	½	⅝	¾	1
Extra—Per Foot.. $	.....	.....	.....	.....

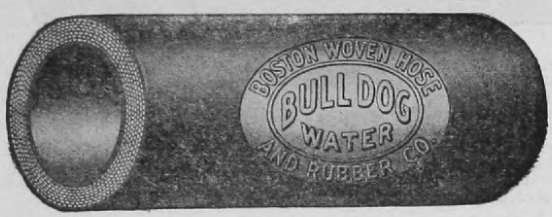
Prices quoted on Application.

UNIVERSITY OF MICHIGAN
Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

WATER CONDUCTING HOSE

Tiger—Water Hose. Adapted for all ordinary service, requiring strength and durability .....Discount, ...%

Winner—Water Hose. A popular medium price hose for discharge purposes. Also used largely for radiator connections on automobiles .....Discount, ...%



Leader—1 inch Water Hose. Made four ply. A light hose for low pressure and agricultural service. **Not** guaranteed, Per Foot, $.....

Non-Kink—1 inch Water Hose. A high grade **moulded** hose, made with two plies **Continuous** Braided Fabrics, instead of wrapped duck, with layer of rubber between, to give flexibility. **Lengths** up to 500 feet.....Per Foot, $.....

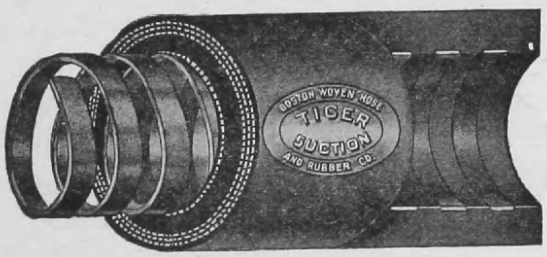
Bull Dog—1 inch Water Hose. Constructed of eight plies of fine, closely woven duck, with strong friction. Will not kink, and is strong and pliable. It should be used when high pressure and rough service make ordinary hose impracticable..... Per Foot, $.....

Water Conducting Hose—List per Foot

Internal Diameter Inches	2-Ply Conducting Per Foot	3-Ply Hydrant Per Foot	4-Ply Engine Per Foot	5-Ply Engine Per Foot	6-Ply Engine Per Foot	Internal Diameter Inches	3-Ply Hydrant Per Foot	4-Ply Engine Per Foot	5-Ply Engine Per Foot	6-Ply Engine Per Foot
½	$0.20	$0.25	$0.30	$0.37	$0.45	2¼	$0.90	$1.12	$1.40	$1.68
¾	.25	.30	.37	.46	.55	2½	1.00	1.25	1.56	1.87
1	.33	.40	.50	.62	.75	3	1.20	1.50	1.87	2.25
1¼	.42	.50	.62	.77	.93	3½	1.40	1.75	2.18	2.62
1½	....	.60	.75	.93	1.12	4	1.60	2.00	2.50	3.00
2	....	.80	1.00	1.25	1.50	5	2.00	2.50	3.12	3.75

Packed—In 50 Foot Lengths, **Not** Coupled.

SUCTION HOSE



Tiger—Suction Hose. Hard Rubber. Extra thick tube and heavy duck to resist suction pressure .....Discount, ...%

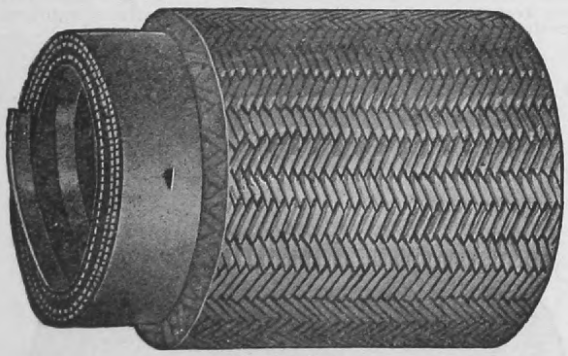
W. L. Leader—Suction Hose. "Wire Lined." Rough or smooth bore. Made of heavy wire duck and with good quality tube and friction. Adapted for diaphram pumps, especially in 3 and 4 inch sizes, for contractors' use.....Discount, ...%

H. R. Leader—Suction Hose. "Hard Rubber." Four ply, thinner tube and lighter fabric than in Tiger. Satisfactory in ¾ and 1 inch sizes.

Inch	¾	1	1¼
Per Foot	$.....	.....	.....

Granger—Agricultural Suction Hose. Plain Cover, Wire Lined, Agricultural Suction Hose. A plain hose without jacket, quality same as Royal.

Inch	¾	1	1¼	1½	2
Per Foot. $.....	.....	.....	.....	.....	.....



Harvester.

Harvester—2 inch Agricultural Suction Hose. Red Braided Jacket, Wire Lined Agricultural Suction Hose. Same as Royal, but with braided jacket instead of woven.....Per Foot, $.....

Royal—2 inch Agricultural Suction Hose. Yellow Woven Jacket, Wire Lined Agricultural Suction Hose. A high grade hose with woven jacket to aid in preventing kinking and a protection against weather conditions.....Per Foot, $.....

Suction Hose—List per Foot

Inches	1½	1¾	2	2½	3	3½	4	4½	5	5½	6
Rough Bore	$1.50	1.90	2.30	3.10	4.00	4.90	5.80	6.70	7.60	8.50	9.50
Smooth Bore.....	1.70	2.15	2.60	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50

Note.—Smooth Bore Suction Hose is made with a coil of round coppered steel wire; Rough Bore Suction Hose is made with a coil of flat galvanized steel wire.

Packed—Tiger, W. L. Leader and H. R. Leader, in 50 foot Lengths, **Not** Coupled; Granger, Royal, and Harvester, in 25 foot Lengths **Not** Coupled.

Digitized by Google Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STEAM HOSE

Bay State—Steam Hose. A medium grade, but will withstand even severe service.....
.....Discount, ...%

Tiger—Steam Hose. Made of lighter duck and thinner tube and not intended for severe service. Very satisfactory where pressure does not exceed 70 pounds.....Discount, ...%

Cowen—Steam Hose. A heavy woven cotton jacket gives protection from outside wear, also adds to the strength and durability of the hose. A very high grade article all through.

Cowen, inch.	½	¾	1	1¼	1½	2
Ply	5	5	5	6	6	8
Per Foot.... $....	....	....	....	....	....	....

Steam Hose—List Per Foot

Internal Diameter Inches	3-Ply Per Foot	4-Ply	5-Ply	6-Ply	7-Ply	8-Ply	Internal Diameter Inches	3-Ply Per Foot	4-Ply	5-Ply	6-Ply	7-Ply	8-Ply
½	$0.47	$0.56	$0.70	$0.84	$0.98	$1.12	2	$1.34	$1.66	$2.07	$2.49	$2.90	$3.32
¾	.57	.71	.87	1.05	1.23	1.41	2¼	1.50	1.87	2.33	2.80	3.27	3.74
1	.70	.87	1.07	1.28	1.50	1.70	2½	1.66	2.08	2.60	3.12	3.64	4.16
1¼	.85	1.04	1.30	1.56	1.82	2.08	3	2.00	2.80	3.50	4.20	4.90	5.60
1½	1.02	1.25	1.56	1.87	2.18	2.50							

Packed—In 50 Foot Lenths, **Not** Coupled.

Note.—For Wire Winding Steam Hose, add to above list as per schedule for wire winding on following page.

Working Pressures, Water and Steam Hose.

Water, inch.....	½	¾	1	1¼	1½	2	2½	3	4
3 Ply, lbs.....	160	130	110	120	105	90	100	85	70
4 Ply, lbs.....	200	160	140	140	125	105	110	100	80
5 Ply, lbs.....	225	190	160	160	140	120	130	115	95
6 Ply, lbs.....	250	200	175	175	160	135	140	125	105

Steam, inch	½	¾	1	1¼	1½	2
3 Ply, lbs.....	75	60	50	45	40	35
4 Ply, lbs.....	85	70	60	55	50	40
5 Ply, lbs.....	95	80	70	65	60	45
6 Ply, lbs.....	105	90	80	75	65	50

Note.—Working Pressure of Water and Steam Hose are based on medium grade (Bay State). For high grades add 25% For low grades deduct 20%, For hose wound with wire or marline add 33⅓%, For Woven Jacketed Hose (Cowen) add 33⅓%, For Braided Jacketed hose (Dandy) add 25%. The Woven Jacket on Cowen Steam Hose is to protect the hose from outside injury rather than add to its heat resisting qualities.

SPRAY HOSE

Bull Dog—Spray Hose. Made for use in power spraying outfits, durable enough to withstand 250 pounds pressure. Tube compounded specially to resist action of oil emulsions or lime or sulphur solutions.

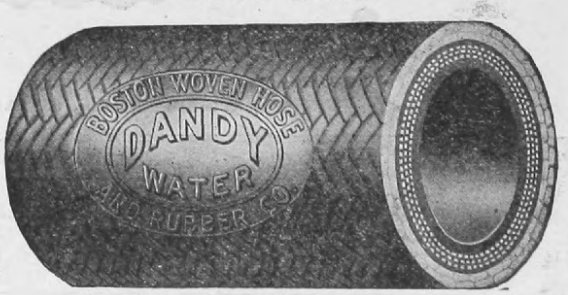
Bull Dog, inch.....	⅜	½	¾
Ply	6	7	9
Per Foot.....	$.....	.....	.....

Tiger—Spray Hose. Thinner tube and less plies of fabric than in Bull Dog. Satisfactory, where pressure does not exceed 125 pounds.

Tiger, inch.....	⅜	½	¾
Ply	5	6	7
Per Foot.....	$.....	.....	.....

Packed—In 50 Foot Lengths, **Not** Coupled.

DECK HOSE



Dandy—Deck Hose. This is a very high grade rubber hose with a heavy cotton braided jacket. The inner rubber hose is complete in itself, and over the rubber cover of this is the braided cotton jacket. This construction makes a very strong hose that will withstand hard and rough usage.

Dandy, inch..	1	1¼	1½	2
Ply	3	3	3	4
Per Foot.....	$.....	.....	.....	.....

Packed—In 50 Foot Lengths, **Not** Coupled.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

PNEUMATIC HOSE

Non-Kink—Pneumatic Hose. A moulded hose, made any length up to 500 feet, with two plies braided fabric instead of wrapped duck, with layer of rubber between to give flexibility. Very durable, and guaranteed to withstand pressures of 100 to 110 pounds.

Non-Kink, inch.....	⅜	½	¾
Continuous Fabric—Ply..	2	2	2
Per Foot..... $.....	.....	.....	

Boston Terrier—Pneumatic Hose. Duck construction with extra ply of fabric outside of rubber cover, to aid wear and resist chafing. As high grade as Moulded hose and made in all sizes. Guaranteed to withstand 100 to 110 pounds pressure.

Boston Terrier, inch	⅜	½	⅝	¾	1
Ply	4	4	5	5	6
Per Foot..... $....	....	....	....	....	

Tiger—Pneumatic Hose. A medium grade. Adapted for pressures of 75 to 80 pounds.

Tiger, inch ...	⅜	½	⅝	¾
Ply	5	6	6	7
Per Foot..... $.....	.....	.....	.....	

Packed—In 50 Foot Lengths, **Not** Coupled.

AIR DRILL HOSE

Cowen—Air Drill Hose. Made of oil resisting tube stock, heavy duck with layers of rubber between, and covered with a woven jacket. Best grade for all kinds of mining or air drill service. Working pressure 100 lbs.

Cowen, inch..	¾	1	1¼	1½
Ply	4	4	5	5
Per Foot..... $.....	.....	.....	.....	

Note.—¾ and 1 inch have a single Woven Jacket and the 1¼ and 1½ inch have a double Woven Jacket.

Iron Clad—Air Drill Hose. A little lighter than Cowen, but with Oil resisting tube and 7/32 inch half round wire winding. **Adapted** for use **under** 100 pounds pressure.

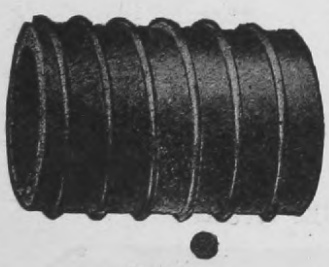
Iron Clad, inch.....	¾	1
Ply	4	5
Per Foot..... $.....	.....	

Leader—Air Drill Hose. For light service. Wound with 5/32 inch half round wire. Very satisfactory in ½ and ¾ inch sizes.

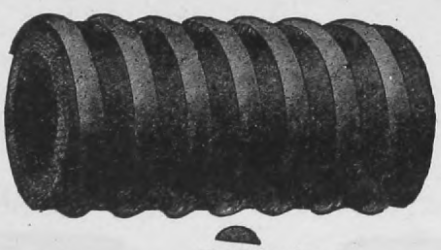
Leader, inch	½	¾	1
Ply	4	4	4
Per Foot..... $.....	.....	.....	

Packed—In 50 Foot Lengths, **Not** Coupled.

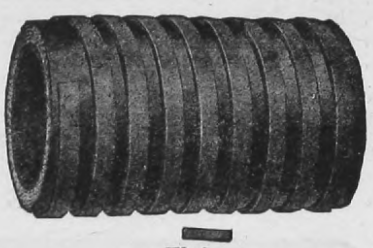
WIRE WINDING HOSE



Round.



Half Oval.



Flat.

Price Per Foot for Winding Steam, Oil, Air-Drill, and Other Hose, with Round Steel Wire.

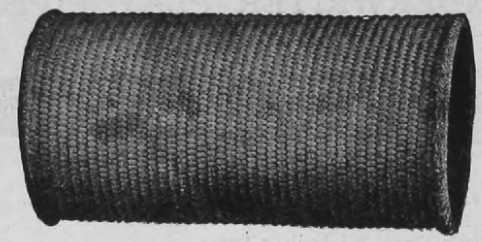
Size of Hose Inches	3-Ply Per Foot	4-Ply	5-Ply	6-Ply	Size of Hose Inches	3-Ply	4-Ply	5-Ply	6-Ply
½	$0.06	$0.07	$0.08	$0.09	1¾	$0.11	$0.12	$0.13	$0.14
¾	.07	.08	.09	.10	2	.13	.14	.15	.16
1	.08	.09	.10	.11	2¼	.15	.16	.17	.18
1¼	.09	.10	.11	.12	2½	.17	.18	.19	.20
1½	.10	.11	.12	.13					

Price Per Foot for Winding Steam, Oil, Air-Drill, and Other Hose, with Flat or Half Oval Steel Wire.

Size of Hose Inches	3-Ply Per Foot	4-Ply	5-Ply	6-Ply	Size of Hose Inches	3-Ply	4-Ply	5-Ply	6-Ply
½	$0.09	$0.10	$0.11	$0.12	1¾	$0.20	$0.21	$0.22	$0.23
¾	.11	.12	.13	.14	2	.23	.24	.25	.26
1	.13	.14	.15	.16	2¼	.25	.26	.27	.28
1¼	.15	.16	.17	.18	2½	.27	.28	.29	.30
1½	.18	.19	.20	.21					

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

COTTON RUBBER LINED MILL HOSE



King Brand

Single Jacket—A good quality Mill Hose equivalent to any high grade Hose on the market. Gives first-class service wherever used. **One Black** and **One Blue Line** runs its entire length.

King Mill Hose—Inside Diameter, inch	1	1¼	1½	2	2½
Not Coupled—In 50 foot lengths, Per Foot	$0.40	.45	.50	.65	.80
Coupled to Order, **Extra** per Length					

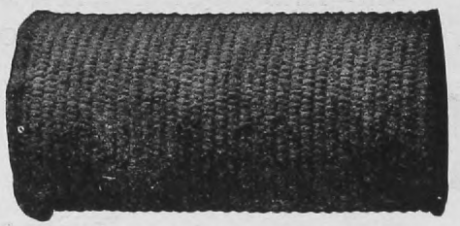
Rival Brand

Single Jacket—A light weight Mill Hose made to meet the demand for a medium priced Hose. Low in price, but not in quality; thoroughly reliable for moderate pressures; will last a reasonable length of time.

Rival Mill Hose—Inside Diameter, inch	1	1¼	1½	2	2½
Not Coupled—In 50 foot lengths, Per Foot	$0.40	.45	.50	.65	.80
Coupled to Order, **Extra** per Length					

COTTON RUBBER LINED FIRE AND MILL HOSE

Empire's Best.



Yale.

Empire's Best Brand

Double Jacket—The finest quality fire hose made, having two distinct jackets, which are extra strong and so woven as to enable the hose to stand a high pressure. The rubber lining is of extra high quality that will retain its life for a very long period. As the life of the hose lies entirely in the quality of the rubber lining, the highest grade obtainable is put in this hose. **One Yellow** and **One Red Line** runs its entire length. **Specify** Style of Coupling and Thread desired.

Empire's Best Fire Hose	Inside Diameter, inches	2½	3
	Coupled in 50 foot lengths, Per Foot	$1.65	1.95

Yale Brand

Double Jacket—Built along substantial lines, having two distinct jackets of great strength, and a grade of rubber lining that will last a good many years. This grade of hose is being used by a great many cities with good results. **One Red** and **One Blue Line** runs its entire length. **Specify** Style of Coupling and Thread desired.

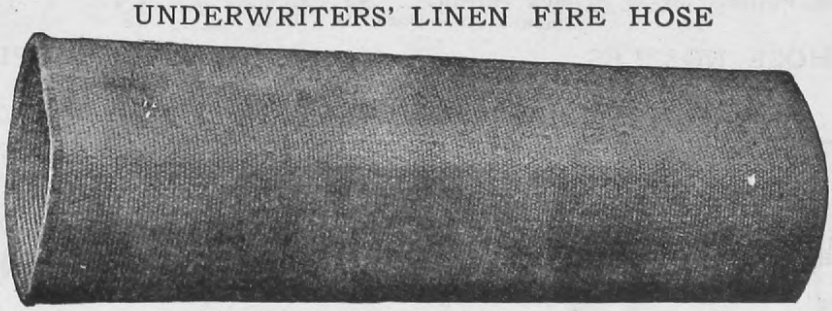
Yale Fire Hose—Inside Diameter 2½ inches, Coupled in 50 foot lengths ..... Per Foot, $1.20

King Brand

Double Jacket—A medium weight Hose with same quality rubber lining as Yale, but with lighter jackets. Made to meet the requirements of municipalities, where the service as well as the treatment does not warrant a more expensive grade. **One Black** and **One Blue Line** runs its entire length. **Specify** Style of Coupling and Thread desired.

King Fire Hose—Inside Diameter 2½ inches, Coupled in 50 foot lengths ..... Per Foot, $1.02

UNDERWRITERS' LINEN FIRE HOSE



Yale Underwriters' Brand

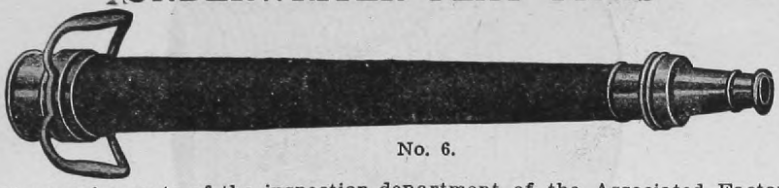
Unlined Linen Underwriters' Fire Hose, made to conform to the Board of Fire Underwriters' specifications. Especially recommended for indoor fire protection in stores, hotels, theatres, etc. It is light, requires very little space and shows a less percentage of leakage than any other linen Hose made. Linen Hose differs from Cotton Hose in that the fiber becomes saturated and swells when wet, so that the Hose, after sweating a harmless amount, becomes water tight and capable of standing great pressure. **One Red** and **One Blue Line** runs its entire length.

Yale Underwriters' Fire Hose—Inside Diameter, inch	1¼	1½	2	2½
Not Coupled—In 50 foot lengths, Per Foot	$0.36	.42	.51	.60
Coupled to order, Extra Per Length				

Note—This Hose is intended for Indoor use and should be thoroughly dried after use to prevent deterioration.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

UNDERWRITER PLAY PIPES

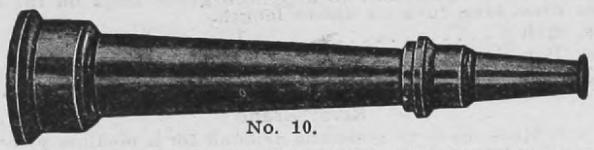


No. 6.

Made to conform to the requirements of the inspection department of the Associated Factory Mutual Fire Insurance Companies. Marlin Wound and painted Red Screw Nozzle, Swivel Handle.

No. 6—Underwriter Play Pipes, 2½-inch Butt, 30 inches long ..... Each, $8.00

HOSE PIPES



No. 10.

Plain Hose Pipes, Finished Brass, with Screw Tips.

No. 10—For Hose, inch	¾	1	1¼	1½	2	2½
Length, inches	7½	8½	12	13	15	20
Hose Thread, Per Dozen	$8.00	10.00	20.00	25.00	45.00	96.00
Iron Pipe Thread, Per Dozen	9.20	11.20	21.20	27.50	48.00	99.50

Packed—One Dozen in a Box.

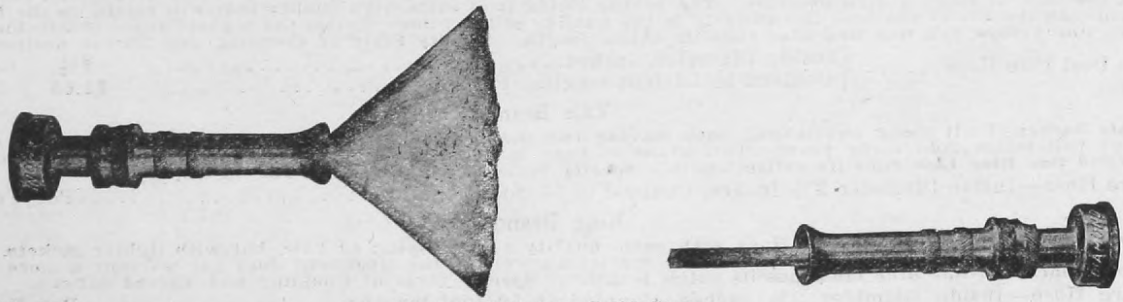
Note.—Threads on tips of No. 10, ¾ and 1 inch Hose Pipes are ⅜ inch Iron Pipe Thread.

HOSE NOZZLES

Throws Spray or Solid Stream.

Gem Hose Nozzles, Finished Brass, ¾-inch Thread ..... Per Dozen, $12.00

Packed—One Dozen in a Box.

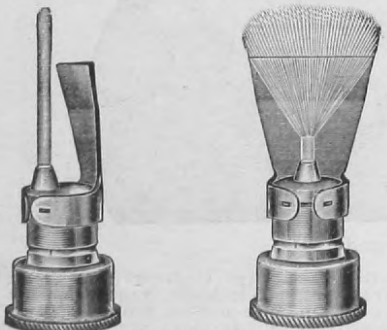


Throws Spray or Solid Stream.

Diamond Hose Nozzles, Finished Brass, ¾-inch Thread ..... Per Dozen, $10.00

Packed—One Dozen in a Box.

DUO HOSE NOZZLES



The **Duo** Hose Nozzle will not burst the hose; by snapping on spring spike furnished with each nozzle, it becomes a sprinkler.

Duo Hose Nozzles, Finished Brass, ¾-inch Thread ..... Per Dozen, $5.00

Packed—One Dozen in a Box.

HOSE PIPES

No. 11.

Hose Pipes, Finished Brass, with Cock and Screw Tips.

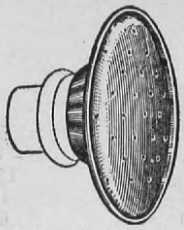
No. 11—For Hose Thread, inch	¾	1
Length, inches	6¾	8
Per Dozen	$11.00	15.00

Packed—One Dozen in a Box.

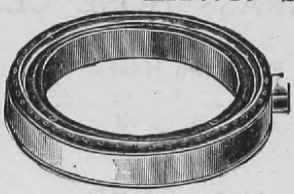
Note.—Threads on tips of No. 11, ¾ and 1 inch Hose Pipes are ⅜ inch Iron Pipe Thread.

Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

LAWN SPRINKLERS

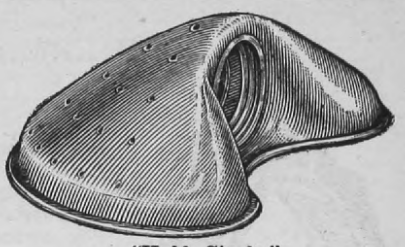


"Fountain Shower."



"Fountain."

"Baby Fountain."



"Half Circle."

Fountain Shower

Made of Polished Brass 2¾ inches Diameter, used as a hose nozzle.

No. 1—Fountain Shower ..... Per Dozen, $3.50

Packed—One Dozen in a Box.

Fountain and Baby Fountain

Made entirely of Brass, no moving parts. Nothing to get out of order. More beautiful than a fountain, more efficient than a shower. Can be moved over the lawn without shutting off the water.

No. 2—Fountain Lawn Sprinklers ..... Per Dozen, $15.00

No. 3—"Baby" Fountain Lawn Sprinklers ..... Per Dozen, 9.50

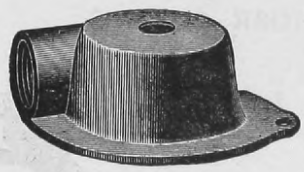
Packed—Half Dozen in a Box.

Half Circle

Made of Polished Brass 4¾ inches long, unique and attractive in shape. Sprinkles a half circle. Can be moved around without shutting water off.

No. 4—Half Circle Fountain ..... Per Dozen, $8.00

Packed—Half Dozen in a Box.

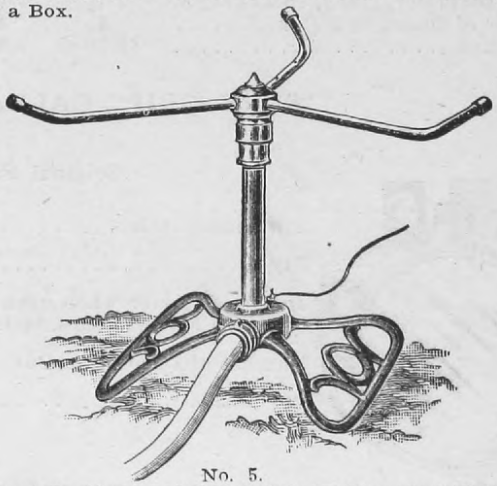


No. 54.

The C. B. G. ("Cheap but Good") Lawn Sprinkler is black japanned and built on the wellknown principle of the tangential spray. It is deservedly very popular on account of efficiency and the low price.

No. 54—Cast Iron ..... Per Dozen, $4.50

Packed—Six Dozen in a Wooden Case.



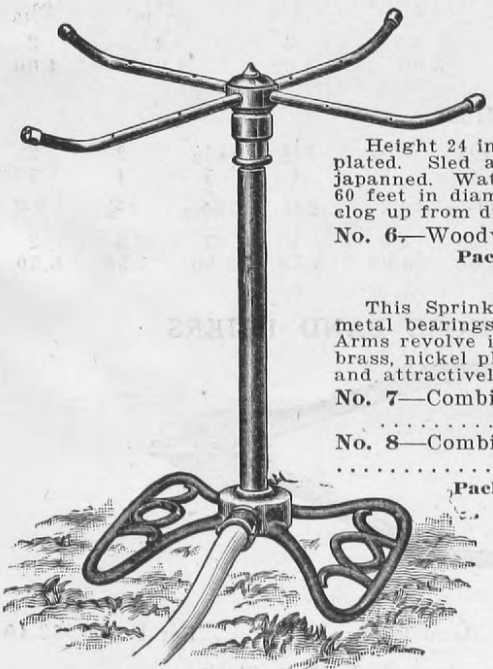
No. 5.

Peninsular

Height 12 inches, Standard, Base and Sled are of iron, heavily japanned. Head and 3 Revolving Arms are nickel plated. Throws water over an area of about 48 feet.

No. 5—Peninsular Sprinklers ..... Per Dozen, $29.00

Packed—One Twelfth Dozen in a Box.



No. 6.

Woodward

Height 24 inches. Head and 4 Revolving Arms are nickel plated. Sled and Standard are made of iron, attractively japanned. Water is thrown uniformly over an area of about 60 feet in diameter and has a very clear channel, does not clog up from dirt.

No. 6—Woodward Sprinkler ..... Per Dozen, $41.00

Packed—One Twelfth Dozen in a Box.

Combination Sprinkler

This Sprinkler has six arms and runs on two babbitt metal bearings. Top Arms revolve one way, while Bottom Arms revolve in the opposite direction Head and Arms are brass, nickel plated. Sled and Standard are iron, beautifully and attractively japanned.

No. 7—Combination Sprinkler, 12 inches high.. ..... Per Dozen, $53.00

No. 8—Combination Sprinkler, 24 inches high.. ..... Per Dozen, $58.00

Packed—One Twelfth Dozen in a Box.

Nos. 7 and 8.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"SHERMAN" WROUGHT BRASS HOSE CLAMPS

For Lawn Hose

For Hose, inch	½	⅝	¾
Ply	3	3	3
Inside Diameter, Open, inches	15/16	1 1/16	1 3/16
Number of Dozen in a Box	12	12	12
Per Dozen	$0.60	.60	.60

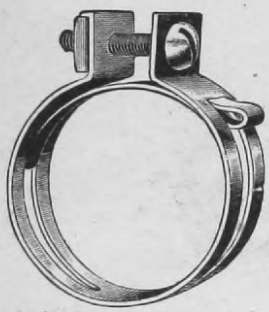
For Water Hose

For Hose, inches	1	1 ¼	1 ¼	1 ½	1 ½	2
Ply	3	3	4	3	4	3 and 4
Inside Diameter, Open, inches	1 7/16	1 21/32	1 13/16	1 15/16	2 1/16	2 9/16
Number of Dozen in a Box	6	4	4	3	3	2
Per Dozen	$2.00	2.50	2.50	3.00	3.00	4.00

For Steam Hose

For Hose, inches	¾	1	1 ¼	1 ½	1 ½	2	2	2 ½	2 ½
Ply	4	4	4	3 and 4	5	3 and 4	5	3 and 4	5
Inside Diameter, Open, inches	1 17/32	1 21/32	1 31/32	2 7/32	2 13/32	2 11/16	2 11/16	3 ¼	3 9/16
Number of Dozen in a Box	4	4	3	3	2	2	1	1	1
Per Dozen	$2.00	2.50	3.00	3.50	4.00	5.50	6.50	8.50	9.50

"SURE GRIP" GALVANIZED STEEL HOSE CLAMPS



Original Pattern.

Original Pattern for Lawn Hose

For Hose, inch	⅜	½	⅝	¾
Ply	3	3	3	3
Inside Diameter when open ½ inch between ears, inches	⅝	⅞	1 1/16	1 ⅛
Number of Dozen in a Box	12	6	6	6
Per Dozen	$1.00	1.00	1.00	1.00

Improved Pattern.

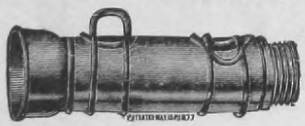
Improved Pattern for Water Hose

For Hose, inches	1	1 ¼	1 ½	1 ½	2	2
Ply	3	3	3	4	3	4
Inside Diameter when open ¾ inch between ears, inches	1 ⅜	1 11/16	2	2 ⅛	2 7/16	2 9/16
Number of Dozen in a Box	3	3	3	3	2	2
Per Dozen	$1.50	2.50	3.00	3.00	4.00	4.00

Improved Pattern for Steam Hose

For Hose, inches	¾	¾	1	1	1 ¼	1 ¼	1 ½	1 ½	2	2
Ply	3	4	4	5	4	5	4	5	4	5
Inside Diameter when open ¾ inch between ears, inches	1 5/16	1 ⅜	1 11/16	1 ¾	1 15/16	2	2 ¼	2 5/16	2 ⅝	2 ¾
Number of Dozen in a Box	3	3	3	3	3	3	3	3	2	2
Per Dozen	$1.50	1.50	2.50	2.50	3.00	3.00	3.50	3.50	5.50	5.50

HOSE BANDS

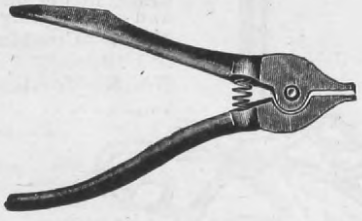


Caldwell Wire Hose Bands.

Nos.	4	6	8	12
Size Hose, inch	½	¾	¾	1
Length, inches	3 ¾	4 ⅛	4 ½	5 ⅜
Per Gross	$2.88	2.88	2.88	4.60

Packed—One Gross in a Package.

HOSE BAND PLIERS



Caldwell.

Caldwell Hose Band Pliers.....**Per Dozen, $2.40**

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GARDEN HOSE COUPLINGS

Cast Brass, Seamless, Deep Corrugations, Full Waterway.

Note.—½ and ⅝ inch, both have ¾ inch threads, fitting all Standard ¾ inch Nozzles and Sprayers.

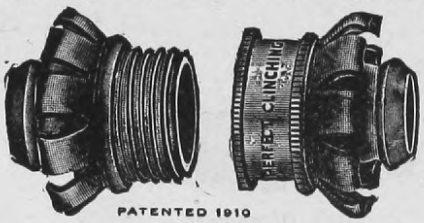
Wrought Brass, Seamless, Deep Corrugations, Full Waterway.

Inch	½	⅝	¾	1
Per Dozen	$.....	.....	.....	.....

Inch	½	⅝	¾	1
Per Dozen	$.....	.....	.....	.....

House Coupling Parts	Inch	½	⅝	¾
	Male Ends	$.....	.....	.....
	Female Ends	.....	.....	.....

GARDEN HOSE COUPLINGS



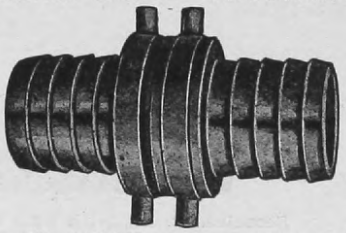
A self-fastening Wrought Brass Coupling which does not require extra bands, bolts or wires, adjusts itself to any thickness of hose, will not pull off, cannot leak or turn within the hose.

Perfect Clinching Hose Couplings:

Inch	½	⅝	¾
Per Dozen	$.....	.....	.....

Packed—One Dozen in a Display Box.

WATER HOSE COUPLINGS



Cast Brass with full Waterway. 1¼ to 2¼ inches have lugs on female swivel only, 3 inch has lugs on both male and female swivel.

Cast Brass Water Hose Couplings:

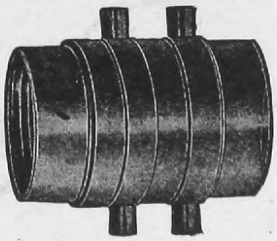
Inches	1¼	1½	2
Hose Thread.....Per Dozen,	$10.00	14.00	24.00
Iron Pipe Thread..Per Dozen,	10.50	15.00	26.00
Inches	2½	3	
Hose Thread.....Per Dozen,	$48.00	75.00	
Iron Pipe Thread.....Per Dozen,	50.00	76.00	

STEAM HOSE COUPLINGS

Long Shank, Iron Pipe Thread. Can be furnished with lugs on swivel, if so desired.

Inches	¾	1	1¼	1½	2	2½
Per Dozen	$15.00	18.00	24.00	30.00	42.00	72.00

EXPANSION RING COUPLINGS



"Mill" Expansion Ring Couplings are made for cotton rubber lined mill or unlined linen hose.

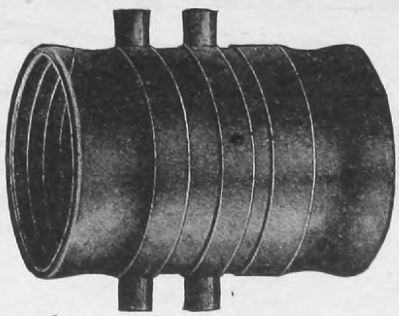
For Cotton Rubber Lined Hose

For Hose, inches..	1	1¼	1½	2	2½
Number of Tail....	7	9	11	12	13
Diam. of Tail, in...	1 5/16	1 19/32	1 27/32	2 11/32	2 7/8
Each	$....	....	....	....	....

For Unlined Linen Hose

For Hose, inches..	1	1¼	1½	2	2½
Number of Tail....	8	10	14	15	16
Diam. of Tail, in...	1 3/16	1 15/32	1¾	2 3/16	2¾
Each	$....	....	....	....	....

UNDERWRITERS' EXPANSION RING COUPLINGS



Made to conform to the requirements of the Inspection Department of the Associated Factory Mutual Fire Insurance Companies. **Instructions** for Ordering. First—Give exact outside diameter of hose, send sample of hose when possible. Second—We must have sample thread by which to cut thread on the coupling; a description of the thread will not do unless it is Iron Pipe or Hose Thread.

2½ Inch

Nos.	21	22	23	24	25	26
Size of Tail, in....	2¾	2⅞	2 15/16	3⅛	3 3/16	3¼

All Sizes.....Each, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOSE NIPPLES

No. 19.

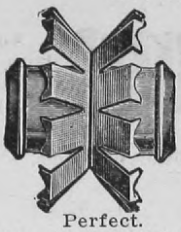
Cast Brass.

Male Hose Nipples with hose thread on one end and taper iron pipe thread on the other end.

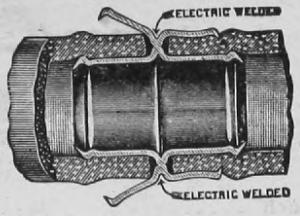
No. 19—Male Hose Nipples, ¾ inch...Per Dozen, $3.50

Packed—In Open Stock.

HOSE MENDERS



Perfect.



A One-piece Article which does the work of the Mender Tube and Two Clamps ordinarily used. Made of Seamless Brass Tubes with Steel Clamping Fingers. Simply slip it in the hose and hammer down. Leaves hose as smooth, strong and tight as the new article.

Perfect Hose Mender { Inch . ½ ⅝ ¾ / Dozen, $..... ....

Packed—Two Dozen in a Display Box.

HOSE MENDERS

Seamless Brass, with Full Waterway.

Iron, Galvanized.

Brass { Inch ..... ½ ⅝ ¾ / Per Dozen ..... $..... ....

Packed—Twelve Dozen in a Box.

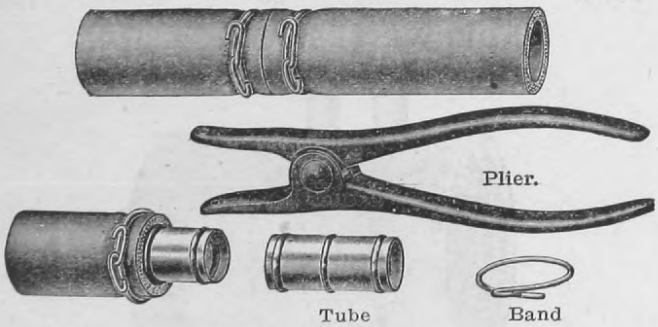
Iron { Inch ..... ½ ¾ 1 / Per Dozen.... $..... ....

Packed—½ and ¾-inch, Two Dozen; 1-inch, One Dozen in a Box.

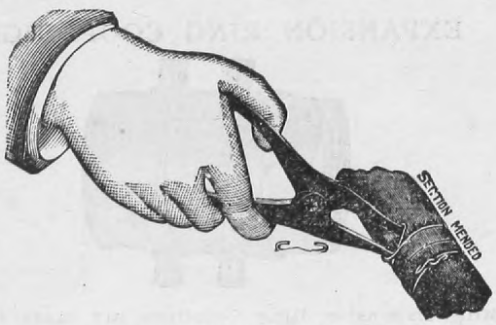
Little Wonder.

Little Wonder Wood Hose Menders { Inch ..... ½ ⅝ ¾ / Per Dozen ..... $..... ....

Packed—One Gross in a Box.



Hudson.



How to Use the Hudson.

Hudson Hose Menders

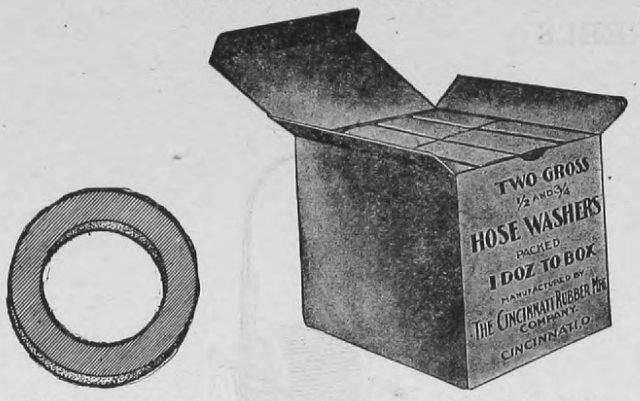
Each Box contains one pair of Pliers, six Tubes and Twenty Bands. Pliers are made of Refined Iron, Japanned. Tubes of Sheet Brass, and Bands of best malleable Brass Wire.

Hudson Hose Menders in Sets { Inch ..... ½ ⅝ ¾ / Per Dozen Sets..... $..... .... / Extra Bands.....Per Dozen, ... / Extra Pliers.....Per Dozen, $.....

Packed—One Set in a Box, One Gross in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOSE WASHERS

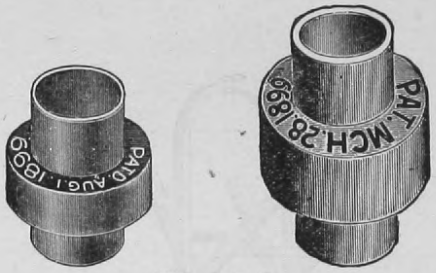


High Grade Rubber Hose Washers, for ¾ inch Couplings.

One Dozen in a Box.....Per Dozen Boxes, $0.60

One Pound (336) in a Box.....Per Pound, .64

GAUGE GLASS PRESERVERS

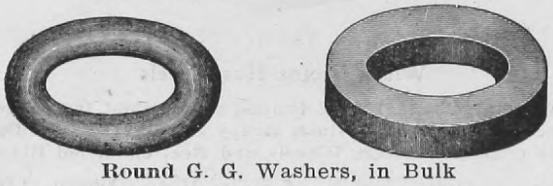


Nos. 1 to 3.

Nos.	1	2	3
Depth of Cushion, inches	¼	¼	⅜
Width of Cushion, inches	⅛	⅛	⅛
Size, inches	½	⅝	¾
Gauge Glass Preservers..Per Dozen, $1.20	1.20	1.20	

Packed—One Dozen in a Box.

GAUGE GLASS WASHERS



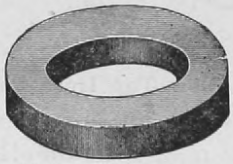
Round G. G. Washers, in Bulk

Inches	½	⅝	¾
Approx. Number in pound..	215	190	145
Per Dozen..... $.....			
All Sizes .....Per Pound, $2.40			

Square G. G. Washers, in Bulk

Inches	½	⅝	¾
Approx. Number in pound..	190	158	135
Per Dozen..... $.....			
All Sizes .....Per Pound, $1.50			

UNION WASHERS

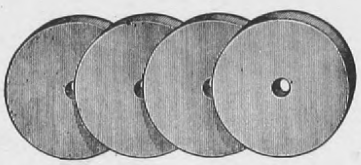


Union Washers

Inches	¼	⅜	½	¾
Approx. Number in lb..	460	360	330	200
Per Dozen .....$.....				

Inches	1	1¼	1½	2
Approx. Number in lb.	145	115	85	65
Per Dozen ....$.....				
In Bulk—All Sizes.....Per Pound, $1.50				

BIBB WASHERS



Bibb Washers

No. 1—Old Crow, Black Rubber, for **Cold** or **Hot** Water.....Inch	½	⅝	¾
Approximate Number in a Pound	425	285	225
Per 100	$.....	.....	.....
All sizes .....Per Pound, $.....			
No. 2—Standard, Red Rubber, for **Hot** Water.....Inch	½	⅝	¾
Approximate Number in a Pound	425	285	225
Per 100	$.....	.....	.....
All Sizes .....Per Pound, $2.50			
No. 3—Standard, Black Rubber, for **Cold** Water.....Inch	½	⅝	¾
Approximate Number in a Pound	425	285	225
Per 100	$.....	.....	.....
All sizes .....Per Pound, $2.30			

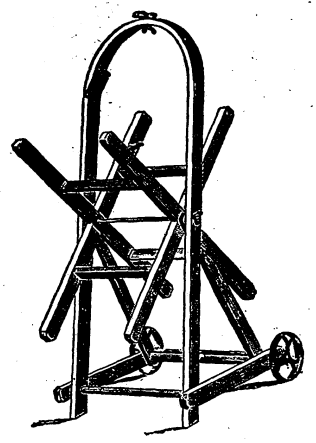
FULLER BIBB BALLS

Fuller Bibb Balls

No. 11—Old Crow, Black Rubber, for **Cold** and **Hot** Water.....Inch	½	⅝	¾
Approximate Number in a Pound	83	54	35
Per Dozen	$.....	.....	.....
All sizes .....Per Pound, $2.00			
No. 22—Standard, Red Rubber, for **Hot** Water.....Inch	½	⅝	¾
Approximate Number in a Pound	83	54	35
Per Dozen	$.....	.....	.....
All sizes .....Per Pound, $1.40			
No. 33—Standard, Black Rubber, for **Cold** Water .....Inch	½	⅝	¾
Approximate Number in a Pound	83	54	35
Per Dozen	$.....	.....	.....
All sizes .....Per Pound, $1.20			

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOSE REELS



Nos. 1 and 2.

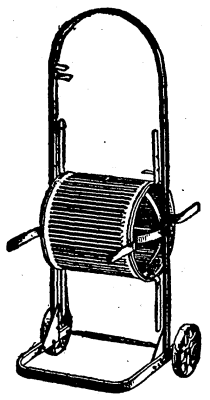
Michigan Bow Top Hose Reels

Made of Hardwood, neat, firm and substantial.

No. 1—Capacity, 125 ft. of ¾-in. Hose. Per Dozen, $14.50

No. 2—Capacity, 200 ft. of ¾-in. Hose. Per Dozen, 16.00

Packed—Half Dozen in a Bundle.



Victor.

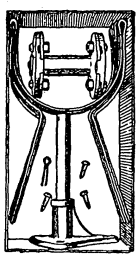
Wirt's Victor Hose Reels

All Metal, Channel Steel Frame, strong Cast Iron Wheels, Solid Steel Reel Arms, 9-inch Heavy Corrugated Iron Drum. Frame enameled Green, Wheels and Reel enameled Black.

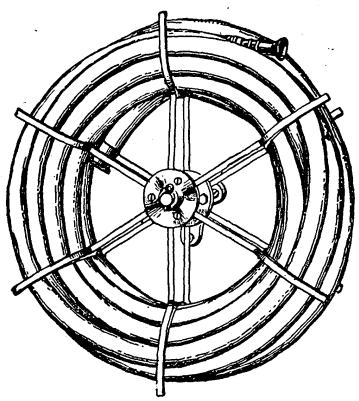
Victor—Capacity, 100 ft. of ¾-in. Hose.. Dozen, $30.00

Packed.—In Open Stock.

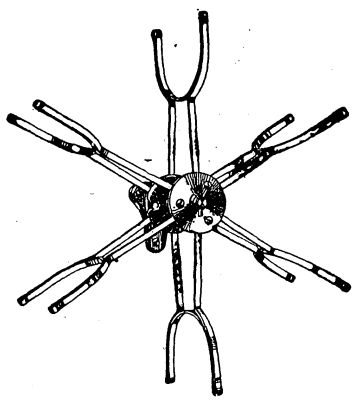
SIMPLEX HOSE REELS



The "Simplex" in its Box for Shipping; can be put together in a twinkling with a screwdriver.



Showing the "Simplex" with 50 feet of Garden Hose.



The "Simplex" without hose; neat, handy and convenient.

For attaching to Sill, Side Wall or Foundation.

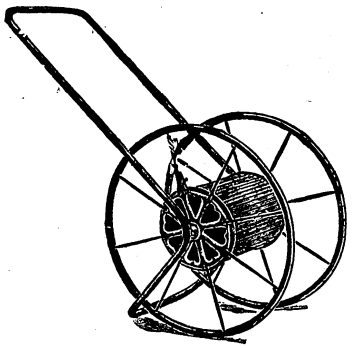
The Simplex Stationary Hose Reel fills a long felt need for those who have small gardens, lawns, back yards, etc. It will take care of the hose, prolong its life occupying very little space. The Simplex is specially designed to care for hose in the best manner. The simple operation of winding it up drains the hose of all water. It is essential to the life of the hose that it be thoroughly dry, and the best way to accomplish this is by reeling. The drum is 12 inches in diameter, which prevents kinking in even the lightest hose on the market; the outside diameter is 22 inches. Screws for fastening are furnished with each reel; packed knocked down in a strong fibre box, 11x6½x3½ inches. To the user of 25 to 50 feet hose who does not have facilities for using a portable reel, the "Simplex" will prove a very handy and popular article.

Simplex Hose Reel **Only**—Capacity, 25 to 50 feet ¾-inch Hose ..... Each, $2.20

Packed—Knocked Down, One in a Box.

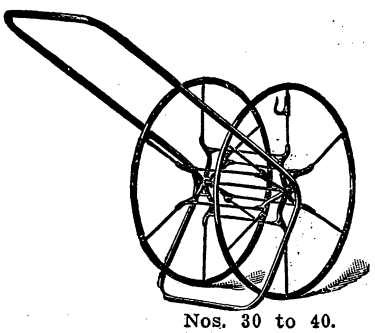
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOSE REELS



Nos. 10 and 20.

Style B, All Metal, Tubular Frame, frictionless, very simple in construction, easily manipulated. **Nos. 10 and 20** have **corrugated** drums.

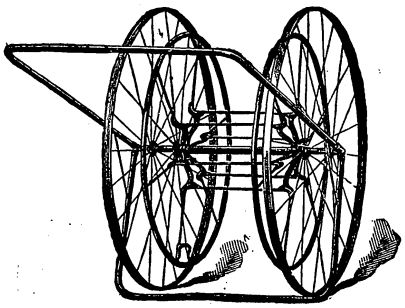


Nos. 30 to 40.

Nos.	10	20	30	35	40
Height, inches	21	24	29	32	34
Weight each, pounds	20	22	35	52	80
Capacity of ¾ inch, 3 Ply Rubber Hose, feet	100	150	400	600	800
Capacity of 1 inch, 4 Ply Rubber Hose, feet	50	75	150	200	300
Capacity of 1¼ inch, 4 Ply Rubber Hose, feet	...	...	100	150	250
Capacity of 1¼ inch Cotton Rubber Lined Hose, feet	...	100	200	350	500
Capacity of 1½ inch Cotton Rubber Lined Hose, feet	...	75	150	250	400
Capacity of 2 inch Cotton Rubber Lined Hose, feet	...	...	100	200	300
Price ..... Each,	$3.50	4.00	6.50	12.00	25.00

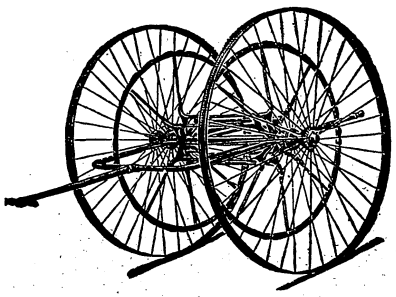
Note.—Nos. 10 and 20 can be furnished galvanized at an advance of $1.75 each list.

PARK REELS



Nos. 21 to 32.
Style C.

HOSE CARTS



Nos. 90 to 110.
Style E.

Style C Park Reels

A tubular iron reel and frame mounted on steel wheels, for parks, lawns, greenhouses, etc. Enameled Green.

Nos.	21	31	32
Height of Wheels, inches	28	34	38
Width of Wheels, inches	1⅛	1⅛	1¾
Extreme Outside Width, inches	26	27	38
Weight each, pounds	45	58	100
Capacity of ¾ inch, 3 Ply Rubber Hose, feet	200	500	800
Capacity of 1 inch, 4 Ply Rubber Hose, feet	100	200	350
Capacity of 1¼ inch, 4 Ply Rubber Hose, feet	75	150	250
Capacity of 1¼ inch Cotton Rubber Lined Hose, feet	150	300	500
Capacity of 1½ inch Cotton Rubber Lined Hose, feet	100	200	350
Capacity of 2 inch Cotton Rubber Lined Hose, feet	75	150	250
Capacity of 2½ inch Cotton Rubber Lined Hose, feet	50	100	200
Price ..... Each,	$7.50	10.50	25.00

Style E Little Knox Hose Carts

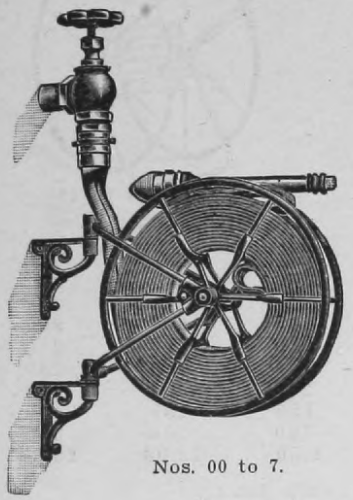
Tubular Steel Reel, Frame and Tongue, Steel Wheels with Wide Tires. Enameled Green.

Nos.	90	100	110
Height of Wheels, inches	36	36	38
Extreme Outside Width, inches	31	33	38
Weight each, pounds	75	90	100
Capacity of ¾ inch, 3 Ply Rubber Hose, feet	500	600	800
Capacity of 1 inch, 4 Ply Rubber Hose, feet	200	300	400
Capacity of 1¼ inch, 4 Ply Rubber Hose, feet	150	200	300
Capacity of 1½ inch, 4 Ply Rubber Hose, feet	100	150	200
Capacity of 1¼ inch Cotton Rubber Lined Hose, feet	300	400	500
Capacity of 1½ inch Cotton Rubber Lined Hose, feet	200	300	400
Capacity of 2 inch Cotton Rubber Lined Hose, feet	150	200	250
Capacity of 2½ inch Cotton Rubber Lined Hose, feet	100	150	200
Price ..... Each,	$12.00	17.00	25.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOSE REELS

Style V, Wirt's Swinging Wall Reels

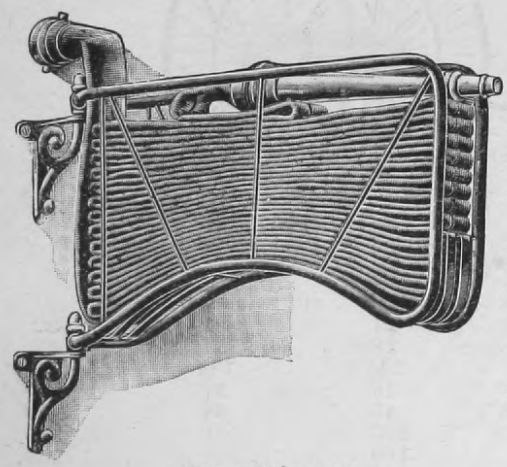


Nos. 00 to 7.

Made of steel tubing, steel rod and wire and malleable castings. Strong, serviceable and ornamental, takes up less space and presents less surface for the accumulation of dust than any other made. Will swing to any angle from wall, hose will unwind without a knot or twist. Tension axles are used so reel may be adjusted to run tight or loose, as desired. Finished in Vermillion. **Furnished** with wall brackets or pipe clamps, as desired. No extra charge for pipe clamps up to and including 4 inches. 5 inch clamps, 35c; 6 inch, 50c; 7 inch, 65c and 8 inch, 75c, per pair, **net** extra.

Nos	Capacity Feet	Size and Kind of Hose	No. of Tiers	Width Inches	Diameter Inches	Each
00	50	2 inch Unlined Linen.....	One	3¾	15	$6.00
000	50	2½ inch Unlined Linen.....	One	4⅝	15	6.00
2½	100	2 inch Unlined Linen.....	One	4¼	21	6.00
3½	100	2½ inch Unlined Linen.....	One	4⅞	21	6.00
3	50	2 inch Cotton, Rubber Lined	One	4¼	26	6.00
4	50	2½ inch Cotton, Rubber Lined	One	4⅞	26	6.50
6	100	2 inch Cotton, Rubber Lined	Two	8	26	8.00
7	100	2½ inch Cotton, Rubber Lined	Two	9	26	8.50

WIRT'S STYLE T HUMP HOSE RACKS



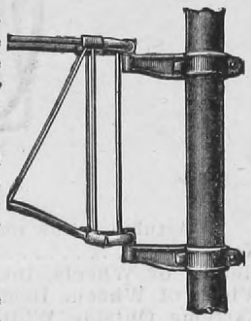
Nos. AOX to A6.

There are twenty-five breaks or folds in a fifty-foot length of hose. On a straight flat bottom these breaks are sharp; on a bottom that is higher in the center than at the ends, the weight is taken off the ends, and these breaks become easy folds and therefore the hose will not break at folds when run off.

The end, or front of the rack is partially enclosed in order that at least five folds of hose must be drawn off. Other racks have the entire end open; and a sudden jerk will often pull the entire length of hose to the floor in a tangled mass. Japanned Red.

Note.

Unless pipe clamps are specified Racks will be shipped with wall brackets. List price covers Brackets, or Pipe Clamps up to 4 inches.



Showing Pipe Clamps.

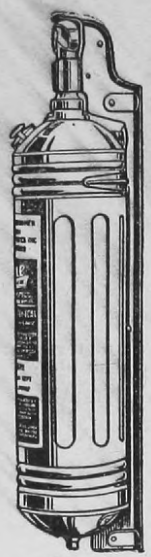
Nos.	Capacity Feet	Size and Kind of Hose.	Height Inches	Length Inches	Each
A0X	50	2 inch Unlined Linen.....	11	22	$5.00
A00	50	2½ inch Unlined Linen.....	11	22	5.00
A1X	100	2 inch Unlined Linen.....	16	24	6.00
A2	100	2½ inch Unlined Linen.....	16	24	6.00
A3X	150	2 inch Unlined Linen.....	23	28	7.00
A4	150	2½ inch Unlined Linen.....	23	28	7.00
A3	50	1¼ or 1½ inch Cotton Rubber Lined Mill	23	28	7.00
A3XC	50	2 inch Cotton Rubber Lined Mill.....	23	28	7.00
A4C	50	2½ inch Cotton Rubber Lined Mill.....	23	28	7.00
A5C	100	1¼ or 1½ inch Cotton Rubber Lined Mill	34	34	7.50
A5X	100	2 inch Cotton Rubber Lined Mill.....	34	34	7.50
A6	100	2½ inch Cotton Rubber Lined Mill.....	34	34	8.00

Note.—When ordering racks with pipe clamps, be sure to give size of pipe they are to fit, and if pipe is not standard size, give outside diameter.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FIRE EXTINGUISHERS

PYRENE FIRE EXTINGUISHER



Pyrene.

Pyrene, approved by the National Board of Fire Underwriters, is an Extinguisher that will put out any kind of fire as curtain fires, stove fires, automobile fires, chimney fires, etc. Size of the Extinguisher is 3 inches in diameter and 14 inches in length, weight filled 6 pounds. Very handy to attach to any motor-car. Used as a double acting pump of one quart capacity, strongly built of brass and white metal. Will throw a continuous stream to a distance of about 25 feet. Pyrene liquid which is non-deteriorating and does not freeze at a temperature of 50 degrees below zero, is a combination of purely organic materials, contains neither acid, alkali nor salts and will not stain anything with which it may come in contact.

Automobile Insurance—All Insurance Companies reduce your fire premium 15%, if car is equipped with Pyrene Extinguisher.

Pyrene Brass Fire Extinguisher including Bracket, filled for immediate use ..... Each, $15.00

Pyrene Nickel Plated Fire Extinguisher including Bracket, filled for immediate use ..... Each, 16.50

Pyrene Liquid—In Quart Cans ..... Per Quart, ...

Pyrene Liquid—In Gallon Cans ..... Per Gallon, ...

J-M.

J-M FIRE EXTINGUISHER

The **J-M** Extinguisher approved by the Underwriter Laboratories, is the only device using compressed air to discharge the fluid. It can be pumped and aimed instantaneously, or by a few seconds easy pumping enough air pressure is developed to shoot a steady stream 30 feet; the nozzle lever is easily pushed open or shut, leaving both hands free to direct the continuous stream. The device is 3 inches in diameter, 14 inches long and weighs 8 pounds filled. The liquid is non-deteriorating and dialectric.

Automobile Insurance—All insurance companies reduce your fire premium 15% if car is equipped with J-M Fire Extinguisher.

J-M Nickel Plated Fire Extinguisher including Brackets, filled for immediate use ..... Each, $15.00

J-M Brass Fire Extinguisher including Brackets, filled for use ..... Each, 16.50

J-M Liquid—Quart Size ..... Per Quart, ...

LIBERTY FIRE EXTINGUISHER

Liberty.

These Extinguishers consist of a metallic tube filled with a dry chemical which instantly destroys, by scientifically smothering all kinds of fire, no matter how fierce or savage. The chemical never freezes, cakes or hardens in the tube but retains all its fire destroying powers until used.

Liberty Fire Extinguishers, 22x2 inches ..... Per Dozen, $15.00

BUHL FIRE EXTINGUISHER

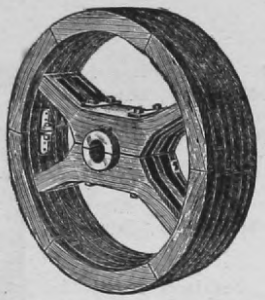
Examined, Labeled and Approved under the direction of the National Board of Fire Underwriters. Made of extra heavy, cold rolled Copper, securely riveted and reinforced by heavy shoulders of solder. Each one is tested to stand a pressure of 350 pounds to the square inch. The method of attaching the dome to the bottom of the shell makes that joint the strongest part. The Bottle containing the sulphuric acid is of a standard size and type, and the bottle holder is of cast brass. The Hose is of the best quality, tested to stand a 400 pound pressure and cannot be torn off. Nozzle is absolutely Non-corrosive. The Extinguisher works automatically and as the right amount of gas is generated at all times it cannot explode. Bottom cannot be forced out no matter how great the pressure, as it is securely held by a heavy backing of solder.

Buhl, Standard or Riveted Type Fire Extinguishers ..... Each, $16.50

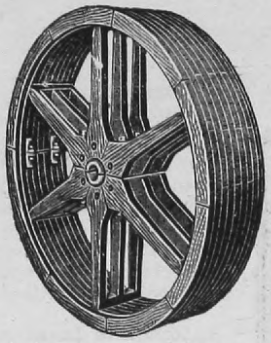
Buhl.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GILBERT WOOD SPLIT PULLEYS

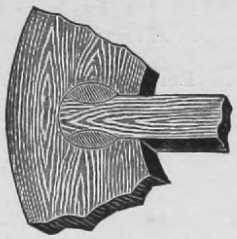


Gilbert Pulleys are unique in design among wood pulleys, and superior in workmanship and finish. They are lower in first cost than iron and steel pulleys, and much cheaper to operate, owing to their light weight as compared with metal pulleys, for this decrease in weight means less friction on the journals and less strain on the shafting. According to Haswell, the leading American authority, wood pulleys will transmit nearly twice the power of metal pulleys at the same belt tension. Gilbert pulleys are in absolutely correct balance, the inside of the rims being turned as well as the face. Gilbert bushings are the finest made, special machines and only the finest stock being used.



Style "B."—12 to 24 inches.

Pulleys from 12 inches to 24 inches in diameter, inclusive, are constructed with four sets of spokes, as shown above.



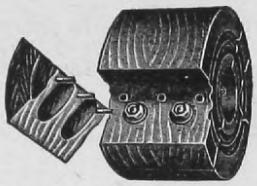
The spokes are built up separately from the rim, and then, under extreme pressure, are forced into it and keyed tightly in place with elliptical maple keys.

It will be observed that our method of recessing the rim to receive the spokes does not cut a sharp angle out of the rim, extending close to the outer edge and rendering it liable to fracture under severe shocks, as is the case with the form of dovetail ordinarily used.

Style "B."—25 to 70 inches.

Pulleys from 25 inches to 70 inches in diameter inclusive, are constructed with six sets of spokes, as shown above.

Pulleys 72 inches in diameter and larger have eight sets of spokes.

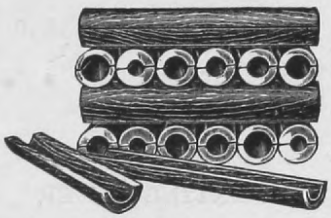


Style "C."—3 to 14 inches.

Made in sizes from 3 to 14 inches in diameter.

Our Style C Pulley is regarded almost universally as incomparably superior to any similar article manufactured.

WOOD BUSHINGS

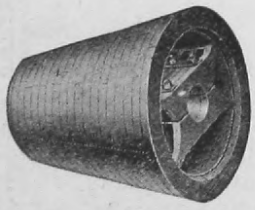


Made in halves exclusively from thoroughly air-seasoned and kiln-dried, selected hard maple, turned on the outside and bored on the inside to exact size. One complete bushing of length required by pulley hub is furnished with each pulley without charge.

Extra or Separate Bushings.

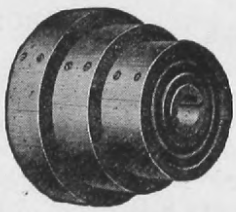
10 inches or less of complete bushing	50 cents
More than 10 inches of complete bushing, per inch	5 cents

TAPER CONE PULLEYS



Taper Cone Pulleys are made to order in either Style C or Style B. To find price, use list for largest diameter and full width of face, and add 25 per cent to make total list.

STEP CONE PULLEYS



Step Cone Pulleys are made to order in either Style C or Style B. To find price, consider each step as a separate pulley, take list for standard pulleys, and add 50 per cent.

Special Pulleys

Flange Pulleys, Rope Transmission Pulleys and other Special Pulleys will be made to order according to specifications and subject to Standard Extras for each Special requirement.

Digitized by
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

GILBERT WOOD SPLIT PULLEYS

With Standard Bushings.

Diameter Inches	Width of Face, Inches												
	3	4	5	6	8	10	12	14	16	18	20	22	24
4	$2.80	$ 2.90	$ 3.10	$ 3.30	$ 3.70	$ 4.10	$ 4.50	.....	.....	.....	.....	.....	.....
5	2.85	2.95	3.20	3.40	3.85	4.30	4.75	.....	.....	.....	.....	.....	.....
6	2.90	3.00	3.25	3.50	4.00	4.50	5.00	.....	.....	.....	.....	.....	.....
7	2.95	3.05	3.35	3.60	4.15	4.70	5.25	$ 5.80	.....	.....	.....	.....	.....
8	3.00	3.10	3.40	3.70	4.30	4.90	5.50	6.10	.....	.....	.....	.....	.....
9	3.10	3.25	3.60	3.90	4.55	5.20	5.85	6.50	.....	.....	.....	.....	.....
10	3.25	3.40	3.75	4.10	4.80	5.50	6.20	6.90	$ 7.60	.....	.....	.....	.....
11	3.50	3.70	4.10	4.50	5.30	6.10	6.90	7.70	8.50	.....	.....	.....	.....
12	3.75	4.00	4.45	4.90	5.80	6.70	7.60	8.50	9.40	$10.30	.....	.....	.....
13	.....	4.30	4.80	5.30	6.30	7.30	8.30	9.30	10.30	11.30	.....	.....	.....
14	.....	4.60	5.15	5.70	6.80	7.90	9.00	10.10	11.20	12.30	$13.40	.....	.....
15	.....	4.90	5.50	6.10	7.30	8.50	9.70	10.90	12.10	13.30	14.50	.....	.....
16	.....	5.20	5.85	6.50	7.80	9.10	10.40	11.70	13.00	14.30	15.60	$16.90	.....
17	.....	5.50	6.20	6.90	8.30	9.70	11.10	12.50	13.90	15.30	16.70	18.10	.....
18	.....	5.80	6.55	7.30	8.80	10.30	11.80	13.30	14.80	16.30	17.80	19.30	$ 20.80
19	.....	6.10	6.90	7.70	9.30	10.90	12.50	14.10	15.70	17.30	18.90	20.50	22.10
20	.....	6.40	7.25	8.10	9.80	11.50	13.20	14.90	16.60	18.30	20.00	21.70	23.40
22	.....	7.00	7.95	8.90	10.80	12.70	14.60	16.50	18.40	20.30	22.20	24.10	26.00
24	.....	7.70	8.80	9.90	12.10	14.30	16.50	18.70	20.90	23.10	25.30	27.50	29.70
26	.....	8.40	9.65	10.90	13.40	15.90	18.40	20.90	23.40	25.90	28.40	30.90	33.40
28	.....	9.10	10.50	11.90	14.70	17.50	20.30	23.10	25.90	28.70	31.50	34.30	37.10
30	.....	9.80	11.35	12.90	16.00	19.10	22.20	25.30	28.40	31.50	34.60	37.70	40.80
32	.....	10.50	12.20	13.90	17.30	20.70	24.10	27.50	30.90	34.30	37.70	41.10	44.50
34	.....	11.30	13.15	15.00	18.70	22.40	26.10	29.80	33.50	37.20	40.90	44.60	48.30
36	.....	12.10	14.10	16.10	20.10	24.10	28.10	32.10	36.10	40.10	44.10	48.10	52.10
38	.....	.....	.....	17.20	21.50	25.80	30.10	34.40	38.70	43.00	47.30	51.60	55.90
40	.....	.....	.....	18.30	22.90	27.50	32.10	36.70	41.30	45.90	50.50	55.10	59.70
42	.....	.....	.....	19.60	24.60	29.60	34.60	39.60	44.60	49.60	54.60	59.60	64.60
44	.....	.....	.....	20.90	26.30	31.70	37.10	42.50	47.90	53.30	58.70	64.10	69.50
46	.....	.....	.....	22.30	28.10	33.90	39.70	45.50	51.30	57.10	62.90	68.70	74.50
48	.....	.....	.....	23.80	30.00	36.20	42.40	48.60	54.80	61.00	67.20	73.40	79.60
50	.....	.....	.....	25.40	32.00	38.60	45.20	51.80	58.40	65.00	71.60	78.20	84.80
52	.....	.....	.....	27.10	34.10	41.10	48.10	55.10	62.10	69.10	76.10	83.10	90.10
54	.....	.....	.....	28.90	36.30	43.70	51.10	58.50	65.90	73.30	80.70	88.10	95.50
56	.....	.....	.....	30.80	38.60	46.40	54.20	62.00	69.80	77.60	85.40	93.20	101.00
58	.....	.....	.....	32.80	41.00	49.20	57.40	65.60	73.80	82.00	90.20	98.40	106.60
60	.....	.....	.....	34.90	43.50	52.10	60.70	69.30	77.90	86.50	95.10	103.70	112.30
62	.....	.....	.....	37.10	46.10	55.10	64.10	73.10	82.10	91.10	100.10	109.10	118.10
64	.....	.....	.....	39.40	48.80	58.20	67.60	77.00	86.40	95.80	105.20	114.60	124.00
66	.....	.....	.....	41.90	51.80	61.70	71.60	81.50	91.40	101.30	111.20	121.10	131.00
68	.....	.....	.....	44.50	54.90	65.30	75.70	86.10	96.50	106.90	117.30	127.70	138.10
70	.....	.....	.....	47.20	58.10	69.00	79.90	90.80	101.70	112.60	123.50	134.40	145.30
72	.....	.....	.....	50.00	61.40	72.80	84.20	95.60	107.00	118.40	129.80	141.20	152.60

Fractional and Odd Diameters

For a pulley whose diameter is expressed in fractions of an inch, or in odd inches not listed, use the list of the next larger diameter listed.

Fractional and Odd Face Widths

For a pulley whose face width is expressed in fractions of an inch, or in odd inches not listed, use the list of the next wider face listed. Pulleys having a narrower face than is listed take the list of the narrowest face listed.

Flange Pulleys

For flange pulleys, add to regular list 20% for single flange, 25% for double flange, and 30% for triple flange. No extra charge for crating.

Offset Hubs

For pulleys with offset hubs, add 10 per cent to final list arrived at after adding for extras, such as large bores, flanges, etc.

Standard Bores of Wood Split Pulleys

Diameter of Pulley, inches	3 to 4 Incl.	4 to 17 Incl	18 to 48 Incl
Bore, inches	1 11/16	2 1/2	3 1/2

Extra Large Bores

Diameter Inches	Add to List Price					
	15%	20%	25%	35%	50%	65%
Under 12	3 9/16 to 4 in.	4 1/16 to 5 in.	5 1/16 to 6 in.	.....	.....	.....
12 to 48	4 1/16 to 4 1/2 in.	4 9/16 to 6 in.	6 1/16 to 7 1/2 in.	7 9/16 to 10 in.	.....	.....
49 to 72	5 1/16 to 6 in.	6 1/16 to 7 1/2 in.	7 9/16 to 9 1/2 in.	9 9/16 to 12 in.	12 1/16 to 15 in.	15 1/16 to 18 in.
73 to 96	7 1/16 to 8 in.	8 1/16 to 10 in.	10 1/16 to 12 in.	12 1/16 to 15 in.	15 1/16 to 18 in.	18 1/16 to 21 in.
97 to 120	9 1/16 to 10 in.	10 1/16 to 12 1/2 in.	12 9/16 to 15 in.	15 1/16 to 18 in.	18 1/16 to 21 in.	21 1/16 to 25 in.

Note—For bores in excess of above limits, net prices will be made on application.

Special Bores

For boring pulleys to fit shaft when bore is less than standard, or for boring pulleys larger than standard but smaller than bores shown in the above table, add 10% to regular list price.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Cut showing construction of 6 to 42-inch.

AMERICAN ALL-WROUGHT STEEL SPLIT PULLEYS

With Interchangeable Bushings.

Metal Bushings to Fit any Shaft.

Cut showing construction of 44 to 60-inch.

EJ%

Diameter. Inches	Width of Face, Inches																
	2	3	4	5	6	8	10	12	14	16	18	20	22	24	26	28	30
6	$3.15	$3.30	$3.45	$3.75	$4.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	3.22	3.38	3.60	3.90	4.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	3.30	3.45	3.75	4.05	4.35	$4.95	$5.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9	3.38	3.60	3.90	4.20	4.50	5.10	5.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	3.45	3.75	4.05	4.35	4.65	5.25	5.90	$ 6.45	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	3.65	3.90	4.20	4.50	4.80	5.40	6.00	6.90	DOUBLE ARM								.....
12	3.90	4.20	4.63	4.80	5.33	5.78	6.45	7.65	$9.00	$10.25	.....	.....	.....	.....	.....	.....	.....
13	4.05	4.35	4.80	5.20	5.62	6.43	7.20	8.40	9.50	10.75	.....	.....	.....	.....	.....	.....	.....
14	4.20	4.50	5.20	5.65	6.15	7.05	8.03	9.00	10.00	11.25	.....	.....	.....	.....	.....	.....	.....
15	4.35	4.65	5.45	5.80	6.55	7.65	8.80	9.75	10.75	12.00	.....	.....	.....	.....	.....	.....	TRIPLE ARM
16	4.50	4.95	5.75	6.10	6.90	8.25	9.45	10.50	11.50	12.65	.....	.....	.....	.....	.....	.....	
17	.....	5.25	6.00	6.50	7.28	8.78	10.05	11.25	12.40	13.65	.....	.....	.....	.....	.....	.....	
18	.....	5.55	6.38	7.00	7.65	9.30	10.65	12.00	13.25	14.50	.....	.....	.....	.....	.....	.....	
19	.....	5.80	6.75	7.50	8.25	10.13	11.25	12.90	14.20	15.60	.....	.....	.....	.....	.....	.....	
20	.....	6.00	7.50	8.10	9.00	10.73	12.00	14.25	15.30	16.90	$18.50	.....	.....	.....	.....	.....	
21	.....	6.25	8.00	8.90	9.60	11.25	12.98	15.60	18.00	20.55	22.60	.....	.....	.....	.....	.....	
22	.....	6.50	8.55	9.50	10.28	12.00	14.10	16.80	19.50	21.30	23.43	.....	.....	.....	.....	.....	
23	.....	7.00	8.70	9.90	10.58	12.60	14.75	18.00	21.00	24.30	26.73	.....	.....	.....	.....	.....	.....
24	.....	7.50	8.90	10.00	10.95	13.20	15.68	19.05	22.65	26.25	29.92	$34.50	.....	.....	.....	.....	.....
25	.....	.....	9.20	.....	11.45	13.80	16.40	20.20	24.50	29.25	35.05	39.50	.....	.....	.....	.....	.....
26	.....	.....	9.55	.....	11.95	14.40	17.10	21.30	26.25	31.20	36.15	41.40	.....	.....	.....	.....	.....
28	.....	.....	10.80	.....	12.90	15.45	18.15	22.90	28.50	34.50	40.35	46.35	.....	.....	.....	.....	.....
30	.....	.....	12.00	.....	14.10	17.25	19.90	24.75	31.50	38.10	45.00	49.50	$55.50	$61.50	$67.50	$74.25	$81.67
32	.....	.....	13.20	.....	15.45	19.35	22.50	26.86	34.15	41.65	48.37	54.37	60.37	66.37	72.37	79.60	87.56
34	.....	.....	14.40	.....	17.25	21.75	25.50	30.00	36.75	45.00	51.75	57.45	63.75	69.75	75.00	82.50	90.75
36	.....	.....	15.90	.....	19.50	24.00	28.65	33.75	39.75	48.60	55.50	61.50	67.50	73.50	79.50	87.45	96.19
38	.....	.....	19.50	.....	21.75	26.40	31.05	37.15	42.75	51.75	58.87	64.87	70.87	76.87	82.87	91.15	100.26
40	.....	.....	21.00	.....	24.00	28.50	33.75	40.15	46.50	55.15	62.25	69.75	77.25	84.75	92.55	101.80	111.98
42	.....	.....	23.25	.....	26.25	32.25	37.50	43.50	50.25	57.75	65.62	73.12	80.62	88.12	95.62	105.18	115.69
44	.....	.....	.....	.....	29.25	35.62	41.25	47.25	54.00	61.12	69.00	78.00	87.00	96.00	105.00	115.50	127.05
46	.....	.....	.....	.....	33.00	39.00	45.00	50.25	57.75	64.50	72.00	81.00	90.00	99.00	108.00	118.80	130.68
48	.....	.....	.....	.....	36.75	42.00	48.75	54.00	61.50	67.50	75.00	87.00	99.00	111.00	123.00	135.30	148.83
50	.....	.....	.....	.....	40.87	47.25	53.25	58.50	66.00	75.00	84.00	96.00	108.00	120.00	132.00	145.20	159.72
52	.....	.....	.....	.....	46.50	51.00	57.00	63.00	69.00	78.75	90.00	102.00	114.00	126.00	138.00	151.80	166.98
54	.....	.....	.....	.....	50.25	56.25	61.50	67.50	74.25	83.25	96.75	108.75	120.75	132.75	144.75	159.22	175.14
56	.....	.....	.....	.....	54.00	60.75	66.75	72.75	80.25	90.00	104.25	119.25	134.25	149.25	164.25	180.67	198.73
58	.....	.....	.....	.....	60.00	65.25	71.25	78.37	86.62	96.37	110.62	125.62	140.62	155.62	170.62	187.68	206.44
60	.....	.....	.....	.....	63.75	70.50	77.25	84.00	93.00	102.75	117.00	132.00	147.00	162.00	177.00	194.70	214.17

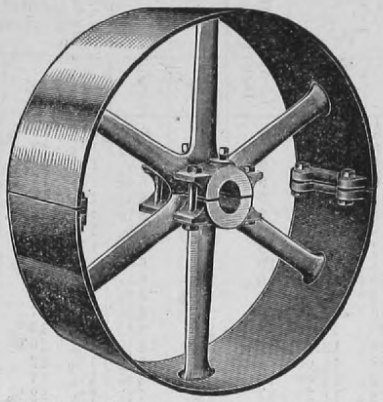
Table of Standard Hubs and Bores of American All-Wrought Steel Split Pulleys.

Diameter Inches	Face Inches	Bore Inches	Hub Inches	Diameter Inches	Face Inches	Bore Inches	Hub Inches	Diameter Inches	Face Inches	Bore Inches	Hub Inches
7	3 to 6	2 7/16	3 ½	14	3 and 4	2 15/16	4 ½	24	4	2 15/16	4 ½
8	3	2 7/16	3 ½	14	5 to 12	3 7/16	5 ½	24	6 to 12	3 7/16	5 ½
8	4 to 10	2 15/16	4 ½	15	3 and 4	2 15/16	4 ½	26	4 to 8	3 7/16	5 ½
9	3	2 7/16	3 ½	15	5 to 10	3 7/16	5 ½	26	10 and 12	4 7/16	6 ½
9	4 to 10	2 15/16	4 ½	16	3 and 4	2 15/16	4 ½	28	4 to 8	3 7/16	5 ½
10	3	2 7/16	3 ½	16	5 to 12	3 7/16	5 ½	28	10 and 12	4 7/16	6 ½
10	4	2 15/16	4 ½	18	3 and 4	2 15/16	4 ½	30	4 to 8	3 7/16	5 ½
10	5 to 12	3 7/16	5 ½	18	5 to 12	3 7/16	5 ½	30	10 and 12	4 7/16	6 ½
11	4	2 15/16	4 ½	20	4	2 15/16	4 ½	32 to 36	4 to 12	4 7/16	6 ½
11	6 to 10	3 7/16	5 ½	20	6 to 12	3 7/16	5 ½	38	6 to 14	4 7/16	6 ½
12	3 and 4	2 15/16	4 ½	22	4	2 15/16	4 ½	40 to 44	6 to 12	4 7/16	6 ½
12	5 to 12	3 7/16	5 ½	22	6 to 12	3 7/16	5 ½	46 and 48	6 to 12	4 7/16	8 ½

Extras for Large Bores.

For pulleys 14 in. to 24 in. diameter inclusive when made on 4 7/16 in. bore, add $1.00 net.
For pulleys 25 in. to 30 in. diameter inclusive 4 in. to 8 in. face inclusive, when made on 4 7/16 in. bore, add $1.25 net.
For pulleys 30 in. to 48 in. diameter inclusive up to and including 16 in. face, when made on 6 in. bore, add $3.00 net.
For pulleys 30 in. to 48 in. diameter inclusive with faces wider than 16 in., when made on 6 in. bore, add $4.50 net.
For pulleys 50 in. to 60 in. diameter inclusive up to and including 16 in. face, when made on 6 in. bore, add $2.00 net.
For pulleys 50 in. to 60 in. diameter inclusive with faces wider than 16 in., when made on 6 in. bore, add $3.00 net.
For key-seating, add 25 cents net for pulleys to 16 in. face inclusive, and 50 cents net for pulleys with wider faces.
For intermediate sizes, not listed, prices on application. For single and double flange pulleys, prices on application.

CAST IRON PULLEYS



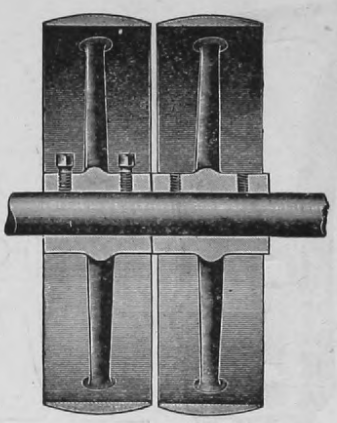
"SPLIT" CAST IRON SINGLE BELT PULLEYS

Diameter in inches	Face in Inches								Largest bore, in., reg. price
	3	4	5	6	7	8	9	10	
6	$3.70	$4.00	$4.60	$4.95	$5.60	$6.05	.....	.....	1 15/16
7	3.90	4.25	4.85	5.25	5.95	6.40	.....	.....	1 15/16
8	4.25	4.60	5.30	5.70	6.45	6.95	.....	.....	1 15/16
9	4.50	4.85	5.55	6.00	6.80	7.30	.....	.....	1 15/16
10	4.80	5.20	6.00	6.45	7.30	7.85	.....	.....	2 7/16
11	5.00	5.45	6.25	6.75	7.65	8.25	.....	.....	2 7/16
12	5.40	5.85	6.75	7.30	8.30	8.90	.....	.....	2 7/16
13	5.70	6.15	7.10	7.70	8.70	9.35	$10.50	.....	2 7/16
14	6.00	6.60	7.50	8.15	9.30	9.95	11.30	.....	2 7/16
15	6.30	6.80	8.05	8.50	9.70	10.05	11.95	.....	2 7/16
16	6.75	7.30	8.40	9.10	10.40	11.30	12.85	.....	2 15/16
17	7.00	7.60	8.85	9.60	10.95	11.95	13.40	.....	2 15/16
18	7.45	8.05	9.40	10.20	11.70	12.65	14.35	.....	2 15/16
19	7.70	8.50	9.85	10.70	12.20	13.20	14.90	.....	2 15/16
20	8.20	9.10	10.60	11.55	13.10	14.10	15.85	$17.00	2 15/16
21	8.50	9.45	11.05	12.05	13.65	14.65	16.40	17.55	3 7/16
22	9.00	10.05	11.75	12.80	14.50	15.50	17.30	18.50	3 7/16
23	9.35	10.45	12.20	13.30	15.05	16.10	17.95	19.10	3 7/16
24	9.85	11.00	12.90	14.05	15.90	17.05	19.00	20.20	3 7/16

"SOLID" CAST IRON SINGLE BELT PULLEYS

Diameter in inches	Face in Inches								Largest bore, in., reg. price
	3	4	5	6	7	8	9	10	
6	$2.20	$2.50	$2.85	$3.20	$3.60	$4.05	.....	.....	1 15/16
7	2.40	2.75	3.10	3.50	3.95	4.40	.....	.....	1 15/16
8	2.65	3.00	3.40	3.80	4.25	4.75	.....	.....	1 15/16
9	2.90	3.25	3.65	4.10	4.60	5.10	.....	.....	1 15/16
10	3.10	3.50	3.95	4.40	4.90	5.45	.....	.....	2 7/16
11	3.30	3.75	4.20	4.70	5.25	5.85	.....	.....	2 7/16
12	3.60	4.05	4.55	5.10	5.70	6.30	.....	.....	2 7/16
13	3.65	4.35	4.90	5.50	6.10	6.75	$ 7.45	.....	2 7/16
14	4.05	4.65	5.10	5.75	6.45	7.20	7.95	.....	2 7/16
15	4.35	4.85	5.65	6.10	6.85	7.70	8.60	.....	2 7/16
16	4.65	5.20	5.80	6.50	7.30	8.20	9.20	.....	2 15/16
17	4.90	5.50	6.25	7.00	7.85	8.75	9.75	.....	2 15/16
18	5.20	5.85	6.60	7.40	8.30	9.30	10.40	.....	2 15/16
19	5.45	6.25	7.05	7.90	8.85	9.85	10.95	.....	2 15/16
20	5.75	6.65	7.55	8.50	9.45	10.45	11.55	$12.70	2 15/16
21	6.05	7.00	8.00	9.00	10.00	11.00	12.10	13.25	3 7/16
22	6.35	7.40	8.45	9.50	10.55	11.55	12.65	13.85	3 7/16
23	6.70	7.80	8.90	10.00	11.10	12.15	13.30	14.45	3 7/16
24	7.05	8.20	9.35	10.50	11.65	12.80	14.00	15.20	3 7/16

TIGHT AND LOOSE PULLEYS

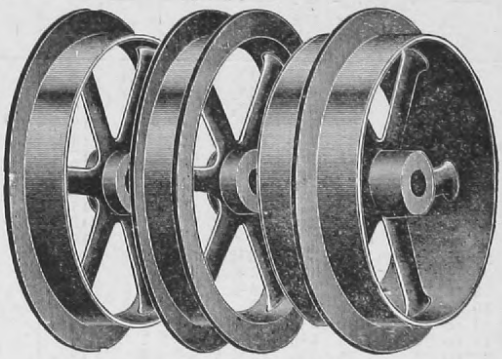


Additional Prices to be Added to the List Prices of Two Standard Pulleys.

Diameter, in inches	Face in Inches			
	3 and 4	5 and 6	7 and 8	9 and 10
6 to 9	$1.30	$2.00	$3.00	$4.50
10 to 15	1.50	2.30	3.40	5.00
16 to 20	2.10	2.90	4.00	5.50
21 to 24	3.30	4.10	5.20	6.80

Tight and Loose Pulleys should be made with crowning faces.

SINGLE AND DOUBLE FLANGE PULLEYS



Additional Prices to be Added to the List Prices of Cast Iron Pulleys.

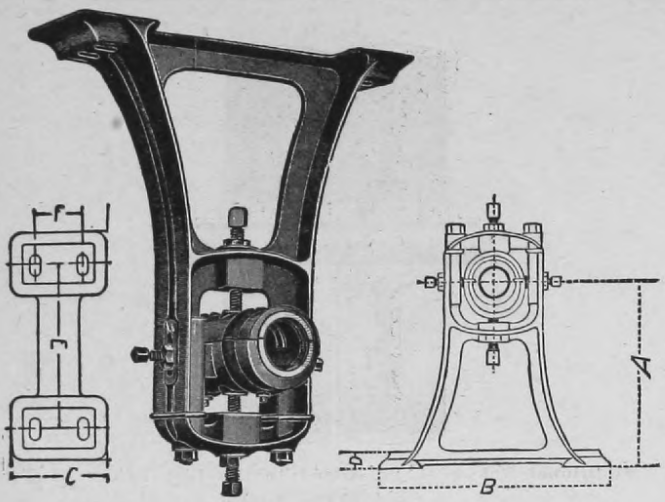
Diameter in Inches	List Price	Diameter in Inches	List Price
6 and 7	$2.40	16 and 17	$6.60
8 and 9	3.10	18 and 19	7.60
10 and 11	3.90	20 and 21	8.80
12 and 13	4.70	22 and 23	10.15
14 and 15	5.65	24	11.50

Pulleys with one flange only, one half that given above.

Pulleys with three flanges, one half more than given above.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NATIONAL SHAFT HANGERS



COMBINATION RING AND WICK OILING BEARINGS

"Sectional View."

Duplex Oiling, Babbitted Hanger Bearing.

Drop Hangers

Four Point Adjustable Ball and Socket Drop Hanger and Floor Stand.

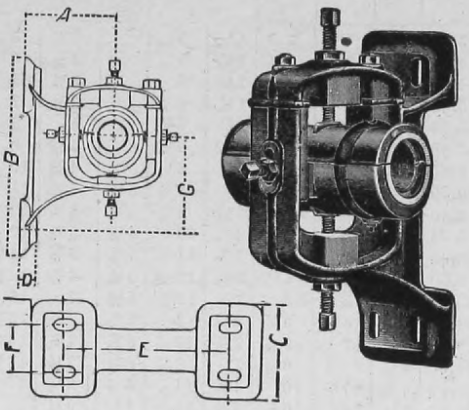
Size Shaft In.	Drop A	Price Each	Length of Bearings	Base B	Base C	Thickness D	Bolt Holes E	Bolt Holes F	No. of Bolts	Size of Bolts
1 5/16	6 to 8	$ 3.50	4	11 1/2	4	7/8	8		2	1/2
	8 to 10	3.75	4	12 1/2	4	7/8	9		2	1/2
	10 to 12	4.00	4	13 3/4	4	7/8	10 1/4		2	1/2
	14 to 16	4.75	4	16	4	7/8	12 1/2		2	1/2
	18 to 20	5.25	4	18	4	7/8	14 3/4		2	1/2
	22 to 24	6.25	4	20 5/8	4	7/8	17 1/2		2	1/2
1 3/16	6 to 8	4.50	5	13 1/2	4	1	9 1/2		2	5/8
	8 to 10	4.75	5	14 3/8	4	1	10		2	5/8
	10 to 12	5.00	5	15	4	1	11		2	5/8
	14 to 16	5.75	5	17 1/2	5	1	13 1/2		2	5/8
	18 to 20	6.50	5	20	5	1	16		2	5/8
	22 to 24	7.50	5	23 1/4	5	1	19 1/4		2	5/8
1 5/16	6 to 8	4.75	5 1/2	13 1/2	4	1	9 1/2		2	5/8
	8 to 10	5.00	5 1/2	14 3/8	4	1	10		2	5/8
	10 to 12	5.25	5 1/2	15	4	1	11		2	5/8
	14 to 16	6.00	5 1/2	17 1/2	5	1	13 1/2		2	5/8
	18 to 20	6.75	5 1/2	20	5	1	16		2	5/8
	22 to 24	7.75	5 1/2	23 1/4	5	1	19 1/4		2	5/8
1 7/16	6 to 8	5.00	6	13 1/2	4	1	9 1/2		2	5/8
	8 to 10	5.25	6	14 3/8	4	1	10		2	5/8
	10 to 12	5.50	6	15	4	1	11		2	5/8
	14 to 16	6.25	6	17 1/2	5	1	13 1/2		2	5/8
	18 to 20	7.00	6	20	5	1	16		2	5/8
	22 to 24	8.00	6	23 1/4	5	1	19 1/4		2	5/8
1 11/16	6 to 8	6.00	7	14 1/2	5	1 1/8	10 1/2		2	5/8
	8 to 10	6.25	7	15 1/4	5	1 1/8	11		2	5/8
	10 to 12	6.50	7	15 1/2	5	1 1/8	11 1/2		2	5/8
	14 to 16	7.25	7	18 1/2	5	1 1/8	14 1/2		2	5/8
	18 to 20	7.75	7	20 1/2	6 1/4	1 1/8	16 1/2		2	5/8
	22 to 24	8.50	7	22	6 1/4	1 1/8	18		2	5/8
	26 to 28	10.75	7	25	6 1/4	1 1/8	21		2	5/8
	30 to 32	12.50	7	27	6 1/2	1 1/8	22 1/2	3	4	3/4
1 15/16	6 to 8	7.00	8	14 1/2	5	1 1/8	10 1/2		2	5/8
	8 to 10	7.25	8	15 1/4	5	1 1/8	11		2	5/8
	10 to 12	7.50	8	15 1/2	5	1 1/8	11 1/2		2	5/8
	14 to 16	8.25	8	18 1/2	5	1 1/8	14 1/2		2	5/8
	18 to 20	8.75	8	20 1/2	6 1/4	1 1/8	16 1/2		2	5/8
	22 to 24	9.50	8	22	6 1/4	1 1/8	18		2	5/8
	26 to 28	11.75	8	25	6 1/4	1 1/8	21		2	5/8
	30 to 32	13.50	8	27	6 1/2	1 1/8	22 1/2	3	4	3/4
2 3/16	6 to 8	$ 8.75	9	16	6 1/2	1 1/4	11 1/2	3	4	3/4
	8 to 10	9.25	9	17 1/2	6 1/2	1 1/4	13	3	4	3/4
	10 to 12	9.50	9	18 1/2	6 1/2	1 1/4	14	3	4	3/4
	14 to 16	10.50	9	21 1/2	6 1/2	1 1/4	17	3	4	3/4
	18 to 20	11.25	9	23	6 1/2	1 1/4	18 1/2	3	4	3/4
	22 to 24	12.25	9	25	8 1/2	1 1/4	20 1/2	4 3/4	4	3/4
	26 to 28	14.00	9	26 1/2	8 1/2	1 1/4	22	4 3/4	4	3/4
	30 to 32	16.00	9	28 1/2	8 1/2	1 1/4	24	4 3/4	4	3/4
2 7/16	6 to 8	9.75	10	16	6 1/2	1 1/4	11 1/2	3	4	3/4
	8 to 10	10.25	10	17 1/2	6 1/2	1 1/4	13	3	4	3/4
	10 to 12	10.50	10	18 1/2	6 1/2	1 1/4	14	3	4	3/4
	14 to 16	11.50	10	21 1/2	6 1/2	1 1/4	17	3	4	3/4
	18 to 20	12.25	10	23	6 1/2	1 1/4	18 1/2	3	4	3/4
	22 to 24	13.25	10	25	8 1/2	1 1/4	20 1/2	4 3/4	4	3/4
	26 to 28	15.00	10	26 1/2	8 1/2	1 1/4	22	4 3/4	4	3/4
	30 to 32	17.00	10	28 1/2	8 1/2	1 1/4	24	4 3/4	4	3/4
2 11/16	6 to 8	11.50	11	18	7	1 1/2	12 1/2	3	4	3/4
	10 to 12	13.50	11	19 3/4	7	1 1/2	14 1/4	3	4	3/4
	14 to 16	15.00	11	22 1/2	7	1 1/2	17	3	4	3/4
	18 to 20	17.00	11	24 1/2	7	1 1/2	19	3	4	3/4
	22 to 24	18.50	11	26 1/2	9	1 1/2	21	5	4	3/4
	26 to 28	20.00	11	28 1/2	9	1 1/2	23	5	4	3/4
	30 to 32	23.00	11	30 1/2	9	1 1/2	25	5	4	3/4
	34 to 36	26.00	11	32 1/2	9	1 1/2	27	5	4	3/4
2 15/16	6 to 8	13.50	12	18	7	1 1/2	12 1/2	3	4	3/4
	10 to 12	15.50	12	19 3/4	7	1 1/2	14 1/4	3	4	3/4
	14 to 16	17.00	12	22 1/2	7	1 1/2	17	3	4	3/4
	18 to 20	19.00	12	24 1/2	7	1 1/2	19	3	4	3/4
	22 to 24	20.50	12	26 1/2	9	1 1/2	21	5	4	3/4
	26 to 28	22.00	12	28 1/2	9	1 1/2	23	5	4	3/4
	30 to 32	25.00	12	30 1/2	9	1 1/2	25	5	4	3/4
	34 to 36	28.00	12	32 1/2	9	1 1/2	27	5	4	3/4
3 3/16	6 to 8	19.00	12 3/4	20	8 1/2	1 5/8	14	3 1/4	4	7/8
	10 to 12	20.00	12 3/4	22	8 1/2	1 5/8	16	3 1/4	4	7/8
	14 to 16	22.50	12 3/4	24	8 1/2	1 5/8	18	3 1/4	4	7/8
	18 to 20	25.00	12 3/4	26 1/2	8 1/2	1 5/8	20 1/2	3 1/4	4	7/8
	22 to 24	26.50	12 3/4	28 1/2	10	1 5/8	22 1/2	5 1/4	4	7/8
	26 to 28	28.50	12 3/4	30 1/4	10	1 5/8	24 1/4	5 1/4	4	7/8
	30 to 32	30.50	12 3/4	32	10	1 5/8	26	5 1/4	4	7/8
	34 to 36	33.50	12 3/4	34	10	1 5/8	28	5 1/4	4	7/8
3 7/16	6 to 8	21.00	13 1/2	20	8 1/2	1 5/8	14	3 1/4	4	7/8
	10 to 12	22.00	13 1/2	22	8 1/2	1 5/8	16	3 1/4	4	7/8
	14 to 16	24.50	13 1/2	24	8 1/2	1 5/8	18	3 1/4	4	7/8
	18 to 20	27.00	13 1/2	26 1/2	8 1/2	1 5/8	20 1/2	3 1/4	4	7/8
	22 to 24	28.50	13 1/2	28 1/2	10	1 5/8	22 1/2	5 1/4	4	7/8
	26 to 28	30.50	13 1/2	30 1/4	10	1 5/8	24 1/4	5 1/4	4	7/8
	30 to 32	32.50	13 1/2	32	10	1 5/8	26	5 1/4	4	7/8
	34 to 36	35.50	13 1/2	34	10	1 5/8	28	5 1/4	4	7/8
3 11/16	7 to 9	25.50	14 1/4	22 1/2	9	1 3/4	16	3 1/2	4	7/8
	10 to 12	26.00	14 1/4	24	9	1 3/4	17 1/2	3 1/2	4	7/8
	14 to 16	28.50	14 1/4	25 3/4	9	1 3/4	19 1/4	3 1/2	4	7/8
	18 to 20	31.50	14 1/4	27 3/4	9	1 3/4	21 1/4	3 1/2	4	7/8
	22 to 24	33.50	14 1/4	29 3/4	11	1 3/4	23 1/4	5 1/2	4	7/8
	26 to 28	35.50	14 1/4	31 3/4	11	1 3/4	25 1/4	5 1/2	4	7/8
	30 to 32	37.50	14 1/4	33 1/2	11	1 3/4	27	5 1/2	4	7/8
	34 to 36	40.50	14 1/4	35 1/2	11	1 3/4	29	5 1/2	4	7/8
3 15/16	7 to 9	27.50	15	22 1/2	9	1 3/4	16	3 1/2	4	7/8
	10 to 12	28.00	15	24	9	1 3/4	17 1/2	3 1/2	4	7/8
	14 to 16	30.50	15	25 3/4	9	1 3/4	19 1/4	3 1/2	4	7/8
	18 to 20	33.50	15	27 3/4	9	1 3/4	21 1/4	3 1/2	4	7/8
	22 to 24	35.50	15	29 3/4	11	1 3/4	23 1/4	5 1/2	4	7/8
	26 to 28	37.50	15	31 3/4	11	1 3/4	25 1/4	5 1/2	4	7/8
	30 to 32	39.50	15	33 1/2	11	1 3/4	27	5 1/2	4	7/8
	34 to 36	42.50	15	35 1/2	11	1 3/4	29	5 1/2	4	7/8
4 3/16	10 to 12	35.00	15 1/2	25	10	1 7/8	18	4	4	1
	14 to 16	38.00	15 1/2	27	10	1 7/8	20	4	4	1
	18 to 20	40.50	15 1/2	29	10	1 7/8	22	4	4	1
	22 to 24	43.50	15 1/2	31	12	1 7/8	24	6	4	1
	26 to 28	47.00	15 1/2	33	12	1 7/8	26	6	4	1
	30 to 32	51.00	15 1/2	35	12	1 7/8	28	6	4	1
	34 to 36	55.00	15 1/2	37	12	1 7/8	30	6	4	1
4 7/16	10 to 12	38.00	16	25	10	1 7/8	18	4	4	1
	14 to 16	41.00	16	27	10	1 7/8	20	4	4	1
	18 to 20	43.50	16	29	10	1 7/8	22	4	4	1
	22 to 24	46.50	16	31	12	1 7/8	24	6	4	1
	26 to 28	50.00	16	33	12	1 7/8	26	6	4	1
	30 to 32	54.00	16	35	12	1 7/8	28	6	4	1
	34 to 36	58.00	16	37	12	1 7/8	30	6	4	1
4 11/16	10 to 12	42.00	16 1/2	25	11	2	18	5	4	1
	14 to 16	46.00	16 1/2	27 1/2	11	2	20 1/2	5	4	1
	18 to 20	49.00	16 1/2	29 1/2	11	2	22 1/2	5	4	1
	22 to 24	52.00	16 1/2	31 1/2	13	2	24 1/2	7	4	1
	26 to 28	55.50	16 1/2	33 3/4	13	2	26 3/4	7	4	1
	30 to 32	60.50	16 1/2	36	13	2	29	7	4	1
	34 to 36	65.50	16 1/2	38	13	2	31	7	4	1
4 15/16	10 to 12	44.50	17	25	11	2	18	5	4	1
	14 to 16	48.50	17	27 1/2	11	2	20 1/2	5	4	1
	18 to 20	51.50	17	29 1/2	11	2	22 1/2	5	4	1
	22 to 24	54.50	17	31 1/2	13	2	24 1/2	7	4	1
	26 to 28	58.00	17	33 3/4	13	2	26 3/4	7	4	1
	30 to 32	63.00	17	36	13	2	29	7	4	1
	34 to 36	68.00	17	38	13	2	31	7	4	1

Note—Price on application for larger sizes.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

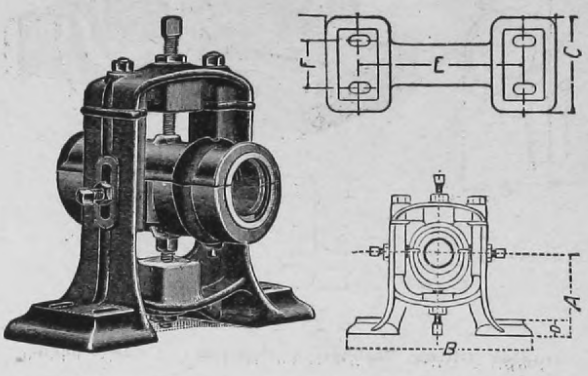
NATIONAL SHAFT HANGERS

POST HANGERS



Four Point Adjustable Ball and Socket Post Hangers
Duplex Oiling and Babbitted Bearings

PILLOW BLOCKS



Four Point Adjustable Ball and Socket Pillow Blocks.
Duplex Oiling and Babbitted Bearings.

Size Shaft In.	Price, Each	A	B	C	D	E	F	G	No. of Bolts	Size of Bolts
15/16	$ 3.75	5	13½	4	⅞	9¾	...	5¾	2	½
1 3/16	4.75	7¼	15¼	4½	1	11	...	7	2	⅝
1 5/16	5.00	7¼	15¼	4½	1	11	...	7	2	⅝
1 7/16	5.25	7¼	15¼	4½	1	11	...	7	2	⅝
1 11/16	6.00	7¼	16¾	5	1⅛	12½	...	7¾	2	⅝
1 15/16	7.00	7¼	16¾	5	1⅛	12½	...	7¾	2	⅝
2 3/16	9.25	7¼	18½	6	1⅛	14	...	8¾	2	¾
2 7/16	10.25	7¼	18½	6	1⅛	14	...	8¾	2	¾
2 11/16	13.50	7¼	19	7	1¼	14½	3¼	10	4	⅝
2 15/16	15.50	7¼	19	7	1¼	14½	3¼	10	4	⅝
3 3/16	20.00	9¾	22¼	9	1½	16¾	5	11½	4	¾
3 7/16	22.00	9¾	22¼	9	1½	16¾	5	11½	4	¾
3 11/16	31.50	9¾	23½	9	1½	18	5	12¼	4	¾
3 15/16	33.50	9¾	23½	9	1½	18	5	12¼	4	¾
4 3/16	43.00	9¾	24½	10	1⅝	18½	5¼	12¾	4	⅞
4 7/16	46.00	9¾	24½	10	1⅝	18½	5¼	12¾	4	⅞
4 11/16	53.50	9¾	24¾	10	1⅝	18¾	5¼	12¾	4	⅞
4 15/16	56.00	9¾	24¾	10	1⅝	18¾	5¼	12¾	4	⅞

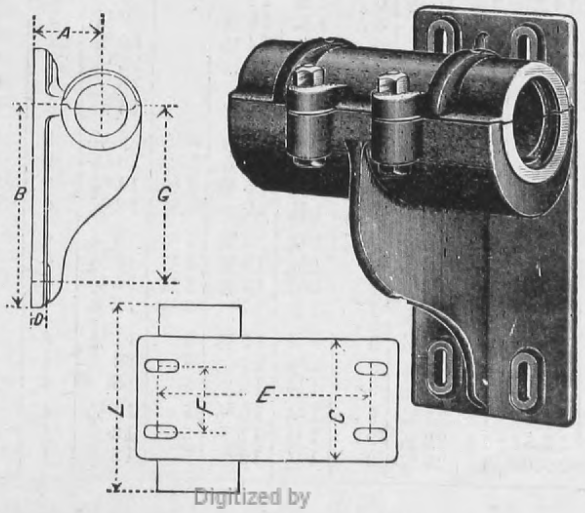
Size Shaft In.	Price Each	A	B	C	D	E	F	No. of Bolts	Size of Bolts
15/16	$ 3.50	6½ to 8½	11½	4	⅞	8	...	2	½
1 3/16	4.50	6½ to 8½	13½	4	1	9½	...	2	⅝
1 5/16	4.75	6½ to 8½	13½	4	1	9½	...	2	⅝
1 7/16	5.00	6½ to 8½	13½	4	1	9½	...	2	⅝
1 11/16	6.00	6½ to 8½	14½	5	1⅛	10½	..	2	⅝
1 15/16	7.00	6½ to 8½	14½	5	1⅛	10½	...	2	⅝
2 3/16	8.75	6½ to 8½	16	6½	1¼	11½	3	4	¾
2 7/16	9.75	6½ to 8½	16	6½	1¼	11½	3	4	¾
2 11/16	11.50	6½ to 8½	18	7	1½	12½	3	4	¾
2 15/16	13.50	6½ to 8½	18	7	1½	12½	3	4	¾
3 3/16	19.00	6½ to 8½	20	8½	1⅝	14	3¼	4	⅞
3 7/16	21.00	6½ to 8½	20	8½	1⅝	14	3¼	4	⅞
3 11/16	25.50	8 to 10	22½	9	1¾	16	3½	4	⅞
3 15/16	27.50	8 to 10	22½	9	1¾	16	3½	4	⅞
4 3/16	35.00	8 to 10	23½	10	1⅞	16½	4	4	1
4 7/16	38.00	8 to 10	23½	10	1⅞	16½	4	4	1
4 11/16	42.00	9 to 11	24	11	2	17	5	4	1
4 15/16	44.50	9 to 11	24	11	2	17	5	4	1

Adjustment—Size Adjustment, ½ inch. Vertical, 2 inches.

Intermediate sizes charged at nearest list price. Price on application for larger sizes.

STANDARD RIGID POST SHAFT HANGERS

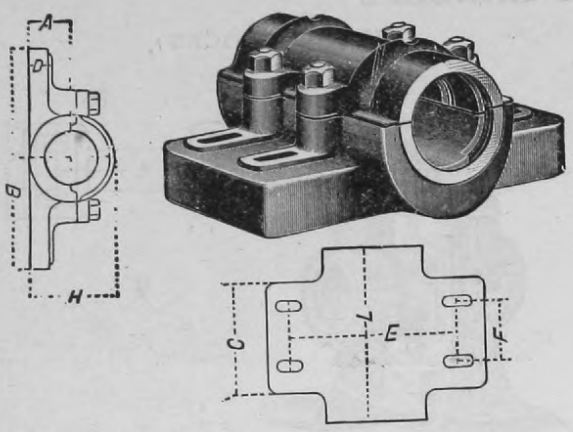
Duplex Oiling, Babbitted Bearings. Ends Faced.



Size Shaft In.	Price Each	A	B	C	D	E	F	G	No. of Bolts	Size of Bolts
1 3/16	$ 4.00	4	9½	3	½	7½	...	6½	2	½
1 7/16	5.00	4	10	3½	½	8	...	7	2	½
1 11/16	5.75	4	11½	4	⅝	9	...	8	2	½
1 15/16	6.75	4	12¼	5	⅝	9¾	...	8	2	½
2 3/16	8.50	4	14½	5¼	⅝	11¾	...	9¼	2	¾
2 7/16	10.00	4	14¾	6	¾	12	...	9¾	2	¾
2 11/16	13.00	6	14¼	6½	¾	11¼	3¼	10	4	⅝
2 15/16	15.00	6	14¾	7¼	¾	11¾	3¾	10½	4	⅝
3 3/16	18.50	6	15½	7½	¾	12½	4¼	11	4	⅝
3 7/16	22.00	6	17½	8	⅞	14¼	4¾	11½	4	¾
3 11/16	26.50	6	17½	8½	1	14¼	5¼	11½	4	¾
3 15/16	31.50	6	18½	9	1	15¼	5½	12	4	¾
4 3/16	36.00	7	19¾	9¼	1⅛	16	5¾	12½	4	⅞
4 7/16	41.00	7	20¼	9½	1⅛	16½	5⅞	13	4	⅞
4 11/16	46.50	7	21	9¾	1⅛	17¼	6¼	13½	4	⅞
4 15/16	52.50	7	21½	10	1⅛	17¾	6½	14	4	⅞

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD RIGID PILLOW BLOCKS

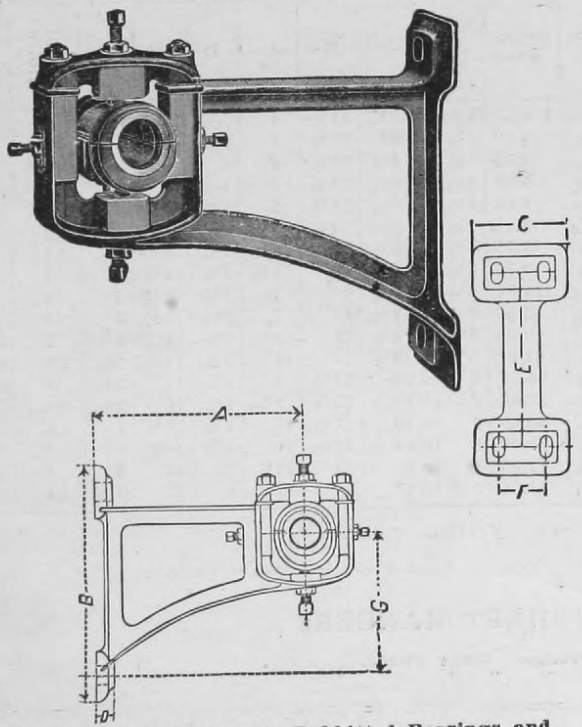


Duplex Oiling, Babbitted Bearing. Ends Faced.

Price on Application for Larger Sizes.

Size Shaft In.	Price Each	A	B	C	D	E	F	H	Length Bearing	Bolts	Size of Bolts
1 3/16	$ 3.75	1 3/4	5 1/2	3	1	5 5/8		2 7/8	5	2	1/2
1 5/16	4.25	1 7/8	7 3/4	3 1/4	1 1/8	5 3/4		3 1/8	5 1/2	2	1/2
1 7/16	4.50	1 7/8	8	3 1/2	1 1/8	6		3 1/8	6	2	1/2
1 11/16	5.25	2 1/4	9	4	1 1/4	7		3 3/4	7	2	1/2
1 15/16	6.00	2 3/8	9 3/4	5	1 3/8	7 1/2		4	8	2	1/2
2 3/16	7.00	2 3/4	10 3/4	5 1/4	1 3/4	8 1/4		4 1/2	9	2	3/4
2 7/16	8.00	2 3/4	11	6	1 7/8	8 1/2		4 5/8	10	2	3/4
2 11/16	9.25	3 1/8	11 1/4	6 1/2	2	8 3/4	3 1/4	5 1/4	11	4	5/8
2 15/16	10.40	3 1/4	11 3/4	7 1/4	2 1/8	9 1/4	3 3/4	5 1/2	12	4	5/8
3 3/16	12.00	3 1/2	12 3/4	7 1/2	2 1/4	10	4 1/4	5 7/8	12 3/4	4	5/8
3 7/16	15.00	3 3/4	14	8	2 3/8	11	4 3/4	6 3/8	13 1/2	4	3/4
3 11/16	18.00	3 7/8	14 3/4	8 1/2	2 1/2	11 1/2	5 1/4	6 5/8	14 1/4	4	3/4
3 15/16	22.00	4	15	9	2 5/8	11 3/4	5 1/2	7	15	4	3/4
4 3/16	24.50	4 1/4	16 1/2	9 1/4	2 3/4	13	5 3/4	7 3/8	15 1/2	4	7/8
4 7/16	26.00	4 3/8	17	9 1/2	2 7/8	13 1/2	5 7/8	7 3/4	16	4	7/8
4 11/16	29.00	4 3/4	17 1/4	9 3/4	3	13 3/4	6 1/4	8 1/8	16 1/2	4	7/8
4 15/16	31.00	4 7/8	17 1/2	10	3 1/8	14	6 1/2	8 1/2	17	4	7/8
5 7/16	58.00	5 1/4	19	10 3/4	3 3/4	15	7 1/4	9 1/4	18	4	1
5 15/16	73.00	5 3/4	20 1/4	11 1/2	4	16 1/4	8	10	19	4	1

NATIONAL "LONG REACH" POST OR BRACKET TYPE SHAFT HANGERS



Four Point Adjustable Babbitted Bearings and Duplex Oiling.

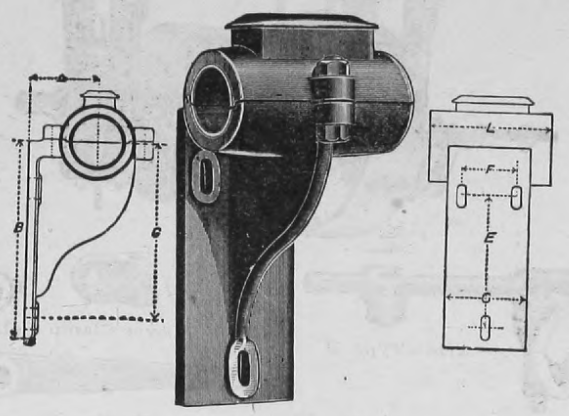
Size Shaft In.	Price Each	A	B	C	D	E	F	G	No. of Bolts	Size of Bolts
1 3/16	$5.00	10	14 1/2	4 1/2	1	10 1/4		6 3/4	2	5/8
	5.50	12	15 1/2	4 1/2	1	11 1/4		7 3/4	2	5/8
	6.00	14	16 1/4	4 1/2	1	12		8 1/2	2	5/8
	6.50	16	17 1/4	4 1/2	1	13		9 5/8	2	5/8
	7.00	18	18 1/2	4 1/2	1	14 1/2		11	2	5/8
	7.50	20	19 1/2	4 1/2	1	15 1/4		11 3/4	2	5/8
1 5/16	5.25	10	14 1/2	4 1/2	1	10 1/4		6 3/4	2	5/8
	5.75	12	15 1/2	4 1/2	1	11 1/4		7 3/4	2	5/8
	6.25	14	16 1/4	4 1/2	1	12		8 1/2	2	5/8
	6.75	16	17 1/4	4 1/2	1	13		9 5/8	2	5/8
	7.25	18	18 1/2	4 1/2	1	14 1/2		11	2	5/8
	7.75	20	19 1/2	4 1/2	1	15 1/4		11 3/4	2	5/8
1 7/16	$5.50	10	14 1/2	4 1/2	1	10 1/4		6 3/4	2	5/8
	6.00	12	15 1/2	4 1/2	1	11 1/4		7 3/4	2	5/8
	6.50	14	16 1/4	4 1/2	1	12		8 1/2	2	5/8
	7.00	16	17 1/4	4 1/2	1	13		9 5/8	2	5/8
	7.50	18	18 1/2	4 1/2	1	14 1/2		11	2	5/8
	8.00	20	19 1/2	4 1/2	1	15 1/4		11 3/4	2	5/8
1 11/16	6.50	10	15 1/4	5	1 1/8	11		7 1/2	2	5/8
	7.00	12	16 1/4	5	1 1/8	11 7/8		8 3/8	2	5/8
	7.75	14	17 1/4	5	1 1/8	12 3/4		9 1/4	2	5/8
	8.50	16	18 1/4	5	1 1/8	14		10 1/2	2	5/8
	9.25	18	19 1/2	5	1 1/8	15 1/4		11 3/4	2	5/8
	10.00	20	20 1/2	5	1 1/8	16		12 1/2	2	5/8
1 15/16	7.50	10	15 1/4	5	1 1/8	11		7 1/2	2	5/8
	8.00	12	16 1/4	5	1 1/8	11 7/8		8 3/8	2	5/8
	8.75	14	17 1/4	5	1 1/8	12 3/4		9 1/4	2	5/8
	9.50	16	18 1/4	5	1 1/8	14		10 1/2	2	5/8
	10.25	18	19 1/2	5	1 1/8	15 1/4		11 3/4	2	5/8
	11.00	20	20 1/2	5	1 1/8	16		12 1/2	2	5/8
2 3/16	9.50	10	16 1/2	6	1 1/8	12		8	2	3/4
	10.25	12	17 3/4	6	1 1/8	13 1/4		9 1/4	2	3/4
	11.50	14	19	6	1 1/8	14 1/2		10 3/4	2	3/4
	13.00	16	20 3/4	6	1 1/8	16 1/4		12 1/2	2	3/4
	14.50	18	23 1/4	6	1 1/8	19		15	2	3/4
	16.00	20	24 1/2	6	1 1/8	20		16	2	3/4
2 7/16	10.50	10	16 1/2	6	1 1/8	12		8	2	3/4
	11.25	12	17 3/4	6	1 1/8	13 1/4		9 1/4	2	3/4
	12.50	14	19	6	1 1/8	14 1/2		10 3/4	2	3/4
	14.00	16	20 3/4	6	1 1/8	16 1/4		12 1/2	2	3/4
	15.50	18	23 1/4	6	1 1/8	19		15	2	3/4
	17.00	20	24 1/2	6	1 1/8	20		16	2	3/4
2 11/16	14.00	10	18 1/4	7	1 1/4	13 3/4	3 1/4	9 1/2	4	5/8
	15.00	12	19 1/4	7	1 1/4	14 3/4	3 1/4	10 1/2	4	5/8
	16.50	14	20 1/4	7	1 1/4	15 3/4	3 1/4	11 1/2	4	5/8
	18.00	16	21 1/2	7	1 1/4	17	3 1/4	12 3/4	4	5/8
2 15/16	16.00	10	18 1/4	7	1 1/4	13 3/4	3 1/4	9 1/2	4	5/8
	17.00	12	19 1/4	7	1 1/4	14 3/4	3 1/4	10 1/2	4	5/8
	18.50	14	20 1/4	7	1 1/4	15 3/4	3 1/4	11 1/2	4	5/8
	20.00	16	21 1/2	7	1 1/4	17	3 1/4	12 3/4	4	5/8
3 3/16	22.50	12	21 1/4	9	1 1/2	15 1/2	5	11 1/2	4	3/4
	24.50	14	22 3/4	9	1 1/2	17	5	13	4	3/4
	27.00	16	25 3/4	9	1 1/2	19	5	15	4	3/4
3 7/16	24.50	12	21 1/4	9	1 1/2	15 1/2	5	11 1/2	4	3/4
	26.50	14	22 3/4	9	1 1/2	17	5	13	4	3/4
	29.00	16	25 3/4	9	1 1/2	19	5	15	4	3/4

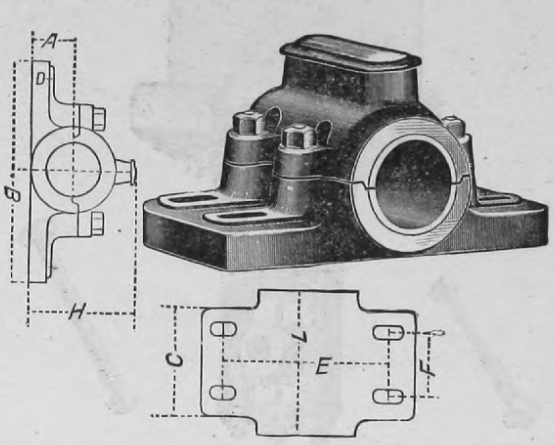
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RIGID POST BOXES

RIGID PILLOW BLOCKS

"Wick Oiling" Bearings Babbitted, Machine Reamed and Ends Faced.





RIGID POST BOXES

Size Shaft Inch	Price, Each	A	B	C	D	E	F	G	L	No. of Bolts	Size of Bolts
1 3/16	$ 3.50	4	8	2 3/4	3/8	5 1/4	1 1/2	7	3 3/4	3	1/2
1 7/16	3.70	4	8 1/2	3	1/2	5 1/2	1 3/4	7 3/8	4 1/2	3	1/2
1 11/16	4.00	4	9	3 1/2	5/8	6	2	8	5 1/4	3	1/2
1 15/16	5.10	4	9 1/2	4	5/8	6 1/4	2 3/8	8 3/8	6	3	1/2
2 3/16	6.15	4	10	4 1/2	5/8	6 5/8	3	9	6 3/4	3	1/2
2 7/16	7.00	4	10 1/2	5	5/8	6 7/8	3	9 1/4	7 1/2	3	5/8
2 11/16	8.50	4	11	5 1/2	5/8	7 1/8	3 1/2	9 3/4	8 1/4	3	5/8
2 15/16	10.15	4	11 1/2	6	3/4	7 1/2	4	10 1/4	9	3	5/8
3 3/16	11.50	5	12	6 1/2	3/4	7 1/2	4 1/4	10 3/4	9 3/4	3	5/8
3 7/16	15.60	5	12 1/2	7	3/4	8	4 1/2	11 1/4	10 1/2	3	5/8
3 11/16	19.70	5	13	7 1/2	7/8	8 1/4	5	11 3/4	11	3	3/4
3 15/16	23.80	5	13 1/2	8	7/8	8 1/2	5 1/2	12	11 1/2	3	3/4

Intermediate Sizes charged at nearest list price.

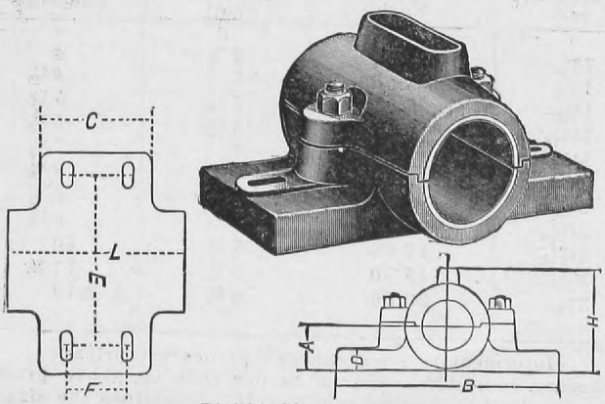
RIGID PILLOW BLOCKS

Size Shaft, Inch.	Price Each	A	B	C	D	E	F	H	No. of Bolts	Size of Bolts	Length of Bearing
15/16	$ 2.00	7/8	6	2	5/8	4 3/8	...	1 3/4	2	3/8	3
1 3/16	2.30	1 1/8	7 1/2	2 1/2	5/8	5 3/8	...	2 1/4	2	1/2	3 3/4
1 5/16	2.60	1 1/8	7 3/4	2 3/4	3/4	5 5/8	...	2 3/8	2	1/2	4 1/8
1 7/16	3.00	1 3/8	8 1/2	3	7/8	6 1/4	...	2 5/8	2	1/2	4 1/2
1 11/16	3.50	1 1/2	9	3 1/2	1	6 3/4	...	3	2	1/2	5 1/4
1 15/16	4.00	1 5/8	10 1/4	4	1	7 3/4	...	3 1/4	2	5/8	6
2 3/16	4.50	1 3/4	10 1/2	4 1/2	1 1/8	8	...	3 5/8	2	5/8	6 3/4
2 7/16	5.50	2	11 3/4	5	1 1/4	9 1/4	...	4	2	3/4	7
2 11/16	6.50	2 1/4	12	5 1/2	1 3/4	9 3/8	3 1/2	4 1/2	4	5/8	8 1/4
2 15/16	7.50	2 1/2	12 1/4	6	1 1/2	9 3/4	3 3/4	5	4	5/8	9
3 3/16	9.00	2 5/8	13 1/4	6 1/2	1 5/8	10 3/4	4 1/4	5 3/8	4	3/4	9 3/4
3 7/16	11.00	2 3/4	13 3/4	7	1 3/4	11 1/8	4 3/4	5 5/8	4	3/4	10 1/2
3 11/16	13.50	3	14 1/4	7 1/2	1 3/4	11 1/2	5	6	4	3/4	11
3 15/16	15.00	3 1/2	15	8	1 7/8	12 1/4	5 1/4	6 1/4	4	7/8	11 1/2
4 3/16	16.00	3 3/4	16	8	2	13 1/4	5 1/2	6 3/4	4	7/8	12
4 7/16	17.00	3 1/2	16 1/4	8 1/2	2 1/8	13 5/8	5 3/4	7 1/8	4	7/8	12 1/2
4 11/16	20.50	3 3/4	17	8 3/4	2 1/8	14	6	7 1/2	4	7/8	13
4 15/16	24.00	4	17 1/2	9	2 3/8	14 1/2	6 1/4	7 3/4	4	7/8	13 1/2

Special Prices for Larger Sizes.

COMMON PILLOW BLOCKS

Babbitted Bearings.

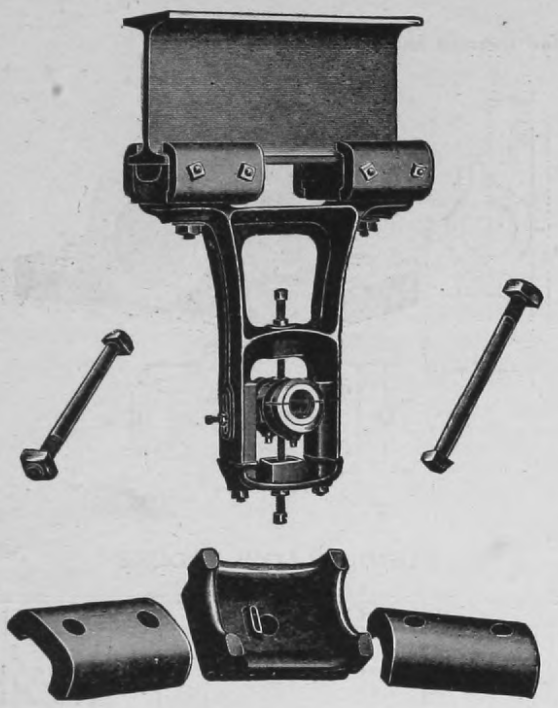


COMMON PILLOW BLOCKS

Size Shaft Inch	Price Each	A In.	B In.	C In.	D In.	E In.	H In.	F In.	Length of Bearing	No. of Bolts	Size of Bolts
15/16	$ 1.00	3/4	6	1 1/2	1/2	4 1/4	2	...	2 1/4	2	3/8
1	1.10	3/4	6	1 1/2	1/2	4 1/4	2	...	2 1/4	2	3/8
1 1/8	1.20	1	6 1/2	1 3/4	5/8	4 3/4	2 1/2	...	2 3/4	2	3/8
1 3/16	1.20	1	6 1/2	1 3/4	5/8	4 3/4	2 1/2	...	2 3/4	2	3/8
1 5/16	1.30	1 1/8	6 3/4	1 7/8	3/4	5	2 1/2	...	2 3/4	2	3/8
1 7/16	1.60	1 1/8	7	2	3/4	5 1/4	2 3/4	...	3 1/2	2	1/2
1 11/16	2.20	1 1/4	7 3/4	2 1/2	7/8	6	3 1/4	...	4	2	1/2
1 15/16	2.90	1 1/2	8 1/4	3	7/8	6 1/4	3 3/4	...	4 1/2	2	1/2
2 3/16	3.70	1 5/8	8 3/4	3 1/4	1	6 5/8	4	...	5	2	1/2
2 7/16	4.25	1 3/4	9	3 1/2	1	7	4 1/4	...	5 3/4	2	5/8
2 11/16	5.40	2	10	3 3/4	1 1/8	8	4 3/4	...	6 1/4	2	5/8
2 15/16	6.50	2 1/8	10 1/2	4	1 1/4	8 1/4	5	...	6 3/4	2	5/8
3 3/16	9.50	2 3/8	11 1/2	5	1 3/8	9	5 3/4	3	7 1/2	4	5/8
3 7/16	10.50	2 5/8	12	5 1/2	1 1/2	9 1/2	6	3 1/2	8	4	5/8
3 11/16	11.50	2 3/4	13	5 1/2	1 3/4	10 1/4	6 1/4	3 1/2	8 1/2	4	3/4
3 15/16	13.75	3	13 1/2	6	2	10 3/4	6 3/4	3 3/4	9	4	3/4

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"BEAM CLAMPS" FOR NATIONAL HANGERS



WIDTH IN INCHES OF BEAM FLANGE.

Beam Clamps	4"	4½"	5"	5½"	6"
Price Each	$2.00	$2.25	$2.50	$2.75	$3.00

Note.

Above suitable for hangers up to and including 1 15/16 and any hanger having a single hole in each hanger foot.

Price of clamps for hangers with double holes in each foot quoted on application.

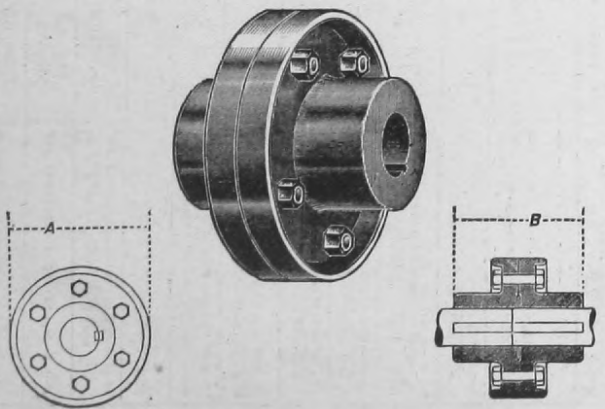
Each clamp is 2" thick which should be considered when specifying drop of hangers.

Price does not include bolts to fasten hangers to clamps.

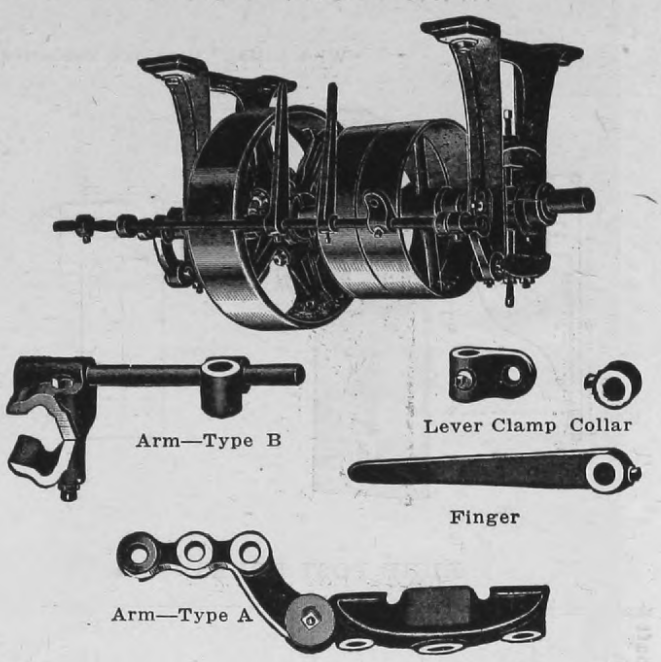
For Hangers see preceding pages.

FLANGE OR PLATE COUPLINGS

Finished All Over With Tight-Fitting Bolts and Keys.



NATIONAL SHIFTING ATTACHMENTS



Type A and Type B—National Shifting Attachments for Counter Shafts are made in two types, A and B, and consist of the following parts: 2 Arms, (1 each right and left); 2 Fingers; 2 Collars; 1 Lever Clamp. The Lever Clamps, Collars and Fingers are alike on both types, the only difference being in the Arms. The A Type is shown in the illustration at top of page.

Size of Shafting	Complete Attachment		Fixtures Without Arms	Price Per Arm
	Type "A" Each	Type "B" Each		
1 5/16" to 1½"	$5.00	$5.00	$2.50	$1.25
1 9/16" to 2"	5.50	5.50	2.50	1.50
2⅛" to 2½"	6.00	6.00	2.50	1.75

In addition to the above a Shifting Rod is required which can readily be made from ⅝" Cold Rolled Steel. If furnished by us an extra charge is made of 5c per foot net.

Particular attention is called to the adjustment in our Shifter Arm in Type B. This enables the fingers to be brought up close to the pulleys and does away with the unsightly end of shifter arm usually extending beyond shifter rod.

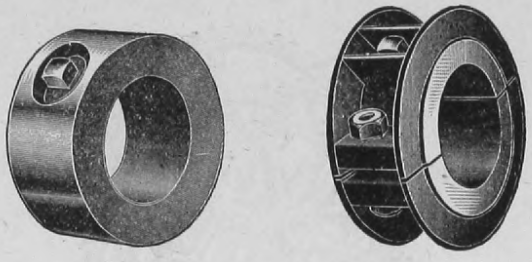
Flange or Plate Couplings

For Shaft Inch	Price Each	Outside Diam. of Shell	Length of Coupling
1 3/16	$ 4.75	4 7/8	4
1 5/16	5.00	5	4 ½
1 7/16	5.50	5 ¼	5 ¼
1 11/16	6.25	5 ½	5 7/8
1 15/16	8.00	7	7 ½
2 3/16	9.00	7 ¼	8 ¼
2 7/16	10.75	7 5/8	8 7/8
2 11/16	13.00	8	9 ⅛
2 15/16	16.00	8 ⅛	10
3 3/16	19.00	9 ⅛	11 ⅜
3 7/16	23.00	9 ⅜	12

Intermediate sizes charged at nearest prices.
Reducing couplings, advance 10 per cent on above prices.
Large shaft which the coupling fits determines the size.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

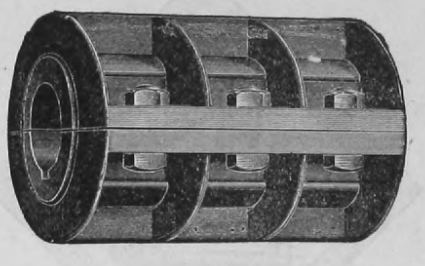
SAFETY SET COLLARS



Solid and Split.

Size of Shaft Inches	Solid Each	Size of Shaft Inches	Split Each
15/16	$0.62	15/16	$0.93
1	.65	1	.97
1 3/16	.80	1 3/16	1.20
1 7/16	1.00	1 7/16	1.50
1 11/16	1.20	1 11/16	1.80
1 15/16	1.40	1 15/16	2.10
2 3/16	1.60	2 3/16	2.40
2 7/16	1.80	2 7/16	2.70
2 11/16	2.10	2 11/16	3.15
2 15/16	2.40	2 15/16	3.60
3 3/16	2.70	3 3/16	4.05
3 7/16	3.00	3 7/16	4.50
3 11/16	3.30	3 11/16	4.95
3 15/16	3.60	3 15/16	5.40
4 3/16	4.15	4 3/16	6.22
4 7/16	4.70	4 7/16	7.05
4 11/16	5.30	4 11/16	7.95
4 15/16	5.90	4 15/16	8.85
5 7/16	7.00	5 7/16	10.50
5 15/16	8.00	5 15/16	12.00

RIBBED CLAMP COUPLINGS

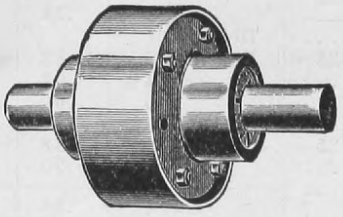


Fitted with Bolts and Keys.

Size of Shaft Inches	Price Each	Diameter Inches	Length Inches
15/16	$ 4.50	2 3/4	4
1 3/16	5.00	3 3/4	5
1 5/16	5.50	4 1/8	5 1/2
1 7/16	6.00	4 1/2	6
1 11/16	7.00	5	7
1 15/16	8.50	5 1/2	8
2 3/16	10.00	6	9
2 7/16	11.00	7	10
2 11/16	12.50	7 3/8	11
2 15/16	15.00	8	12
3 3/16	19.00	8 3/8	12 3/4
3 7/16	21.50	8 3/4	13 1/2
3 11/16	24.50	9 1/8	14 1/4
3 15/16	28.00	10	15
4 3/16	33.00	10 3/8	15 1/2
4 7/16	38.00	10 3/4	16
4 11/16	43.00	11 3/4	16 1/2
4 15/16	48.00	12 1/8	17

For reducing Couplings add 10 per cent to price of the larger size.

SHAW SINGLE COMPRESSION FLANGE COUPLINGS

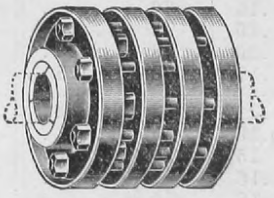


REQUIRE NO KEYS OR KEYSEATING.

For Shaft Inches	Price Each	Outside Diam. of Shell	Length of Coupling
1 3/16	$ 4.75	4 7/8	4
1 5/16	5.00	5	4 1/2
1 7/16	5.50	5 1/4	5 1/4
1 11/16	6.25	5 1/2	5 7/8
1 15/16	8.00	7	7 1/2
2 3/16	9.00	7 1/4	8 1/4
2 7/16	10.75	7 5/8	8 7/8
2 11/16	13.00	8	9 1/8
2 15/16	16.00	8 1/8	10
3 3/16	19.00	9 1/8	11 3/8
3 7/16	23.00	9 3/8	12

Intermediate sizes charged at nearest list prices.
Reducing couplings, advance 10 per cent on above prices.
Large shaft which the coupling fits determines the size.

SHAW DOUBLE COMPRESSION FLANGE COUPLINGS



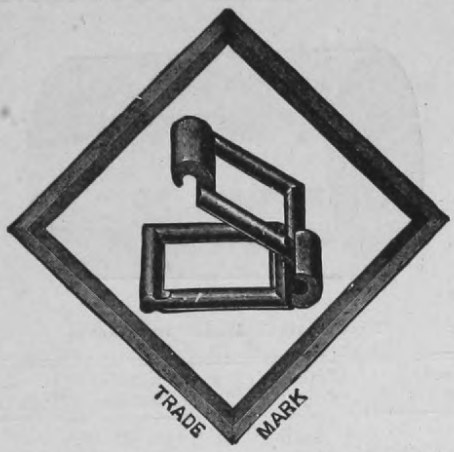
Style of Couplings for Sizes 2 13/16 inch and Larger. Constructed with four flanges instead of two, the alternating flanges being bolted together.

For Shaft Inches	Price Each	Outside Diam. of Flange	Length of Coupling
2 15/16	$27.25	9 1/4	11 1/8
3 3/16	32.50	9 1/2	11 5/8
3 7/16	39.25	9 7/8	12 1/8
3 11/16	45.25	10 1/8	12 5/8
3 15/16	51.25	11 1/16	13 1/8
4 3/16	61.50	11 3/4	13 5/8
4 7/16	71.75	11 3/4	14 1/8
4 11/16	83.00	12 3/4	16 1/8
4 15/16	94.00	12 3/4	16 1/8

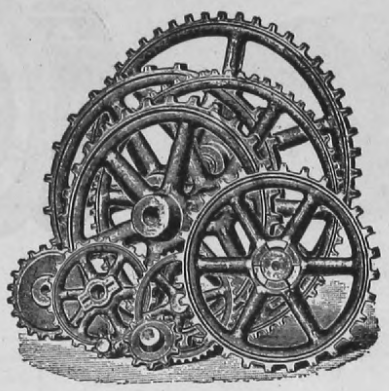
Intermediate sizes charged at nearest list prices.
Reducing couplings, advance 10 per cent on above prices.
The larger shaft which the coupling fits determines the size.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DETACHABLE LINK CHAIN BELTING



SPROCKET WHEELS



DETACHABLE LINK CHAIN BELTING

For use on Mowers, Reapers, Binders, Corn and Wheat Drills, Corn Shellers, Straw Stackers, Feed Cutters, Traction Engines, and in Saw Mills, Flour Mills, Distilleries, etc., etc.

Standard List, December 1, 1915

Number	Plain Links per Foot	Approximate Links per 10 Feet	Couplers per Pair
22	$0.27	244	.....
23	.20	185	.....
024	.18	133	.....
025	.18	120	.....
25	.15	133	$0.15
027	.17	128	.....
29	.31	120	.....
31	.19	132	.....
32	.15	104	.18
32½	.20	160	.....
33	.15	86	.17
34	.15	86	.17
34½	.18	103	.....
35	.15	74	.20
36½	.19	81	.....
37	.15	60	.....
38	.15	60	.....
4-Bar 39	.30	75	.....
042	.20	88	.....
42	.17	88	.21
3-Bar 43	.32	79	.54
44	.16	80	.....
45	.15	74	.20
Keeper 45	.16	74	.....
47	.18	74	.....
48	.17	60	.22
50	.20	87	.20
051	.30	104	.....
51	.21	104	.20
51½	.33	93	.....
052	.27	80	.22
(B) 52	.31	80	.....
52	.20	80	.18
Light 52½	.19	79	.....
Heavy 52½	.29	79	.22
53	$0.22	91	.....
54	.20	82	.....
055	.21	74	.....
(B) 55	.28	73	.....
55	.18	74	$0.18
Keeper 55	.20	74	.....
55½	.22	74	.....
056	.30	80	.....
56½	.32	72	.....
057	.21	74	.....
57	.20	52	.21
58	.22	75	.....
59	.29	52	.....
(B) 60	.33	69	.....
062	.31	73	.....
62	.25	73	.25
62½	.29	73	.....
063	.31	80	...28
64	.29	60	.....
65	.21	56	.....
66	.26	60	.25
67	.26	52	.25
70	.51	60	.....
71	.40	72	.....
071½	.40	58	.....
71½	.36	60	.38
072	.41	72	.37
72	.33	59	.....
072½	.42	72	.....
72½	.43	72	.38
73	.40	40	.....
075	.37	58	.....
75	.27	46	.21
75½	.29	51	.....
76	$0.39	52	.....
76½ or E 1	.30	58	.....
77	.28	52	$0.25
77½	.44	52	.36
78	.38	46	.28
80	.....	.....	.....
83	.39	30	.36
85	.49	30	.49
88	.48	46	.31
88½	.72	46	.51
89	.64	46	.....
93	.54	30	.49
94	.88	30	.....
95	.59	30	.60
101	.66	45	.....
103	.74	39	.64
Dbl. Notch 103	.82	39	.....
104½	1.02	22	1.03
105	.60	20	.....
108	.70	25	.87
110	.82	25	1.02
L 111	.20	74	.....
114	.94	36	.93
115	1.15	37	.....
116½	1.28	37	.....
117	1.24	37	.....
118	1.32	37	.....
122	1.25	20	1.74
123	1.41	36	.....
124	1.14	30	1.31
130	1.90	34	1.92
146	1.13	20	.....

Note.—Write for complete Catalogue containing illustrations and List Prices.

SPROCKET WHEELS

In ordering Sprocket Wheels state Number of Link Chain Belting to be used, diameter of Wheel or Number of Teeth and Size of Bore, also if you wish Wheels with Set Screws or Key seated.

Not Listed

Note.—Sprocket Wheels are not listed in this Catalogue. Complete Catalogue of Sprocket Wheels and Chain Belting will be sent upon application.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

WROUGHT STEAM, GAS AND WATER PIPE

Full Standard Weight.

Price List—Nominal Weights and Dimensions—January 1, 1913.

Black and Galvanized—Standard Lengths

Size, inches	⅛	¼	⅜	½	¾	1	1¼	1½
Inside Diameter, inches	.269	.364	.493	.622	.824	1.049	1.380	1.610
Thickness, inches	.068	.088	.091	.109	.113	.133	.140	.145
Weight per foot, pounds	.245	.425	.568	.852	1.134	1.684	2.281	2.731
Threads per inch of Screw	27	18	18	14	14	11½	11½	11½
Per Foot	$0.05½	$0.06	$0.06	$0.08½	$0.11½	$0.17	$0.23	$0.27½

Size, inches	2	2½	3	3½	4	4½	5	6
Inside Diameter, inches	2.067	2.469	3.068	3.548	4.026	4.506	5.047	6.065
Thickness, inches	.154	.203	.216	.226	.237	.247	.258	.280
Weight per foot, pounds	3.678	5.819	7.616	9.202	10.889	12.642	14.810	19.185
Threads per inch of Screw	11½	8	8	8	8	8	8	8
Per Foot	$0.37	$0.58½	$0.76½	$0.92	$1.09	$1.27	$1.48	$1.92

Size, inches	7	8	9	10	11	12	13	14	15
Inside Diameter, inches	7.023	7.981	8.941	10.020	11.000	12.000	13.250	14.250	15.250
Thickness, inches	.301	.322	.342	.365	.375	.375	.375	.375	.375
Weight, per foot, pounds	23.769	25.809	34.188	41.132	46.247	50.706	55.824	60.375	64.500
Threads, per inch of Screw	8	8	8	8	8	8	8	8	8
Per Foot	$2.38	$2.88	$3.45	$4.12	$4.63	$5.07	$5.60	$6.10	$6.50

Cut Lengths

1¼ inch..... { Black, in 2, 3, 4, 5, 6, 8 and 10 foot Length.....Per Foot, $0.23
{ Galvanized, in 2, 3, 4, 5, 6, 8 and 10 foot Lengths.....Per Foot, $0.23

Plugged and Reamed

2 inch, Galvanized, in Random Lengths.....Per Foot, $0.37

DISCOUNTS ON WROUGHT PIPE

Size	BLACK. City.	BLACK. Country.	GALVANIZED. City.	GALVANIZED. Country.
Standard Lengths, ⅛, ¼, ⅜ inch.....Discount,	.....%	.....%	.....%	.....%
½ inch.....Discount,	.....%	.....%	.....%	.....%
¾ to 3 inch.....Discount,	.....%	.....%	.....%	.....%
3½ to 6 inch.....Discount,	.....%	.....%	.....%	.....%
7 to 12 inch.....Discount,	.....%	.....%	.....%	.....%
Cut Lengths, 1¼ inch, 2 ft. to 4 ft.....Discount,	.....%	.....%	.....%	.....%
1¼ inch, 5 ft. and longer. Discount,	.....%	.....%	.....%	.....%
Plugged and Reamed, 2 inch.....Discount,			.....%	.....%

STANDARD BUNDLING SCHEDULE OF WROUGHT PIPE

Average Number of Feet and Weight per Bundle.

Size	Standard Pipe			Extra Strong Pipe			Double Extra Strong Pipe		
	Pieces	Feet	Weight	Pieces	Feet	Weight	Pieces	Feet	Weight
⅛	..	500	123	..	500	157	..	...	...
¼	24	420	179	24	400	214	..	...	...
⅜	18	340	193	18	330	244	..	...	...
½	12	240	204	12	230	250	7	130	223
¾	7	140	159	7	140	206	5	95	232
1	5	100	168	5	100	217	3	60	220
1¼	3	60	137	3	60	180	3	60	313
1½	3	60	164	3	60	218	3	60	384

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

HOOK PLATES

With 1 Hook.

With 6 Hooks.

Cast Iron Hook Plates for Pipe.

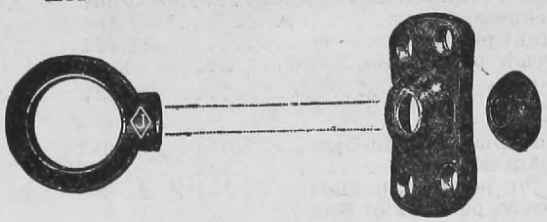
Number of Hooks		1	2	3	4	5	6
For 1 inch Pipe, 2½ inches between Centers	Each,	$0.09	.18	.23	.26	.32	.38
For 1¼ inch Pipe, 3 inches between Centers	Each,	.10	.21	.27	.32	.41	.52
For 1½ inch Pipe, 3½ inches between Centers	Each,	.15	.28	.43	.58	.72	.88
For 2 inch Pipe, 4½ inches between Centers	Each,	.22	.43	.65	.90	1.15	1.35

TINNED PIPE STRAPS

Tinned Wrought Steel Gas Pipe Straps.

Inches		⅜	½	¾	1	1¼
Number in a Pound		40	18	16	12	9
Per Pound		$0.18	.18	.18	.18	.18

EXPANSION PIPE HANGERS



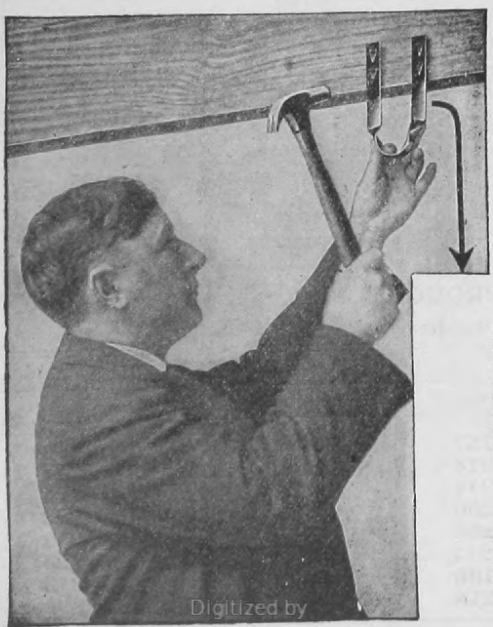
Cast Iron Expansion Pipe Hangers or Ring Hooks

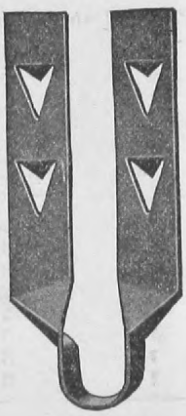
Inches		¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Rings and Buttons Tapped for Pipe, inches		⅜	⅜	⅜	⅜	⅜	½	½	½	½	½	¾	¾
Each, without Pipe		$0.17	.18	.19	.25	.29	.36	.44	.55	.63	.90	1.12	1.35

Extra Parts of Expansion Pipe Hangers

Inches		¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Plates	Each,	$0.08	.08	.08	.09	.09	.10	.10	.10	.10	.10	.10	.10
Buttons	Each,	.06	.06	.06	.07	.07	.08	.08	.08	.08	.08	.08	.08
Rings	Each,	.08	.12	.15	.20	.25	.30	.40	.50	.60	.80	1.00	1.25

ORCUTT PIPE HANGERS





The **Orcutt** Pipe Hanger is a new device for hanging pipes of different sizes. It is made in one piece from ¾-inch hoop steel, with four sharp V-shaped prongs that are driven into the wood at any height desired. The arms are of ample length to allow pipe to be suspended from joist, doing away with loosely driven nails. Construction of the prongs gives them such a hold in the wood that no vibration of the pipe can jar them loose. All hangers finished in black enamel which protect them against rust.

Orcutt Pipe Hanger

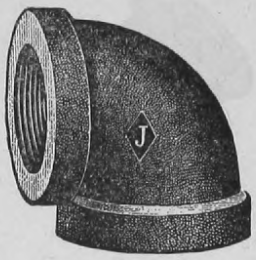
Size, inches	⅜	½	¾	1	1¼	1½	2
Per Hundred	$2.50	2.60	2.60	2.60	2.90	2.90	3.20

Packed—In Open Stock.

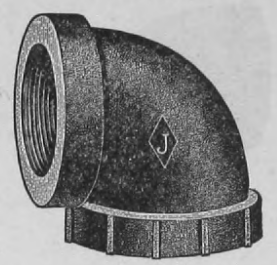
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CAST IRON FITTINGS

R. H. ELBOWS.



R. & L. ELBOWS.



Right Hand Elbows.

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Right Hand Elbows.....Each,	$0.05	.05	.06	.08	.10½	.16	.20	.28	.50	.75
Inches	3½	4	4½	5	6	7	8	9	10	12
Right Hand Elbows.....Each,	$1.05	1.20	1.75	2.00	2.75	4.70	6.75	9.00	13.50	20.00

Right and Left Hand Elbows.

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Right and Left Hand Elbows, Each,	$0.06	.06	.07	.09	.12	.18	.23	.32	.60	.85

REDUCING ELBOWS.

45° ELBOWS.

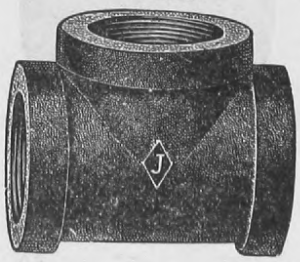
Reducing Elbows.

Inches	½	¾	1	1¼	1½	2	2½	3	3½
Reducing Elbows.....Each,	$0.07	.09	.12	.18	.23	.32	.60	.85	1.20
Inches	4	4½	5	6	7	8	9	10	12
Reducing Elbows.....Each,	$1.40	2.00	2.30	3.15	5.40	7.75	10.50	15.50	23.00

45° Elbows.

Inches	⅜	½	¾	1	1¼	1½	2	2½	3
45° Elbows.....Each,	$0.06	.07	.10	.12	.19	.24	.34	.60	.90
Inches	3½	4	4½	5	6	7	8	9	10	12
45° Elbows.....Each,	$1.25	1.45	2.20	2.50	3.45	5.90	8.50	11.25	17.00	25.00

TEES.



REDUCING TEES.

Tees.

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Tees.....Each,	$0.08	.08	.09	.12	.15	.23	.29	.41	.73	1.10
Inches	3½	4	4½	5	6	7	8	9	10	12
Tees.....Each,	$1.50	1.75	2.55	3.00	4.00	6.80	9.75	13.00	19.50	29.00

Reducing Tees.

Inches	½	¾	1	1¼	1½	2	2½	3	3½
Reducing Tees.....Each,	$0.10	.14	.17	.27	.33	.47	.83	1.25	1.75
Inches	4	4½	5	6	7	8	9	10	12
Reducing Tees.....Each,	$2.00	2.95	3.50	4.60	7.80	11.25	15.00	22.50	33.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MALLEABLE IRON FITTINGS

R. H. ELBOWS

45° ELBOWS

Right Hand Elbows

Inches	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Class	A	B	B	B	C	C	C	C	C	C	C	C	C	C	C	C
Approx. wt. per 100,	6	12	18½	28	41½	68½	102	137	220	380	590	820	1170	1525	2070	3200
Black .....Each,	$0.06	.07	.08	.10	.15	.22	.25	.35	.50	.90	1.50	2.25	3.00	3.50	4.00	6.50
Galvanized ...Each,	.08	.09	.11	.14	.20	.32	.40	.60	.90	.150	2.60	3.75	5.00	....	6.50	10.00

45° Elbows

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Class	B	B	B	B	B	B	B	B	C	C	C	C	C	C	C
Approx. wt. per 100,	13	16	25¼	36	55	92	124	175	317	563	750	865	...	...	...
Black .....Each,	$0.08	.10	.12	.18	.26	.36	.54	.82	1.25	2.50	3.25	4.50	5.25	6.00	7.50
Galvanized ...Each,	.12	.15	.20	.25	.40	.50	.85	1.35	1.90	3.75	4.75	6.75	....	9.00	11.00

DROP ELBOWS

Male and Female.

DROP ELBOWS

Female.

Black Drop Elbows

Inch	⅜x⅜	½x½
Class	B	B
Approx. Weight per 100	20½	31
Male and Female Threads.....Each,	$0.08	.12

Inch	⅜x⅜	½x½	¾x¾
Class	B	B	B
Approx. Weight per 100	22	33	53
Female Threads .....Each,	$0.08	.12	.20

STREET ELBOWS

TEES

Street Elbows

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½
Class	B	B	B	B	C	C	C	C	C
Approx. wt. per 100	11	18	29½	53½	65½	110	160	260	450
Black .....Each,	$0.10	.10	.12	.20	.25	.40	.55	.90	1.50
Galvanized .....Each,	.12	.12	.15	.28	.35	.55	.80	1.30	2.25

Tees

In describing Tees, the run is first named, then the Outlet, thus:

½ T ⅜ = ½ × ⅜ × ¾
(¾)

Inches	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Class	A	B	B	B	C	C	C	C	C	C	C	C	C	C	C	C
Approx. wt., per 100,	9½	12	19	31	56½	82	132½	160	270	476	900	1110	1550	2200	2710	4760
Black .....Each,	$0.07	.08	.09	.11	.15	.25	.30	.45	.60	1.05	1.70	2.50	3.40	4.25	5.00	7.75
Galvanized Each,	.09	.10	.13	.16	.20	.38	.50	.70	1.00	1.90	3.00	4.25	5.75	....	8.00	12.00

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

MALLEABLE IRON FITTINGS

DROP TEES

Male and Female.

Female.

Black Drop Tees

Inch	⅜x⅜	½x½	¾x¾
Class	B	B	B
Approx. Wt. per 100	21	33	58
Male and Female Threads..Each,	$0.10	.14	.22

Inch	⅜x⅜	½x½	¾x¾
Class	B	B	B
Approx. Wt. per 100	21½	34	59
Female Threads ..... Each,	$0.10	.14	.22

CROSSES

R. & L. COUPLINGS

Ribbed Pattern.

Crosses

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½
Class	B	B	B	B	B	C	C	C	C
Approx. Wt. per 100	15½	24½	32	64	95	148	200	290	600
Black .....Each,	$0.09	.10	.16	.20	.30	.40	.60	1.00	1.75
Galvanized .....Each,	.12	.14	.25	.29	.45	.60	.90	1.50	2.75

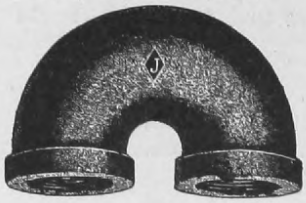
Right and Left Hand Couplings

Inches	¼	⅜	½	¾	1	1¼	1½	2
Class	B	B	B	B	C	C	C	C
Approx. Wt. per 100	7¼	14	20	29	53	77	111	167
Black .....Each,	$0.04	.06	.08	.12	.16	.25	.36	.52
Galvanized .....Each,	.06	.09	.10	.17	.25	.35	.55	.75

RETURN BENDS

Medium Pattern.

RETURN BENDS



Open Pattern.

Medium Pattern Return Bends

Inches	½	¾	1	1¼	1½	2
Center to Center, inches	1¼	1½	1⅞	2¼	2½	3
Class	B	B	B	C	C	C
Approx. Wt. per 100	34	60	92	160	255	337
Black .....Each,	$0.18	.25	.35	.50	.75	1.00
Galvanized .....Each,	.25	.35	.55	.75	1.15	1.65

Open Pattern Return Bends

Inches	½	¾	1	1¼	1½	2
Center to Center, inches	1½	2	2½	3	3½	4
Class	B	B	B	C	C	C
Approx. Wt. per 100	44	83	140	200	310	550
Black .....Each,	$0.20	.30	.50	.65	.85	1.25
Galvanized .....Each,	.28	.45	.70	.90	1.25	2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON PIPE FITTINGS

REDUCERS

LOCK NUTS

CAPS

Malleable Iron Reducers

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Class	A	B	B	B	B	C	C	C	C	C	C	C
Approx. Wt.....Per 100,	6	12	15	23	41½	50	66	108	188	300	370	500
Black .....Each,	$0.05	.06	.07	.10	.16	.20	.28	.45	.70	1.00	1.50	1.85
Galvanized .....Each,	.08	.10	.10	.15	.25	.35	.45	.75	1.05	1.65	2.40	3.05

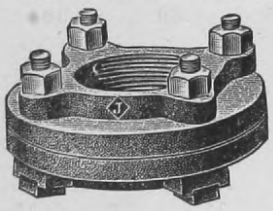
Malleable Iron Lock Nuts

Inches	¼	⅜	½	¾	1	1¼	1½	2
Class	B	B	B	B	B	B	C	C
Approx. Wt.....Per 100,	3½	6	7	13	17½	26	34	50
Black .....Each,	$0.02	.03	.04	.05	.07	.09	.11	.18
Galvanized .....Each,	.03	.04	.05	.07	.10	.14	.20	.30

Malleable Caps

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Class	B	B	B	B	B	C	C	C	C	C	C	C
Approx. Wt.....Per 100,	5½	7½	15	21	35	58½	64	112	185	275	315	400
Black .....Each,	$0.03	.04	.05	.08	.12	.16	.24	.32	.45	.85	1.00	1.20
Galvanized .....Each,	.04	.05	.08	.12	.17	.24	.38	.52	.76	1.30	1.60	2.00

FLANGE UNIONS



DRIVE CAPS

Octagon Drive Caps

Inches	1¼
Each	$0.35

UNIONS

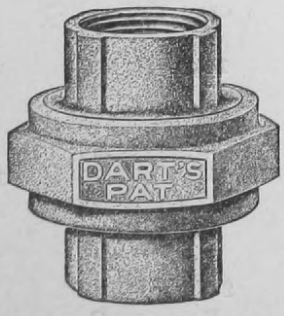
Cast Iron Flange Unions, with Bolts

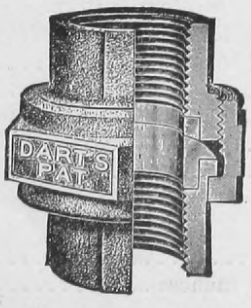
Inches.....	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	7	8	9	10	12
Black..Each,	$0.40	.46	.52	.64	.78	1.00	1.25	1.50	1.80	2.10	3.15	3.95	5.50	7.00	10.00	11.50	16.00

Malleable Iron Unions

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Black .....Each,	$0.18	.20	.22	.27	.33	.46	.58	.75	1.55	2.10	3.65	4.35
Galvanized .....Each,	.27	.30	.33	.40	.50	.70	.90	1.15	2.35	3.15	5.50	6.50

DART'S PATENT UNION





The two Bronze Seats prevent corrosion and the Malleable Iron Pipe Ends and Nut insure strength and durability.

Inches	¼	⅜	½	¾	1	1¼	1½	2
Plain .....Each,	$0.30	.40	.50	.60	.80	1.20	1.60	2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON PIPE FITTINGS

BUSHINGS

Reduced one size only.

BUSHINGS

Reduced more than one size.

PLUGS

Square Head.

Bushings

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Black ..... Each,	$0.04	.04	.04	.05	.06	.07	.09	.14	.21	.30
Galvanized ..... Each,	....	.08	.08	.10	.12	.14	.18	.28	.42	.60
Inches	3½	4	4½	5	6	7	8	9	10	12
Black ..... Each,	$0.40	.50	.75	.93	1.25	1.87	2.75	3.25	3.75	5.00
Galvanized ..... Each,	.80	1.00	1.50	1.85	2.50	3.75	5.50	6.50	7.50	10.00

Plugs

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Black ..... Each,	$0.02	.02	.02	.03	.04	.05	.07	.10	.18	.25
Galvanized ..... Each,	.04	.04	.04	.06	.08	.10	.14	.20	.36	.50
Inches	3½	4	4½	5	6	7	8	9	10	12
Black ..... Each,	$0.38	.42	.65	.88	1.20	1.85	2.75	3.25	3.75	5.00
Galvanized ..... Each,	.76	.84	1.30	1.75	2.40	3.70	5.50	6.50	7.50	10.00

FLOOR FLANGES

Drilled for Screws.

Floor Flanges

For Pipe, inches	⅜	½	¾	1	1¼	1½	2
Diameter of Flange, inches	3	3½	3½	4	4	4½	5½
Price ..... Each,	$0.10	.15	.15	.16	.16	.22	.35

PUMP ROD COUPLINGS

Pump Rod Couplings

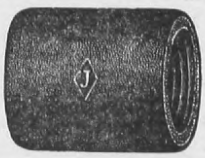
Inches	⅜ x ⅜	7/16 x 7/16	⅜ x 7/16
Black ..... Per Lb.,	$.....	.....	.....
Galvanized .. Per Lb.,	.....	.....	.....

TURNED COUPLINGS

Turned and Faced.

Inches	1¼
Black ..... Each,	$0.12

WROUGHT IRON COUPLINGS



Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Black ..... Each,	$0.05	.06	.07	.10	.13	.17	.21	.28	.40	.60
Galvanized ..... Each,	.06	.08	.10	.13	.18	.25	.32	.40	.55	.80
Inches	3½	4	4½	5	6	7	8	9	10	12
Black ..... Each,	$0.80	1.00	1.50	1.65	2.40	3.25	4.25	5.50	7.50	10.00
Galvanized ..... Each,	1.05	1.40	2.00	2.25	3.25	...	...	...	...	....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MALLEABLE IRON FITTINGS

Classification and Price List Per Pound

Revised, June 1st, 1917.

Class	A	B	C
Black, Per Pound	$0.40	$0.20	$0.13
Galvanized, Per Pound	.50	.28	.20
Bends, Return	.....	1 and smaller	1¼ and larger
Bends, Return, Right and Left	½	¾ and larger	.....
Bends, Y	.....	all sizes	.....
Bends, Y, 60°	.....	all sizes	.....
Caps	⅛	¼ to 1 inclusive	1¼ and larger
Chandelier Hooks	.....	all sizes	.....
Couplings, Pump Rod	all sizes	.....	.....
Couplings, Reducing	¼x⅛, ⅜x⅛, ½x⅛	⅜ x ¼ to 1 x ¾	*1¼ and larger
Couplings, Right Hand	.....	¼, ⅜, ½ and ¾	1 and larger
Couplings, Right and Left	.....	¼, ⅜, ½ and ¾	1 and larger
Crosses, Reducing	.....	1 and smaller	*1¼ and larger
Crosses, Straight	.....	¼ to 1 inclusive	1¼ and larger
Elbows	¼ x ⅛ ⅛ x ⅛ ⅜ x ⅛	¼, ⅜ and ½ ⅜ x ¼ ½ x ¼ ½ x ⅜	*¾ and larger
Elbows, Drop	.....	all sizes	.....
Elbows, 45°	.....	¼ to 2 inclusive	2½ and larger
Elbows, 60°	.....	1¼ to 2	.....
Elbows, Right and Left	¼ and ⅜	½, ¾ and 1	*1¼ and larger
Elbows, Side Outlet	.....	all sizes	.....
Elbows, Street	⅛	¼, ⅜, ½ and ¾ ¾ x ½ and 1 x ¾	1 and larger
Elbows, Street, 45°	⅜	½ to 4	.....
Extension Pieces	.....	all sizes	.....
Lock Nuts	⅛	¼ to 1¼ inclusive	1½ and larger
Offsets	.....	all sizes	.....
Tees In describing Tees, the run is first named, then the outlet, thus: ½ T ⅜ = ½ × ⅜ × ¾ ¾	⅛ x ⅛ ⅛ x ¼ ¼ x ⅛ ⅜ x ⅛	¼, ⅜ and ½ ¼ x ⅜ ⅜ x ¼ x ¼ ⅜ x ¼ ⅜ x ¼ x ⅜ ½ reducing	*¾ and larger
Tees, Drop	.....	all sizes	.....
Tees, Four Way	.....	all sizes	.....
Tees, Street	.....	⅜, ½ and ¾ 1 x ¾ x 1	1 and larger
Wall Plates	.....	all sizes	.....
Waste Nuts	.....	all sizes	.....

*Fittings in Class C having one or more outlets smaller than ¾ will be charged in Class B.

Note.—Orders for less than 25 pounds of Black Fittings in Classes B and C will be charged at a uniform price of 20 cents per pound, and in Class A at 40 cents per pound. An extra charge will be made for Fittings not enumerated in Standard List.

In ordering, be particular to state whether beaded for steam or plain for gas is desired.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CIRCULATING BOILER FITTINGS

Boiler Elbows.

Boiler Elbows with Unions.

Boiler Couplings.

Boiler Couplings with Unions.

Malleable Iron, Galvanized.		Female	Male	Female	Male	Female	Male
Inch		¾ x ¾	x 1	¾ x ½	x 1	½ x ½	x 1
Boiler	Elbows ..... Each,	$0.40		.40		.40	
	Elbows with Unions ..... Each,	.75		.75		.60	
	Couplings ..... Each,	.40		.40		.40	
	Couplings with Unions ..... Each,	.75		.75		.60	

SOLDERING UNIONS AND NIPPLES

UNIONS

No. 842.

MALE NIPPLES

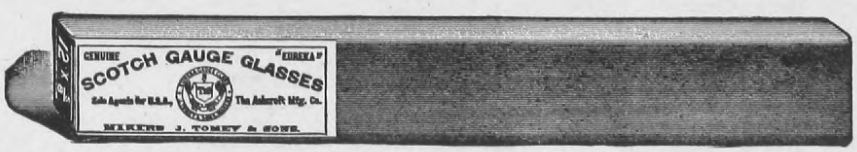
No. 844.

FEMALE NIPPLES

No. 846.

Size, inches	⅜	½	¾	1	1¼	1½	2
No. 842—Union ..... Each,	$4.20	4.80	6.00	8.40	12.00	15.00	21.00
No. 844—Male Nipple ..... Each,	3.00	3.60	5.40	7.20	10.80	12.60	18.00
No. 846—Female Nipple ..... Each,	3.00	3.60	5.40	7.20	10.80	12.60	18.00

SCOTCH GAUGE GLASSES



Genuine Scotch Glass Tubes for Water Gauges.

Length inches		10	11	12	13	14	15	16	17	18	19	20
External Diameter, inches	½ inch..Per Dozen,	$3.00	3.24	3.60	3.84	4.20	4.44	4.80	5.04	5.40	5.64	6.00
	⅝ inch..Per Dozen,	3.00	3.24	3.60	3.84	4.20	4.44	4.80	5.04	5.40	5.64	6.00
	¾ inch..Per Dozen,	3.60	3.96	4.32	4.80	5.16	5.52	5.88	6.24	6.60	7.08	7.44

Packed—Half Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CAST IRON SINK TRAPS

HUMPHRYES

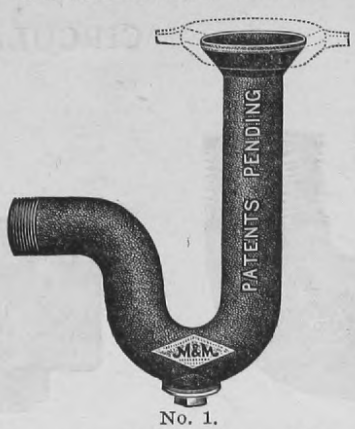
No. H1713.

Humphryes Cast Iron Sink Traps

These Traps combine the features of the "S" and ½ "S" Trap, and can be connected in a few minutes. They have a deep water seal and are non-siphoning. With an elbow screwed into outlet you can extend the outlet to the floor, and with a coupling it can be extended through the wall.

No. H1713—Diameter 1¼ inches.....Each, $0.70

DIAMOND UNIVERSAL



No. 1.

Diamond Universal Cast Iron Sink Traps

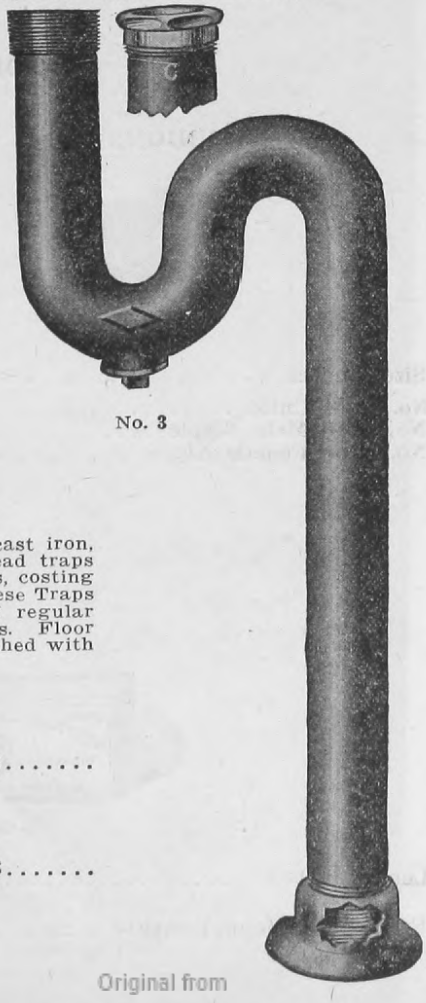
These Traps are designed to be as near universal as possible for use in all usual and unusual places; fit any ordinary kitchen and slop sink. Furnished with brass clean-out screw. Regular iron sink collar slips over this trap, engaging the bell end at top to fasten trap to sink.

No. 1—Diamond Universal Sink Trap, 1¼ inch in diameter with Bell End on Top, Outlet threaded for Iron Pipe.....Each, $.....

DIAMOND WITH BELL END

No. 2

DIAMOND WITH THREADED END



No. 3

Diamond Long Outlet Cast Iron Sink Traps

These Traps are made from high grade close grain cast iron, very smooth inside and outside; they are superior to lead traps in every way, and are really as serviceable as brass traps, costing much less. Nicely painted red and easy to install. All these Traps are threaded for iron pipe, so waste pipes can be of regular wrought pipe, with regular fittings or drainage fittings. Floor Flange permits an adjustment of about one inch. Furnished with Brass Clean-out Screw.

No. 2—**Diamond** Sink Trap, length over all, 2 feet, diameter 1¼ inches, **with Bell End on Top,** Outlet threaded for Iron Pipe. Furnished with Floor Flange.....Each, $.....

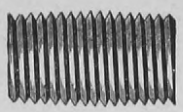
No. 3—**Diamond** Sink Trap, length over all, 2 feet, diameter 1¼ inches, **Top** and Outlet **threaded** for Iron Pipe. Furnished with Floor Flange .....Each, $.....

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WROUGHT NIPPLES

Manufacturers' Price List, in Effect October 1st, 1899.



Close.

Shoulder.

BLACK, THREADED RIGHT HAND.

Length, Inches						Size Inches	Each		Extra Long Nipples, Each. Length, Inches								
Close	Short	Long					Close or Short	Long	4	5	6	7	8	9	10	11	12
¾	1½	2	2½	3	3½	⅛	$0.04	$0.06	$0.07	$0.08	$0.10	$0.12	$0.14	$0.15	$0.17	$0.18	$0.19
⅞	1½	2	2½	3	3½	¼	.04	.06	.07	.08	.10	.12	.14	.15	.17	.18	.19
1	1½	2	2½	3	3½	⅜	.04	.06	.07	.08	.10	.12	.14	.15	.17	.18	.19
1⅛	1½	2	2½	3	3½	½	.05	.07	.08	.10	.12	.14	.16	.18	.20	.22	.23
1⅜	2	2½	3	3½	4	¾	.06	.09	.....	.11	.13	.17	.18	.20	.22	.24	.26
1½	2	2½	3	3½	4	1	.08	.13	.....	.15	.18	.23	.25	.28	.31	.34	.36
1⅝	2½	3	3½	4	4½	1¼	.11	.17	.....	.20	.24	.29	.33	.36	.40	.44	.47
1¾	2½	3	3½	4	4½	1½	.13	.20	.....	.25	.29	.36	.40	.45	.50	.54	.59
2	2½	3	3½	4	4½	2	.18	.27	.....	.32	.38	.50	.54	.59	.65	.72	.77
2½	3	3½	4	4½	5	2½	.39	.59	.....	.....	.68	.90	.97	1.06	1.17	1.26	1.35
2⅝	3	3½	4	4½	5	3	.48	.72	.....	.....	.85	1.08	1.20	1.33	1.45	1.58	1.70
2¾	4	4½	5	5½	6	3½	.75	1.05	.....	.....	.....	1.30	1.45	1.60	1.75	1.90	2.05
2⅞	4	4½	5	5½	6	4	.85	1.20	.....	.....	.....	1.52	1.69	1.87	2.05	2.22	2.40
2⅞	4	4½	5	5½	6	4½	1.25	1.70	.....	.....	.....	2.25	2.50	2.75	2.95	3.17	3.40
3	4½	5	5½	6	6½	5	1.55	2.45	.....	.....	.....	2.58	2.83	3.10	3.35	3.60	3.85
3⅛	4½	5	5½	6	6½	6	1.85	2.90	.....	.....	.....	3.05	3.35	3.70	4.00	4.30	4.65
3¼	5	6	.....	.....	.....	7	3.20	3.60	.....	.....	3.60	4.05	4.45	4.90	5.30	5.75	6.15
3½	5	6	.....	.....	.....	8	3.55	4.05	.....	.....	4.05	4.55	5.05	5.50	6.00	6.50	7.00
3⅝	5	8	.....	.....	.....	9	5.25	6.50	.....	.....	.....	.....	.....	7.10	7.75	8.40	9.00
3⅞	5	8	.....	.....	.....	10	6.75	8.25	.....	.....	.....	.....	.....	8.90	9.70	10.40	11.15
4½	5	8	.....	.....	.....	12	8.00	10.00	.....	.....	.....	.....	.....	10.80	11.75	12.70	13.65

BLACK, THREADED RIGHT AND LEFT HAND.

Length, Inches						Size Inches	Each		Extra Long Nipples, Each. Length, Inches								
Close	Short	Long					Close or Short	Long	4	5	6	7	8	9	10	11	12
¾	1½	2	2½	3	3½	⅛	$0.05	$0.08	$0.09	$0.11	$0.13	$0.16	$0.18	$0.20	$0.23	$0.25	$0.27
⅞	1½	2	2½	3	3½	¼	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1	1½	2	2½	3	3½	⅜	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1⅛	1½	2	2½	3	3½	½	.07	.10	.11	.13	.16	.18	.21	.24	.27	.29	.31
1⅜	2	2½	3	3½	4	¾	.08	.12	.....	.15	.17	.23	.25	.27	.29	.32	.35
1½	2	2½	3	3½	4	1	.11	.18	.....	.20	.24	.31	.33	.37	.41	.45	.48
1⅝	2½	3	3½	4	4½	1¼	.15	.23	.....	.27	.32	.39	.45	.50	.55	.60	.65
1¾	2½	3	3½	4	4½	1½	.18	.27	.....	.34	.39	.48	.52	.60	.67	.72	.80
2	2½	3	3½	4	4½	2	.24	.36	.....	.43	.51	.67	.72	.80	.87	.96	1.03
2½	3	3½	4	4½	5	2½	.52	.79	.....	.....	.91	1.20	1.30	1.40	1.55	1.68	1.80
2⅝	3	3½	4	4½	5	3	.65	.96	.....	.....	1.13	1.44	1.60	1.77	1.93	2.10	2.27
2¾	4	4½	5	5½	6	3½	1.00	1.40	.....	.....	.....	1.75	1.95	2.15	2.35	2.55	2.75
2⅞	4	4½	5	5½	6	4	1.15	1.60	.....	.....	.....	2.00	2.25	2.50	2.75	3.00	3.25

GALVANIZED, THREADED RIGHT HAND.

Length, Inches						Size Inches	Each		Extra Long Nipples, Each. Length, Inches								
Close	Short	Long					Close or Short	Long	4	5	6	7	8	9	10	11	12
¾	1½	2	2½	3	3½	⅛	$0.06	$0.11	$0.12	$0.15	$0.17	$0.21	$0.24	$0.26	$0.29	$0.31	$0.34
⅞	1½	2	2½	3	3½	¼	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34
1	1½	2	2½	3	3½	⅜	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34
1⅛	1½	2	2½	3	3½	½	.06	.11	.13	.16	.18	.23	.26	.28	.31	.33	.36
1⅜	2	2½	3	3½	4	¾	.08	.14	.....	.18	.21	.26	.29	.32	.35	.38	.41
1½	2	2½	3	3½	4	1	.11	.19	.....	.24	.28	.34	.38	.42	.47	.51	.55
1⅝	2½	3	3½	4	4½	1¼	.17	.29	.....	.32	.38	.45	.51	.57	.63	.69	.75
1¾	2½	3	3½	4	4½	1½	.21	.35	.....	.39	.46	.55	.63	.70	.77	.84	.91
2	2½	3	3½	4	4½	2	.27	.47	.....	.52	.61	.74	.83	.93	1.03	1.13	1.23
2½	3	3½	4	4½	5	2½	.56	.86	.....	.....	1.00	1.26	1.41	1.56	1.71	1.86	2.01
2⅝	3	3½	4	4½	5	3	.70	1.10	.....	.....	1.30	1.60	1.80	2.00	2.20	2 40	2.60
2¾	4	4½	5	5½	6	3½	1.20	1.70	.....	.....	.....	2.10	2.35	2.60	2.85	3.15	3.40
2⅞	4	4½	5	5½	6	4	1.35	1.87	.....	.....	.....	2.30	2.60	2.90	3.20	3.50	3.80
2⅞	4	4½	5	5½	6	4½	1.85	2.60	.....	.....	.....	3.30	3.65	4.05	4.45	4.85	5 25
3	4½	5	5½	6	6½	5	2.30	3.15	.....	.....	.....	3.75	4.20	4.60	5.00	5.40	5.85
3⅛	4½	5	5½	6	6½	6	2.80	4.25	.....	.....	.....	4.50	5.00	5.55	6.05	6.60	7.15
3¼	5	6	.....	.....	.....	7	4.25	4.95	.....	.....	.....	5.65	6.35	7.05	7.75	8.45	9.20
3½	5	6	.....	.....	.....	8	5.00	5.80	.....	.....	.....	6.65	7.50	8.35	9.25	10.10	10.95

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD BRASS VALVES

GLOBE

ANGLE

Standard Brass Valves, Screwed

Inches		⅛	¼	⅜	½	¾	1	1¼	1½	2	2½
Globe Valves	Each,	$0.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00
Angle Valve	Each,	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00

JENKINS BROS. BRASS VALVES

GLOBE

ANGLE

Jenkins Bros. Standard Pattern Brass Valves, Screwed

Inches		¼	⅜	½	¾	1	1¼	1½	2	2½	3
Globe Valves	Each,	$1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
Angle Valves	Each,	$1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00

JENKINS BROS. VALVE DISCS

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Each	$0.03	.04	.04	.05	.06	.09	.12	.18	.24	.40

HEAVY BRASS VALVES

GLOBE

ANGLE

Heavy Brass Valves, Screwed. With Jenkins Standard Discs

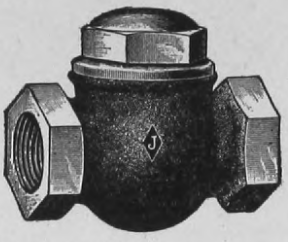
Inches		¼	⅜	½	¾	1	1¼	1½	2
Globe Valves	Each,	$1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75
Angle Valves	Each,	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BRASS CHECK VALVES

HORIZONTAL

Standard.



Heavy.

Jenkins Bros.

Standard Brass Horizontal Check Valves, Screwed

Inches	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½
Each	$0.65	.65	.70	.90	1.15	1.60	2.25	3.15	4.75	9.00

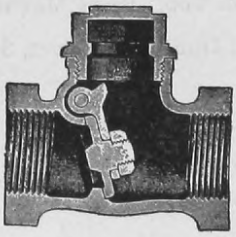
Heavy Brass Horizontal Check Valves, Screwed. With Jenkins Standard Discs

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½
Each	$1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50

Jenkins Bros. Standard Pattern Brass Horizontal Check Valves, Screwed

Inches	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Each	$1.10	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50	21.00

SWING



Standard Brass Swing Check Valves, Screwed

Inches	⅜	½	¾	1	1¼	1½	2	2½	3
Each	$1.80	2.00	2.25	2.80	3.65	4.75	6.75	15.00	24.00

VERTICAL

ANGLE

Standard Brass Vertical Check Valves, Screwed

Inches	¼	⅜	½	¾	1	1¼	1½	2
Each	$0.72	.77	1.00	1.26	1.80	2.52	3.50	5.30

Standard Brass Angle Check Valves, Screwed

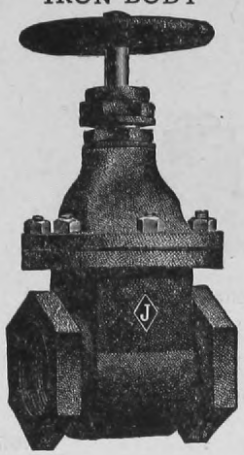
Inches	⅛	¼	⅜	½	¾	1	1¼	1½	2
Each	$0.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD GATE VALVES

BRASS

IRON BODY



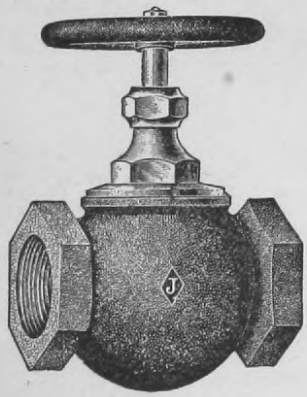
Standard Brass Gate Valves, Screwed

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Each	$1.45	1.45	1.65	2.05	2.80	3.70	5.00	7.30	13.00	19.00

Standard Iron Body Brass Mounted Gate Valves, Screwed

Inches	2	2½	3	3½	4	4½	5	6	7	8
Each	$10.00	11.50	14.00	17.00	19.00	24.00	27.50	32.50	45.00	54.00

GLOBE



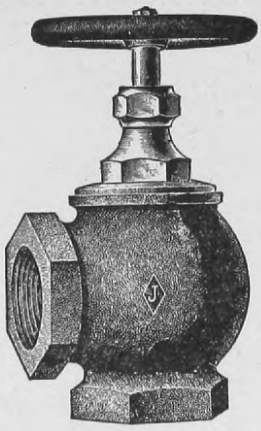
STANDARD IRON BODY VALVES

"Plain Top," Brass Mounted

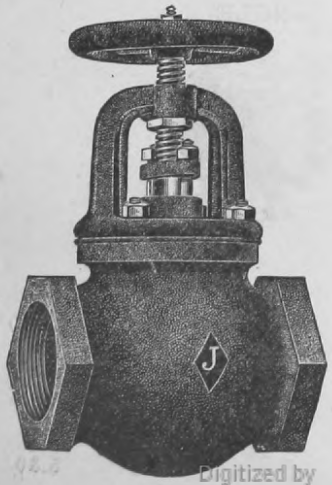
Standard Iron Body Valves, Screwed

Inches	2½	3
Globe Valves ..... Each,	$7.35	9.80
Angle Valves ..... Each,	7.35	9.80

ANGLE



GLOBE

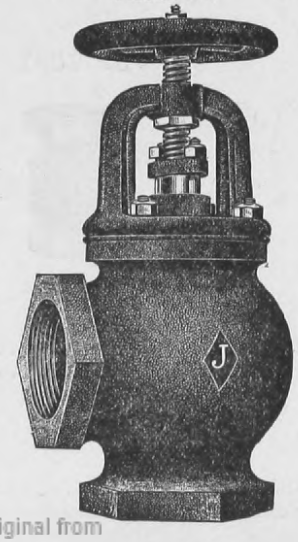


"Yoke Top," Brass Mounted

Standard Iron Body Valves, Screwed

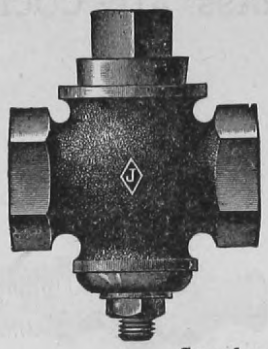
Inches	3½	4	4½
Globe Valves .. Each,	$15.25	19.00	24.00
Angle Valves .. Each,	15.25	19.00	24.00
Inches	5	6	8
Globe Valves ... Each,	$27.00	37.50	72.00
Angle Valves ... Each,	27.00	37.50	72.00

ANGLE

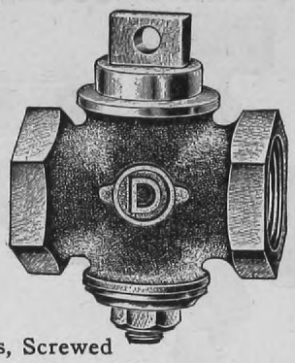


Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEAM COCKS



GAS SERVICE COCKS



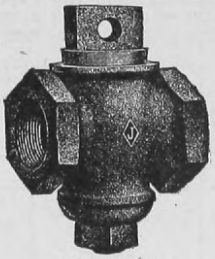
Standard Square Head Brass Steam Cocks, Screwed

Inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Each	$0.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50

Flat Head Brass Gas Service Cocks, Screwed

Inches	¼	⅜	½	¾	1	1¼	1½	2
Each	$0.90	1.00	1.10	1.30	2.10	3.25	4.60	8.00

STANDARD IRON COCKS



Flat Head.

STANDARD IRON COCKS

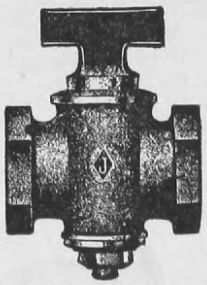
Square Head.

Standard Iron Cocks. Screwed.

Inches	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8
No. 320—All Iron Cocks.....Each,	$0.90	1.05	1.30	1.60	1.95	2.70	4.40	6.75	12.00	15.50	32.00	45.00	100.00
No. 322—Iron Cocks, Brass Washer, Each,	1.00	1.20	1.55	1.95	2.35	3.20	5.15	7.75	14.00	19.00	38.00	53.00	110.00
No. 324—Iron Cocks, Brass Plug...Each,	1.30	1.60	1.90	2.65	3.75	5.25	8.75	13.00	27.50	36.50	67.00	94.00	200.00

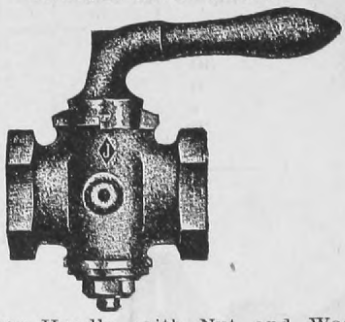
Note.—½ to 2 inch will be furnished with **Flat** Head, and 2½ to 8 inch will be furnished with **Square** Head, unless otherwise ordered. They can be furnished with Check when so ordered; sizes ½ to 2 inch at 15 cents extra, net; sizes 2½ inch and larger, 25 cents extra, net.

ROUGH STOPS



Tee Handle, with Nut and Washer.

CHECK AND WASTE



Lever Handle, with Nut and Washer.

For Iron Pipe

Inches	½	⅝	¾	1	1¼	1½	2
No. 1—Tee Handle, Rough Stops.....Per Dozen,	$21.00	29.40	36.00	52.80	89.40	149.40	258.00
No. 2—Lever Handle, Rough Stops....Per Dozen,	21.00	29.40	36.00	52.80	89.40	149.40	258.00
No. 21—Tee Handle Check and Waste...Per Dozen,	21.60	30.00	36.60	54.00	91.20	152.40	264.00
No. 22—Lever Handle Check and Waste, Per Dozen,	21.60	30.00	36.60	54.00	91.20	152.40	264.00

For Lead and Iron Pipe

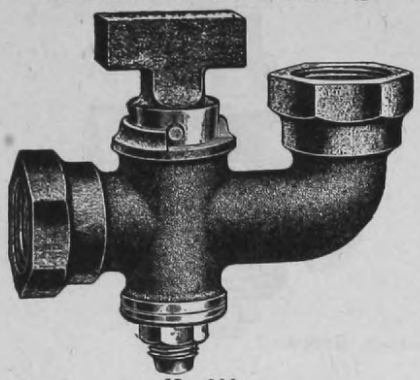
No. 32—Lever Handle, Check and Waste, ⅝ inch.....Per Dozen, $24.00

For Lead Pipe

No. 42—Lever Handle, Check and Waste, ⅝ inch.....,Per Dozen, $24.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HYDRANT COCKS

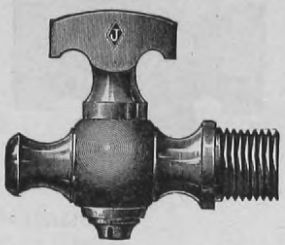


No. 200.

Flat Way, Tee Handle, For Iron Pipe.

No. 200	Inch	½	¾	1	1¼
	Per Dozen	$25.80	45.00	64.80	103.80

BRASS AIR COCKS



T Handle, Single Thread.

Inches	⅛	¼	⅜	½
Each	$0.40	.45	.50	.60

PENBERTHY AUTOMATIC INJECTORS

For Stationary, Marine, Portable and Traction Engines. A perfect re-start Automatic Machine, when the Injector is working and forcing water to the boiler. If the current of water be suddenly broken off by a jar or jolt, as is often the case of a traction engine or road roller, the Injector will pick up the water and again establish the current to the boiler automatically without the manipulation of a single valve or the least attention.

Size Nos.	Pipe Connection Inch	Each	Horsepower Based on ordinary Tubular Boiler	Capacity per hour, 1 to 3 feet lift, 60 to 100 pounds Steam Pressure.	
				Maximum Gals.	Minimum Gals.
A	½	$18.00	8 to 16	135	70
AA	½	20.00	12 to 22	180	100
B	¾	25.00	17 to 32	260	140
BB	¾	30.00	20 to 45	360	180
C	1	40.00	40 to 65	475	250
CC	1	45.00	45 to 80	600	325

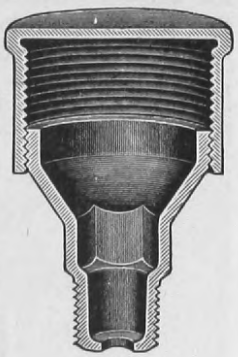
GREASE CUPS

Exterior.

The Grease Cups are pressed form sheet metal, making them stronger and better than cast cups. They are made by a patented process which does not torture nor weaken the metal at any point, on the sectional cut it can be noticed that the metal is of a uniform thickness throughout, which makes a very light, strong and durable cup.

Number	Inside Dia. Cap. Inches	Reg. Pipe Thread. Inches	Optional Pipe Thread	Capacity Oz.	Plain Steel Each	Dull Brass Each	Nickel Plated Each
000	¾	⅛	5/16x32	⅓	$0.60	$0.60	$0.75
00	1	⅛	¼	⅔	.70	.70	.90
0	1¼	¼	⅛	1	.90	.90	1.15
1	1½	¼	⅛	1½	1.15	1.15	1.40
2	2	⅜	¼	3	1.50	1.50	1.85
3	2½	⅜	¼ and ½	5	2.15	2.15	2.60

Note.—Regular Pipe Thread will be sent unless otherwise specified.



Sectional

COMPRESSION SILL COCKS

No. 513.

Unfinished Brass, Nickel Plated, Wheel Handle.

No. 513	Inch	½	¾
	Per Dozen	$13.00	13.00

Packed—Half Dozen in a Box.

Sill Cock Keys

No. 516K—Extra Keys for No. 516 Compression Sill Cocks.....Per Dozen, $2.00

No. 516.

Unfinished Brass, Nickel Plated, Loose Key.

No. 516	Inch	½	¾
	Per Dozen	$14.00	14.00

Packed—Half Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

COMPRESSION BIBBS

PLAIN BIBBS

Nos. 802 to 804N.

Plain Bibbs, Tinned Shank, for Lead Pipe

Finished Brass

Nos.	802	803	804
Inch	½	⅝	¾
Per Dozen	$21.00	27.00	35.40

Nickel Plated

Nos.	802N	803N	804N
Inch	½	⅝	¾
Per Dozen	$24.60	30.60	39.60

Packed—Half Dozen in a Box.

HOSE BIBBS

Nos. 882 to 884N.

Hose Bibbs, Tinned Shank, for Lead Pipe

Finished Brass

Nos.	882	883	884
Inch	½	⅝	¾
Per Dozen	$24.00	30.00	38.40

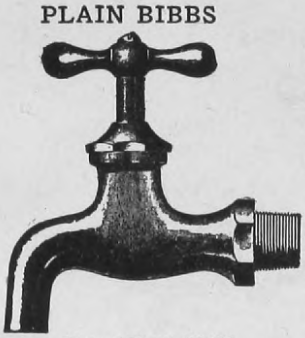
Packed—Half Dozen in a Box.

Nickel Plated

Nos.	882N	883N	884N
Inch	½	⅝	¾
Per Dozen	$27.60	33.60	42.60

Packed—Half Dozen in a Box.

PLAIN BIBBS



Nos. 872 to 874N.

Plain Bibbs, Screwed, for Iron Pipe

Finished Brass

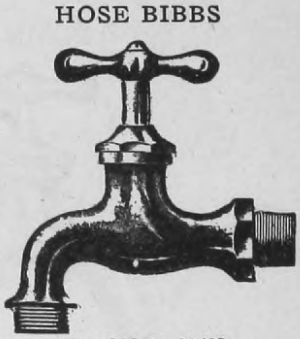
Nos.	872	873	874
Inch	½	⅝	¾
Per Dozen	$19.80	25.20	33.00

Nickel Plated

Nos.	872N	873N	874N
Inch	½	⅝	¾
Per Dozen	$23.40	28.80	37.20

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 892 to 894N.

Hose Bibbs, Screwed, for Iron Pipe

Finished Brass

Nos.	892	893	894
Inch	½	⅝	¾
Per Dozen	$22.80	28.20	36.00

Packed—Half Dozen in a Box.

Nickel Plated

Nos.	892N	893N	894N
Inch	½	⅝	¾
Per Dozen	$26.40	31.80	40.20

Packed—Half Dozen in a Box.

PLAIN BIBBS

Nos. 2872 to 2873N.

Plain Bibbs, Male Flange, Outside Thread, Fitted for Iron Pipe

Finished Brass

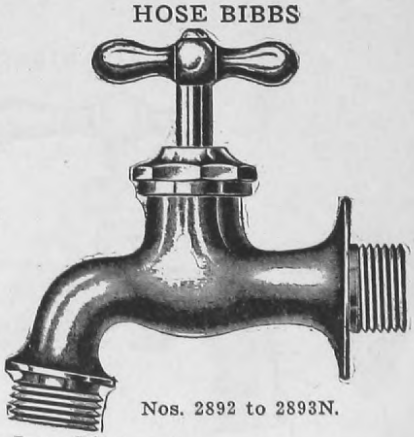
Nos.	2872	2873
Inch	½	⅝
Per Dozen	$25.80	32.40

Nickel Plated

Nos.	2872N	2873N
Inch	½	⅝
Per Dozen	$29.40	36.00

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 2892 to 2893N.

Hose Bibbs, Male Flange, Outside Thread, Fitted for Iron Pipe

Finished Brass

Nos.	2892	2893
Inch	½	⅝
Per Dozen	$28.80	35.40

Packed—Half Dozen in a Box.

Nickel Plated

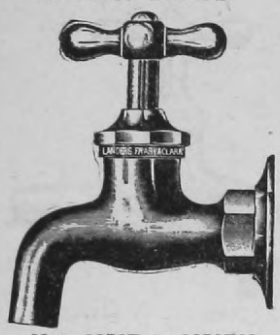
Nos.	2892N	2893N
Inch	½	⅝
Per Dozen	$32.40	39.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMPRESSION BIBBS

PLAIN BIBBS



Nos. 2872B to 2873BN.

Plain Bibbs, Female Flange, Inside Thread, Fitted for Iron Pipe

Finished Brass

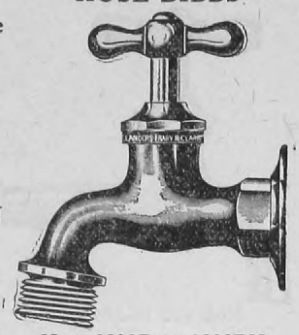
Nos.	2872B	2873B
Inch	½	⅝
Per Dozen	$25.80	32.40

Nickel Plated

Nos.	2872BN	2873BN
Inch	½	⅝
Per Dozen	$29.40	36.00

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 2892B to 2893BN.

Hose Bibbs, Female Flange, Inside Thread, Fitted for Iron Pipe

Finished Brass

Nos.	2892B	2893B
Inch	½	⅝
Per Dozen	$28.80	35.40

Packed—Half Dozen in a Box.

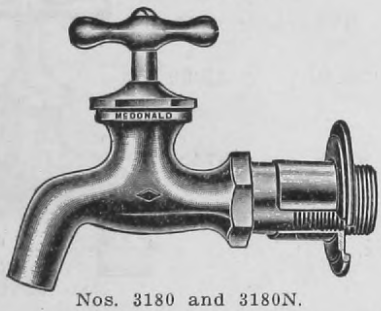
Nickel Plated

Nos.	2892BN	2893BN
Inch	½	⅝
Per Dozen	$32.40	39.00

Packed—Half Dozen in a Box.

LOOSE COLLAR COMPRESSION BIBBS

PLAIN BIBBS



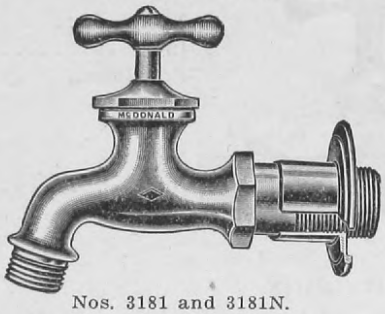
Nos. 3180 and 3180N.

Male Flange, Outside Thread, Fitted for Iron Pipe

Per Dozen		
Inch	½	⅝
No. 3180 —Finished Brass	$32.40	40.80
No. 3180N—Nickel Plated	36.00	44.40

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 3181 and 3181N.

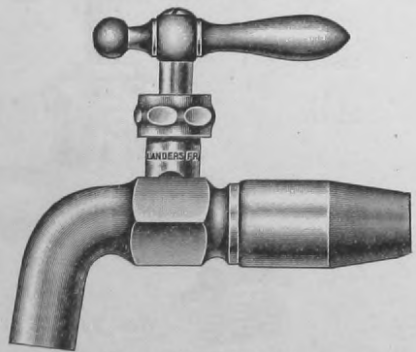
Male Flange, Outside Thread, Fitted for Iron Pipe

Per Dozen		
Inch	½	⅝
No. 3181 —Finished Brass	$35.40	43.80
No. 3181N—Nickel Plated	39.00	47.40

Packed—Half Dozen in a Box.

FULLER BIBBS

PLAIN BIBBS



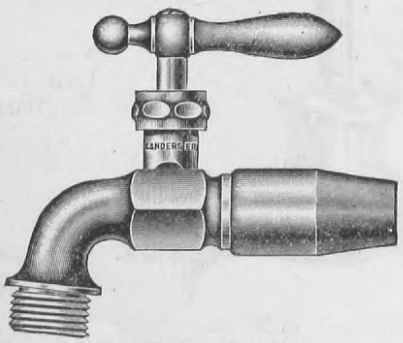
Nos. 970 and 970N.

Tinned Shank, for Lead Pipe, **Per Dozen**.

Inch	½	⅝
No. 970 —Finished Brass	$24.60	29.40
No. 970N—Nickel Plated	29.40	34.20

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 990 and 990N.

Tinned Shank, for Lead Pipe, **Per Dozen**.

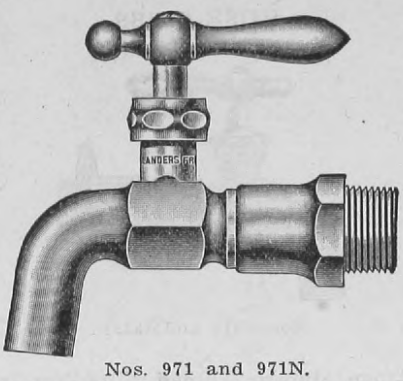
Inch	½	⅝
No. 990 —Finished Brass	$28.20	33.00
No. 990N—Nickel Plated	33.00	37.80

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FULLER BIBBS

PLAIN BIBBS



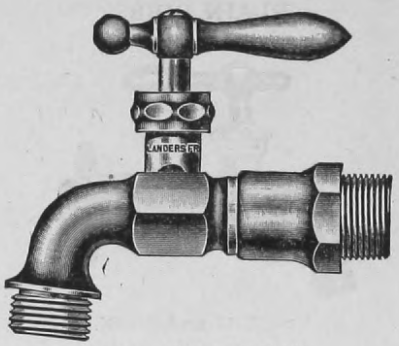
Nos. 971 and 971N.

With Shoulder Screwed for Iron Pipe, **Per Dozen.**

Inch	½	⅝
No. 971 —Finished Brass	$23.40	27.60
No. 971N—Nickel Plated	28.20	32.40

Packed—Half Dozen in a Box.

HOSE BIBBS



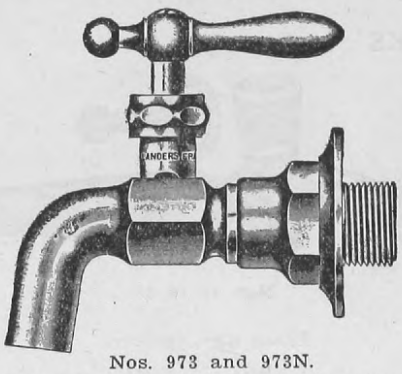
Nos. 991 and 991N.

With Shoulder Screwed for Iron Pipe, **Per Dozen.**

Inch	½	⅝
No. 991 —Finished Brass	$27.00	31.20
No. 991N—Nickel Plated	31.80	36.00

Packed—Half Dozen in a Box.

PLAIN BIBBS



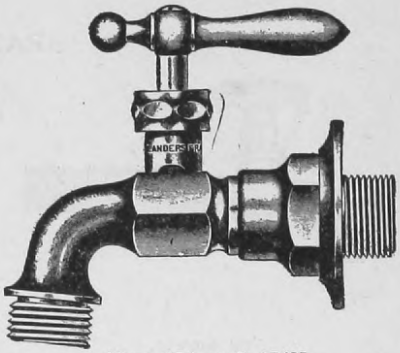
Nos. 973 and 973N.

Hexagon Flange, Outside Thread, for Iron Pipe, **Per Dozen.**

Inch	½	⅝
No. 973 —Finished Brass	$31.20	36.60
No. 973N—Nickel Plated	36.00	41.40

Packed—Half Dozen in a Box.

HOSE BIBBS



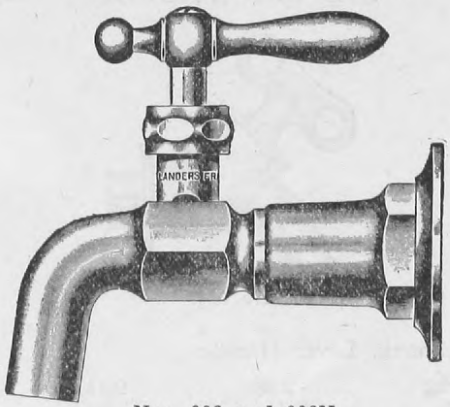
Nos. 974 and 974N.

Hexagon Flange, Outside Thread, for Iron Pipe, **Per Dozen.**

Inch	½	⅝
No. 974 —Finished Brass	$29.40	34.80
No. 974N—Nickel Plated	34.20	39.60

Packed—Half Dozen in a Box.

PLAIN BIBBS



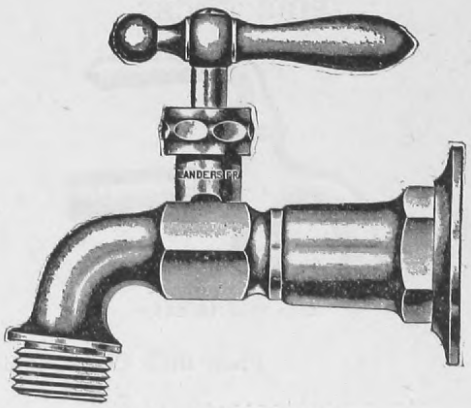
Nos. 993 and 993N.

Hexagon Flange, Inside Thread, for Iron Pipe, **Per Dozen.**

Inch	½	⅝
No. 993 —Finished Brass	$34.80	40.20
No. 993N—Nickel Plated	39.60	45.00

Packed—Half Dozen in a Box.

HOSE BIBBS



Nos. 994 and 994N.

Hexagon Flange, Inside Thread, for Iron Pipe, **Per Dozen.**

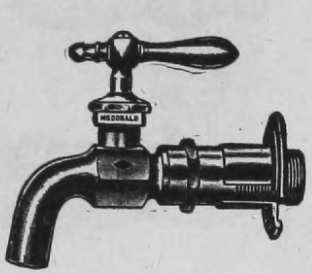
Inch	½	⅝
No. 994 —Finished Brass	$33.00	38.40
No. 994N—Nickel Plated	37.80	43.20

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE COLLAR FULLER BIBBS

PLAIN BIBBS



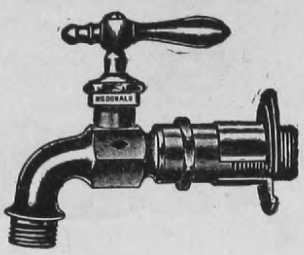
Nos. 3318 and 3318N.

Male Flange, Outside Thread, Fitted for Iron Pipe

	Per Dozen.	
Inch	½	⅝
No. 3318 —Finished Brass	$36.60	43.80
No. 3318N—Nickel Plated	41.40	48.60

Packed—Half Dozen in a Box.

HOSE BIBBS



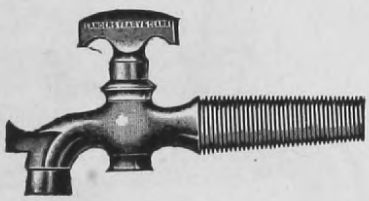
Nos. 3319 and 3319N.

Male Flange, Outside Thread, Fitted for Iron Pipe

	Per Dozen.	
Inch	½	⅝
No. 3319 —Finished Brass	$40.20	47.40
No. 3319N—Nickel Plated	45.00	52.20

Packed—Half Dozen in a Box.

BRASS RACKING COCKS



Nos. 21 to 23.

To Screw.

Nos.	**21**	**22**	**23**
Inch	⅜	½	⅝
Per Dozen	$10.50	14.00	19.50

Packed—Nos. 21 and 22, One Dozen; No. 23, Half Dozen in a Box.

Nos. 30 to 33.

Loose Key, to drive.

Nos.	**30**	**31**	**32**	**33**
Inch	⅜	½	⅝	¾
Per Dozen	$12.00	15.00	20.00	29.00

Packed—Nos. 30 and 31, One Dozen; Nos. 32 and 33, Half Dozen in a Box.

BIBB COCKS

Nos. 230 to 235.

OIL CAN FAUCETS

No. 056.

Plain Bibb Cocks, Finished Brass, Tinned Shank, Lever Handle

Nos.	**230**	**231**	**232**	**233**	**234**	**235**
Inch	¼	⅜	½	⅝	¾	1
Per Dozen	$25.80	26.40	27.00	37.20	47.40	68.40

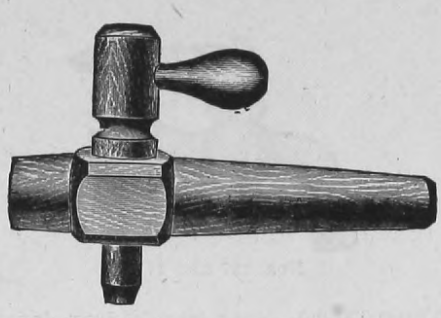
Packed—Half Dozen in a Box.

Oil Can Faucets, with Flange, to Solder

No. 056—5/16 inch Cast Iron, Tinned ..... Per Dozen, $1.80

UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

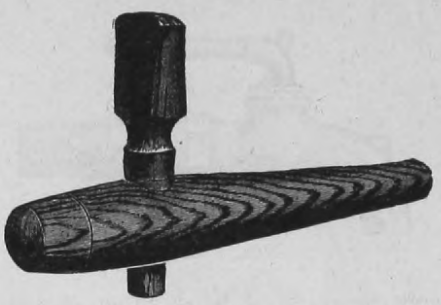
FAUCETS



Nos. 1 to 5.

Cork Lined Faucets, made of seasoned Sugar Maple, boiled in oil.

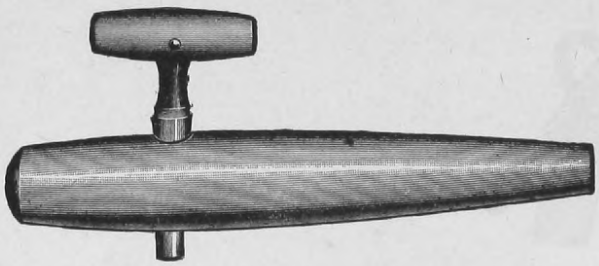
Nos.	1	2	3	5
Length, inches	7	8	9	10½
Per Dozen	$1.00	1.25	1.50	2.00



Nos. 08 to 010.

Cedar Faucets, selected Red Cedar, not lined, Interchangeable Keys.

Nos.	08	09	010
Length, inches	8	9	10
Per Dozen	$1.00	1.30	1.75



Nos. 80 and 100.

Metal Key Faucets. Turned from selected, thoroughly seasoned Maple, highly polished, Leather Lined, Non-corrosive Composition Key with Malleable Iron Shank, and finished hardwood Handle.

Nos.	80	100
Length, inches	8	10
Per Dozen	$4.00	4.75

Nos. 10 and 20.

Lock Faucets, Hard Maple Body. Tinned Malleable Iron Key and Cap, Compressed Leather Lining, Composition Key and Spigot (non-corrosive).

Key may be left in if desired, but cannot be removed except when locked.

Nos.	10	20
Length, inches	8	9
Per Dozen	$4.00	4.50

MOLASSES AND OIL GATES

Nos. 2 to 5.

Stebbins Pattern, Screw Shank, Japanned.

Nos.	2	3	4	5
Inside Diameter, in.	⅞	1¼	1⅜	1½
Bore, inches	1¼	1½	1⅝	1¾
Per Dozen	$8.00	9.00	10.00	12.00

Packed—Half Dozen in a Box.

Nos. 10 to 60.

Scoville's Perfection, Tapered Shank, with Thread for **Wood.**

Nos.	10	20	30	40	50	60
Inside Diam., in.	½	¾	1	1¼	1½	2
Bore, inches	¾	1	1¼	1½	1¾	2
Per Dozen	$9.50	12.00	14.00	16.50	20.00	28.00

Packed—Half Dozen in a Box.

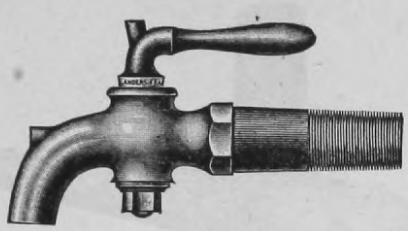
Scoville's Perfection, Straight Shank, **Iron Pipe Thread.**

Nos.	120	130	140	150	160
Inside Diam., in.	¾	1	1¼	1½	2
Bore, inches	1	1¼	1½	1¾	2
Per Dozen	$12.00	14.00	16.50	20.00	28.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PETROLEUM FAUCETS

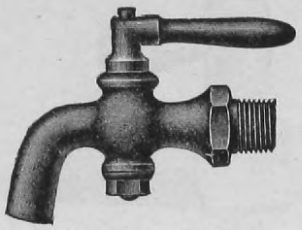


Nos. 5 to 7.

Screw Shank, Lever Handle, Iron, Japanned.

Nos.	5	6	7
Inch	⅝	¾	1
Per Dozen	$13.00	16.00	23.00

Packed—Half Dozen in a Box.



Nos. 167 and 177.

Iron Pipe Thread, Lever Handle, Iron, Japanned.

Nos.	167	177
Inch	¾	1
Per Dozen	$17.00	24.00

Packed—Half Dozen in a Box.

"McDONALD" LOCK OIL BIBBS

No. 48.

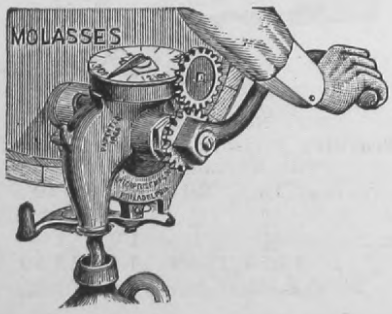
Hinged Lever

For use on Oil Barrels and Tanks. Threaded for iron pipe, and when the Bibb is closed the Hinged Handle drops over the Brass Staple or Loop on the Bibb. This Loop or Staple is large enough to permit the use of a padlock, to lock the Bibb for security.

No.	48
Inch	⅝
Each	$2.45

Packed—Half Dozen in a Box.

MEASURING FAUCETS

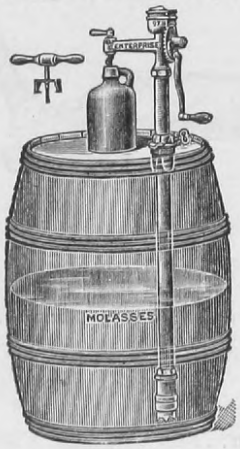


No. 61.

No. 61—Enterprise Improved Patent Suction and Force Measuring Faucet, Tinned, for Molasses, Thick Oils, Varnish, Tar, etc.....Each, $3.50

Packed—Twelve in a Case.

MEASURING PUMPS



No. 97.

For measuring molasses, heavy oils, tar and other thick liquids. Each revolution of the crank pumps a gill. Extreme length, 54 inches.

No. 97—Pump only.....Each, $8.00

Packed—Head Crated—Each in a Separate Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STRAIGHT LINK COIL CHAIN

Common Coil Chain—Self-Colored. The Welding on this chain is done by experienced workmen; it is proof tested to strains shown below for the various sizes.

BB Coil Chain—Blackened. This is a closer link chain than the Common grade and greater care is exercised in the manufacture; making a good strong chain for general use.

BBB Coil Chain—Dollied and Blackened. This is a closer link chain than the BB grade. Special care is exercised in its manufacture and made only by the most experienced workmen.

Size, Inches	Common Coil Chain						BB Coil Chain						BBB Coil Chain					
	Approximate Links per Foot	Outside Length in Inches	Outside Width in Inches	Weight per 100 Feet	Proof Test	Approximate Breaking Strain	Approximate Links per Foot	Outside Length in Inches	Outside Width in Inches	Weight per 100 Feet	Proof Test	Approximate Breaking Strain	Approximate Links per Foot	Outside Length in Inches	Outside Width in Inches	Weight per 100 Feet	Proof Test	Approximate Breaking Strain
3/16	13 1/2	1 3/8	7/8	46	1,000	2,000	14 1/2	1 1/4	3/4	50	1,100	2,200	15	1 1/8	3/4	52	1,200	2,400
1/4	12 1/2	1 1/2	1 1/16	75	1,500	3,300	13 1/2	1 7/16	1 5/16	80	1,650	3,800	14	1 3/8	1 5/16	83	1,750	4,500
5/16	11	1 3/4	1 1/4	110	2,600	5,200	12	1 7/8	1 1/8	115	3,000	5,600	12 1/2	1 5/8	1 1/8	118	3,400	7,000
3/8	10	2 1/8	1 1/2	155	3,600	7,200	11	1 15/16	1 7/16	160	4,000	8,000	11 1/2	1 7/8	1 7/16	166	4,500	9,000
7/16	9	2 1/4	1 11/16	200	4,500	10,000	9 1/2	2 3/16	1 9/16	210	5,500	11,500	10	2 1/8	1 9/16	215	6,300	12,500
1/2	8	2 1/2	1 7/8	260	6,500	13,000	8 1/2	2 7/16	1 3/4	265	7,000	15,000	9	2 3/8	1 3/4	268	8,000	16,000
9/16	7 1/2	2 7/8	2 1/8	325	8,000	16,000	8	2 13/16	2	335	8,800	18,500	8 1/4	2 3/4	2	340	10,000	22,000
5/8	6 1/2	3 3/8	2 1/4	400	9,500	20,000	7	3 1/8	2 1/8	410	10,750	23,000	7 1/4	3	2 1/8	420	12,500	25,000
3/4	6	3 7/8	2 11/16	590	13,500	28,800	6 1/4	3 5/8	2 9/16	600	15,500	33,500	6 1/2	3 1/2	2 9/16	610	17,750	35,000
7/8	5	4 3/8	3 1/8	800	18,500	39,000	5 1/4	4 1/8	3	820	21,000	44,000	5 1/2	4 1/16	3	830	24,000	47,500
1	4	5	3 5/8	1,000	24,000	51,500	4 1/4	4 3/4	3 1/2	1,030	28,500	59,000	4 1/2	4 5/8	3 1/2	1,040	31,350	64,500
1 1/8	3 3/4	5 1/2	4	1,300	29,000	60,000	4	5 1/4	3 7/8	1,350	36,000	74,000	4 1/8	5 1/8	3 7/8	1,400	38,000	78,000
1 1/4	3 3/8	6 1/8	4 3/8	1,500	39,000	80,000	3 1/2	5 7/8	4 1/4	1,550	43,000	86,000	3 5/8	5 3/4	4 1/4	1,600	47,000	95,000

DREDGE CHAIN

Dredge Chain—Dollied and Blackened. The material used in the manufacture of this chain is special Dredge Iron, rerolled and double refined. It is tough, fibrous and made a trifle harder, to prevent wearing rapidly. This iron will stand an average tensile strain of about 52,000 pounds per square inch and has a very high elastic limit.

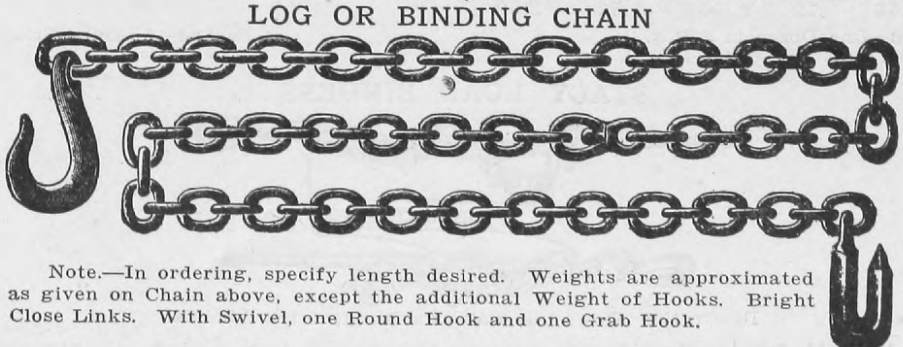
Size, Inches	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2
Standard Pitch	1 11/16	1 15/16	2 3/16	2 1/2	2 3/4	3 1/8	3 3/16	3 7/8	4 1/4	4 3/4	5 1/4	5 3/4
Outside Length in Inches	3	3 1/2	4	4 5/8	5 1/8	5 3/4	6 7/16	7	7 3/4	8 1/2	9 1/4	10
Outside Width in Inches	2 1/8	2 1/2	2 7/8	3 1/4	3 3/4	4 1/8	4 9/16	5	5 1/2	5 7/8	6 3/8	6 3/4
Proof Test	12,000	18,000	24,500	32,000	40,000	49,000	58,000	67,000	77,000	83,000	95,000	108,000
Approximate Breaking Strain	25,000	36,000	48,000	61,000	78,000	95,000	114,000	134,000	154,000	166,000	190,000	216,000
Average Safe Working Load	7,200	10,800	14,700	19,200	24,000	29,400	34,800	40,200	46,200	49,800	57,000	64,800

LOADING CHAIN

Extra Special Steel Loading Chain, Trident Pattern.....

Inches	1/4	5/16
Per 100 Pounds.....	$.....	.....

LOG OR BINDING CHAIN



Note.—In ordering, specify length desired. Weights are approximated as given on Chain above, except the additional Weight of Hooks. Bright Close Links. With Swivel, one Round Hook and one Grab Hook.

Log Chains .....

Inch	5/16	3/8
Length, Feet	12, 14, 16	12, 14, 16
Per Pound	$.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL CHAIN HOOKS

No. 1.

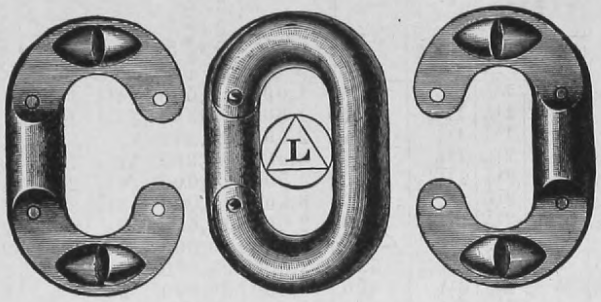
For Log Chain.....Inch,	¼	5/16	⅜	7/16	½	⅝
No. 1—Slip Hooks...Per 100,	$9.70	12.50	17.60	23.00	31.30	59.00
No. 2—Grab Hooks...Per 100,	9.70	12.50	17.60	23.00	31.30	59.00

No. 2.

COLD SHUTS

No. 10.

MISSING LINKS



"Missing Link."

Wrought Steel Cold Shuts

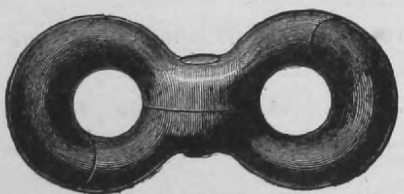
No. 10—Inches	¼	5/16	⅜	7/16	½	⅝
Per 100	$2.70	3.20	4.10	5.30	7.10	12.10

Missing Links

Drop Forged from high grade steel. Stronger than chain of same size and conforming to it.

Inches	¼	5/16	⅜	7/16	½
Approximate Strain, pounds	5,580	8,300	11,200	13,980	15,900
Per Dozen	$1.50	1.65	1.80	2.00	2.25

REPAIR LINKS

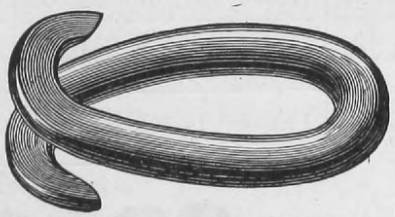


No. 2530. Malleable Iron, Polished.

Nos.	2530A	2530B	2530C	2530D	2530F
Inches	¼	5/16	⅜	7/16	½
Per Dozen	$0.56	.72	.96	1.52	2.00

Packed—One Dozen in a Box.

OPEN LINKS



No. 20. Wrought Steel, Polished.

No. 20—Inch	¼	5/16	⅜	7/16	½
Per Gross	$1.50	2.70	4.00	5.00	6.00

Packed—In Open Stock.

STACY LOAD BINDERS

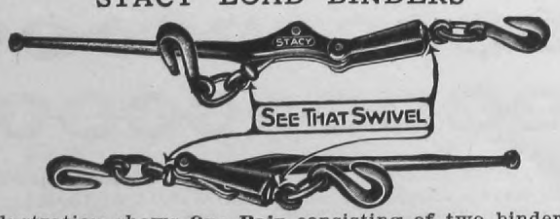


Illustration shows **One Pair** consisting of two binders.

Made of the best Malleable Iron, easily adjusted; with new style Swivel Clevis; binds equally successfully Lumber, Ties, Logs, Timbers, Boilers, Pipe, Poles, and in fact any load which requires a binding chain.

Stacy Patent Load Binders as illustrated.....Per Pair of Two, $4.00

Packed—Wired—One Pair of Two in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SINGLE JACK CHAIN

No. 8.

No. 10.

No. 12.

No. 14.

No. 16.

No. 18.

No. 20.

Single Iron Jack Chain

Nos.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Per Dozen Yards.	$0.95	.90	.80	.70	.65	.60	.55	.50	.48	.48	.45	.40	.40	.40	.40	.40	.40

Single Brass Jack Chain

Nos.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Per Dozen Yards,	$5.25	4.25	3.50	2.80	2.30	1.92	1.60	1.25	1.00	.84	.70	.60	.55	.50	.50	.50	.50

Packed—One Dozen Yards in a Package.

DOUBLE JACK CHAIN

No. 14.

No. 15.

No. 16.

Double Iron Jack Chain

Nos.	14	15	16
Per Dozen Yards	$0.60	.58	.53

Packed—One Dozen Yards in a Package.

STANDARD SAFETY CHAIN

No. 3-0.

No. 0.

No. 2-0.

No. 1.

Nos.		3-0	2-0	0	1
Brass	Per Dozen Yards,	$1.25	1.45	1.80	2.25
Nickel Plated Steel	Per Dozen Yards,	1.10	1.10	1.25	1.45

Packed—One Dozen Yards in a Package.

STANDARD PLUMBERS' CHAIN

No. 3-0.

No. 0.

No. 2-0.

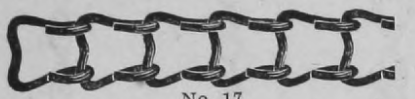
No. 1.

Nos.		3-0	2-0	0	1
Brass	Per Dozen Yards,	$1.25	1.45	1.80	2.25
Nickel Plated Steel	Per Dozen Yards,	1.10	1.10	1.25	1.45

Packed—One Dozen Yards in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD LADDER CHAIN


No. 17.

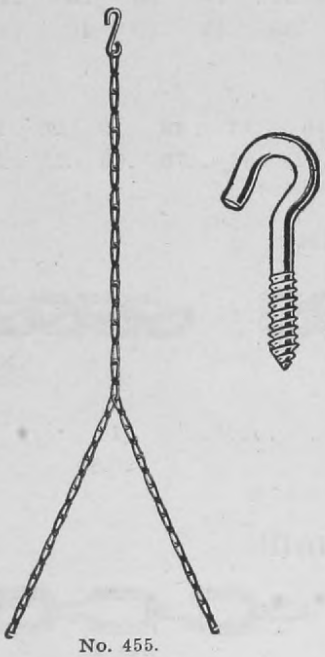
No. 18.

No. 19

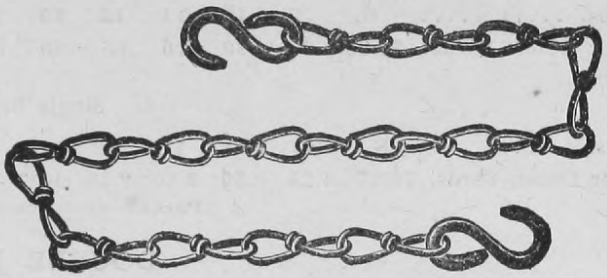
Nos.	17	18	19
Steel ..... Per Dozen Yards,	$0.60	.50	.48
Brass ..... Per Dozen Yards,	1.30	1.14	.90

Packed—One Dozen Yards in a Package.

PORCH SWING CHAINS


No. 455.

HAMMOCK CHAINS



Silver Gray Color, absolutely rust proof, instantly adjustable.

Tenso Hammock Chains:

Short, 3 feet long.....Per Dozen Sets, $4.50
Medium, 6 feet long.....Per Dozen Sets, 6.75

Packed—One Set (2 chains) in a Box.

PORCH SWING CHAINS

No. 455—Porch Swing Chains, Consists of Two Y-Shaped Chains 7½ feet long, Two No. 11 Ceiling Hooks and Two No. 110 "S" Hooks.....
.....Per Dozen Sets, $7.44

Packed—One Set in a Box.

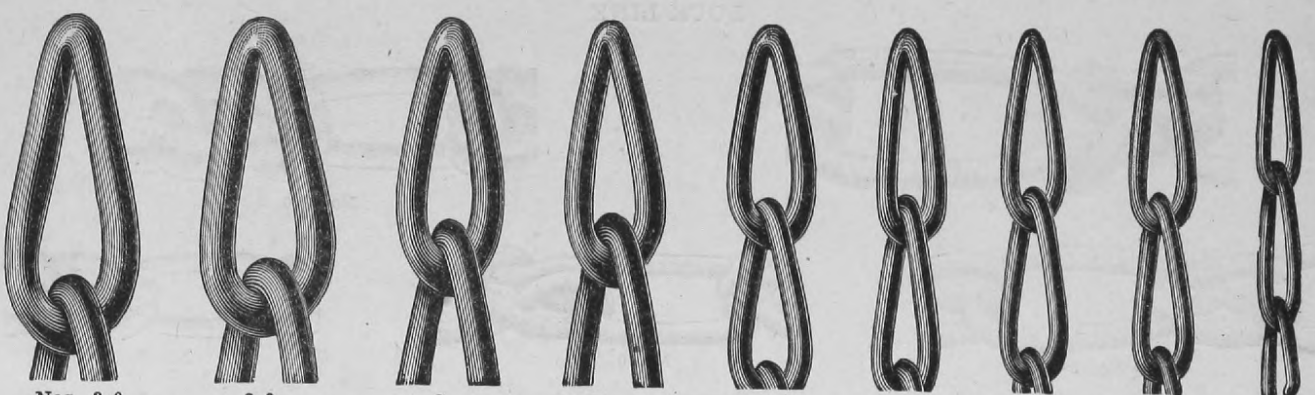
"LIBERTY" MACHINE CHAIN

Nos.	Feet in a Package	List Per 100 Feet	Dec. Size Inch	Nearest Fract. Diam. Inch	Nearest Wire Gauge	Prov. Test	Break Strength	Weight 100 Ft.	Links Per Ft.
10/0	50	$32.00	.400	13/32	....	5000	10000	158 lb.	10½
8/0	50	28.00	.343	11/32	00	3700	7500	116 lb.	12
6/0	50	21.00	.275	9/32	1	2500	5000	73 lb.	14
5/0	50	18.00	.244	15/64	3	2200	4500	57 lb.	14
4/0	100	15.00	.212	7/32	5	1600	3,300	40 lb.	14
3/0	100	14.00	.198	13/64	6	1300	2,600	34 lb.	14
2/0	100	13.00	.186	3/16	7	1200	2,400	30 lb.	15
1/0	100	12.50	.176	11/64	7½	1100	2,200	27 lb.	16
1	100	12.00	.163	5/32	8	1000	2,000	22 lb.	16
2	100	11.50	.147	9/64	9	....	....	....	....
3	100	11.00	.133	1/8	10	....	....	....	....

Polished Steel .....% Hardened Steel .....%

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

"LIBERTY" COIL CHAIN



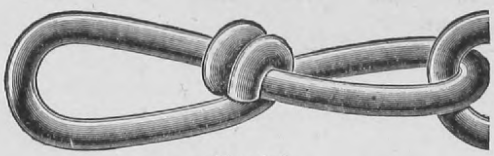
Nos. 3-0. 2-0. 0. 1. 2. 3. 4. 5. 6.

Polished Steel

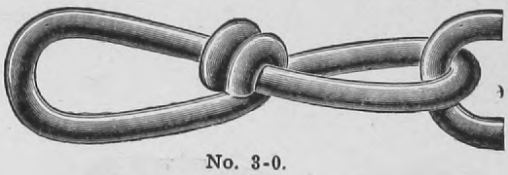
Nos.	4-0	3-0	2-0	0	1	2	3	4	5	6
Per 100 Feet	$13.00	11.00	10.00	8.80	7.80	7.20	6.80	6.60	6.50	6.50

Packed—100 Feet in a Package.

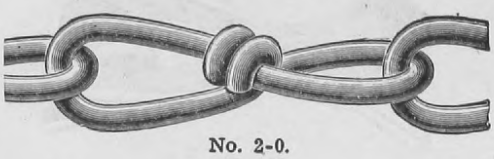
TENSO COIL CHAIN



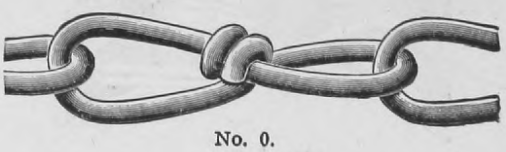
No. 4-0.



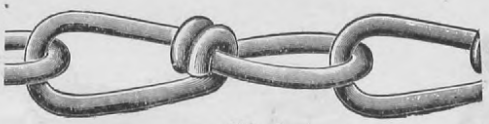
No. 3-0.



No. 2-0.



No. 0.



No. 1.

No. 2.

No. 3.

No. 4.

No. 5.

No. 6.

Tenso Steel Wire Coil Chain, "SHERARDIZED Rust-proof" Finish

Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6
Per 100 Feet	$6.00	5.00	4.00	3.50	3.20	3.00	2.80	2.70	2.50	2.30

Packed—100 Feet in a Package.

Niagara "Polished" Steel Wire Coil Chain

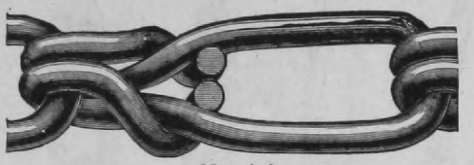
Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6	7
Per 100 Feet	$3.00	2.50	2.00	1.75	1.60	1.50	1.40	1.35	1.25	1.15	1.15

Packed—100 Feet in a Box.

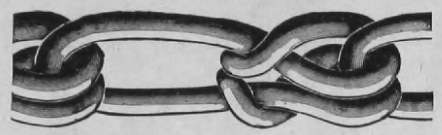
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COIL CHAIN

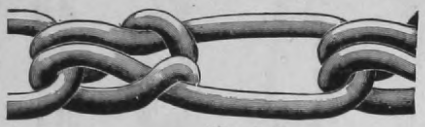
LOCK LINK



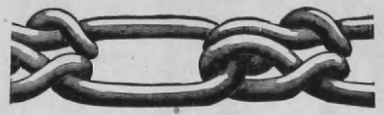
No. 4-0.



No. 3-0.



No. 2-0.



No. 0.

No. 1.

No. 2.

No. 3.

No. 4.

No. 5.

No. 6.

No. 7.

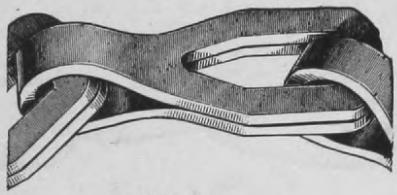
Lock Link Polished Steel Wire Coil Chain

Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6	7
Per 100 Feet	$3.75	3.25	2.50	2.30	2.00	1.80	1.60	1.50	1.45	1.40	1.40

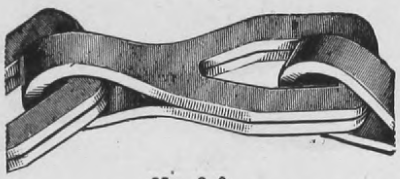
Packed—100 Feet in a Package.

COIL CHAIN

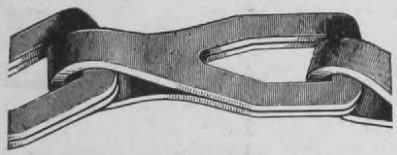
AMERICAN



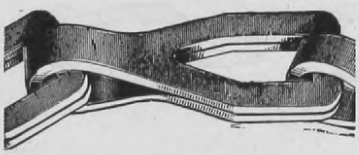
No. 4-0.



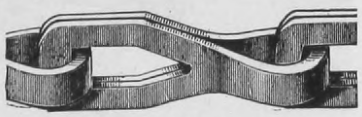
No. 3-0.



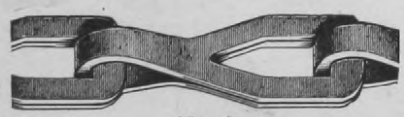
No. 2-0.



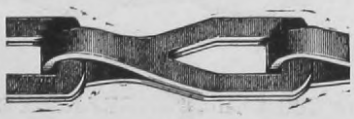
No. 0.



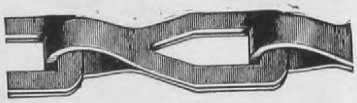
No. 1.



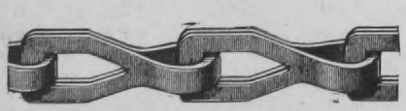
No. 2.



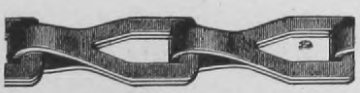
No. 3.



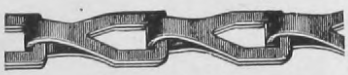
No. 4.



No. 5.



No. 6.



No. 7.

American Polished Steel Coil Chain

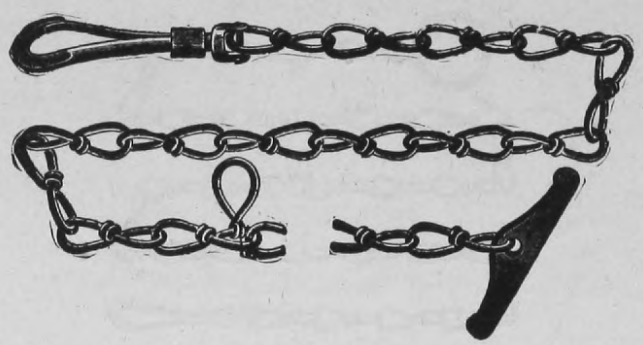
Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6	7
Per 100 Feet	$6.50	5.00	4.40	3.75	3.50	3.15	2.90	2.70	2.50	2.30	2.20

Packed—100 Feet in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HALTER CHAINS

TENSO



Tenso Steel Wire Halter Chains, **Rustproof** Finish, with T-Bar, Swivel and Snap.

Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6
4½ feet.....Per Dozen,	$5.00	4.50	3.80	3.40	3.00	2.90	2.70	2.60	2.40	2.20

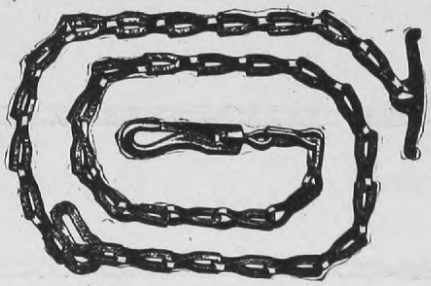
Packed—Nos. 4/0 to 1/0, Half Dozen; Nos. 1 to 6, One Dozen in a Box.

Niagara Steel Wire Halter Chains. **Polished,** with T-Bar, Swivel and Snap.

Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6	7
4½ feet.....Per Dozen,	$3.00	2.75	2.30	2.15	1.80	1.70	1.55	1.50	1.40	1.35	1.35

Packed—Nos. 4/0 and 3/0, Half Dozen; Nos. 2/0 to 7, One Dozen in a Box.

AMERICAN

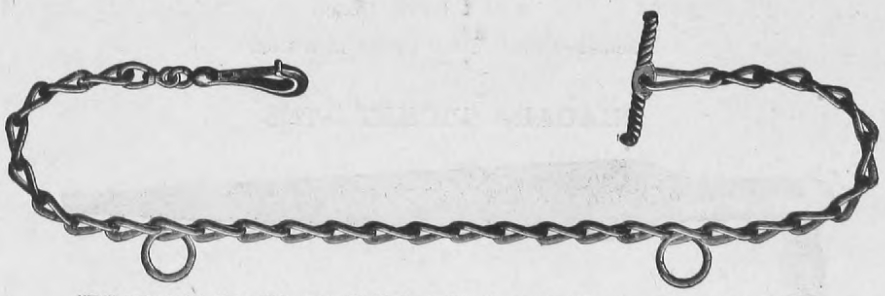


American Halter Chains, Polished Steel, **with T-Bar,** Snap and Swivel.

Nos.	3-0	2-0	1-0	1	2	3	4	5	6	7
4½ feet.....Per Dozen,	$3.50	3.20	2.80	2.50	2.25	2.10	2.00	1.80	1.75	1.75

Packed—No. 3/0, Half Dozen; Nos. 2/0 to 7, One Dozen in a Box.

"LIBERTY" HALTER CHAINS



"Liberty" Halter Chains, Polished Steel, with T-Bar, Snap and Swivel.

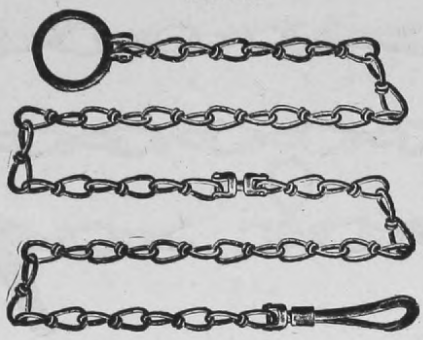
Nos.	4-0	3-0	2-0	1-0	1	2	3	4	5	6	7
4½ feet.....Per Dozen,	$9.00	7.80	6.80	5.80	5.00	4.70	4.50	4.30	4.20	4.20	4.20
6 feet.....Per Dozen,	12.50	9.80	8.60	7.40	6.80	6.20	5.80	5.70	5.60	5.60	5.60

Packed—Nos. 4/0 to 1/0, 4½ feet long, Half Dozen; Nos. 4/0 to 1, 6 feet long, Half Dozen; Others, One Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

TIE-OUT OR PICKET CHAINS

TENSO



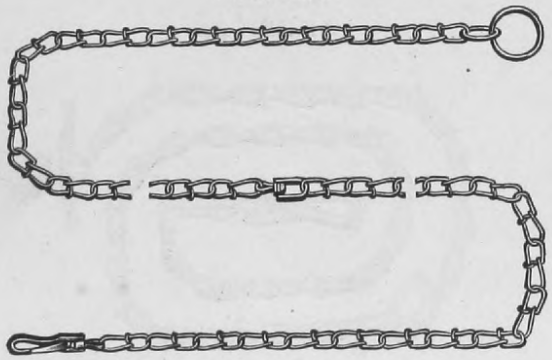
Tenso Steel Wire Tie-Out or Picket Chains

Rust-proof Finish, Swivel Snap on one end, Ring on other end and Swivel in center.

20 Foot Lengths			30 Foot Lengths		
Nos.	**0120**	**0220**	**Nos.**	**0130**	**0230**
Size Nos.	0	00	Size Nos.	0	00
Per Dozen	$4.00	4.75	Per Dozen	$6.00	7.00

Packed—One-twelfth Dozen in a Box.

EUREKA



Eureka Steel Wire Tie-Out or Picket Chains

Polished, Swivel Snap on one end, Ring on other end, and Swivel in center.

20 Foot Lengths			30 Foot Lengths		
Nos.	**120**	**220**	**Nos.**	**130**	**230**
Size Nos.	0	00	Size Nos.	0	00
Per Dozen	$4.00	4.75	Per Dozen	$6.00	7.00

Packed—One-twelfth Dozen in a Box.

NIAGARA PICKET PINS

Combined Picket Pin and Swivel. All Steel, very stiff and strong, penetrates all soils without the use of mallet, holds firmly even in soft ground. All parts work freely.

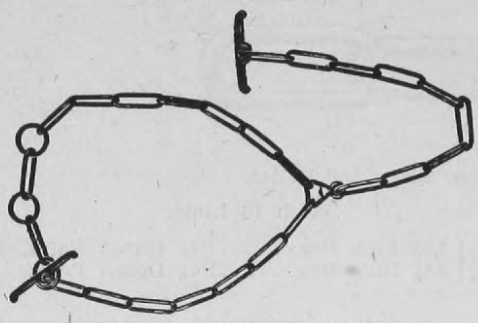
Niagara Picket Pins and Swivels.....Per Dozen, $3.00

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CHAIN COW TIES

EL-WEL-CO-TI

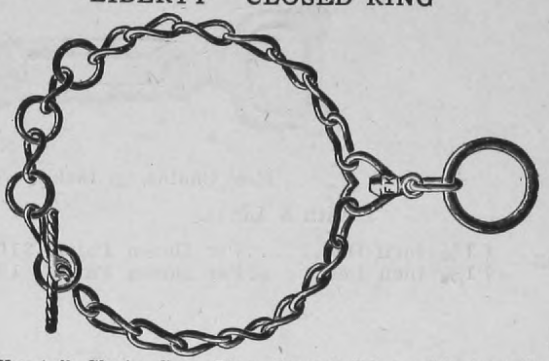


El-Wel-Co-Ti Chain Cow Ties.

Straight Link, Electric Welded, Ohio Pattern, Two Toggles.

Nos.	620	630	730	830
Size Nos.	2/0	3/0	3/0	3/0
Length, Feet	4½	4½	5	5½
Per Dozen	$3.70	3.90	4.10	4.35

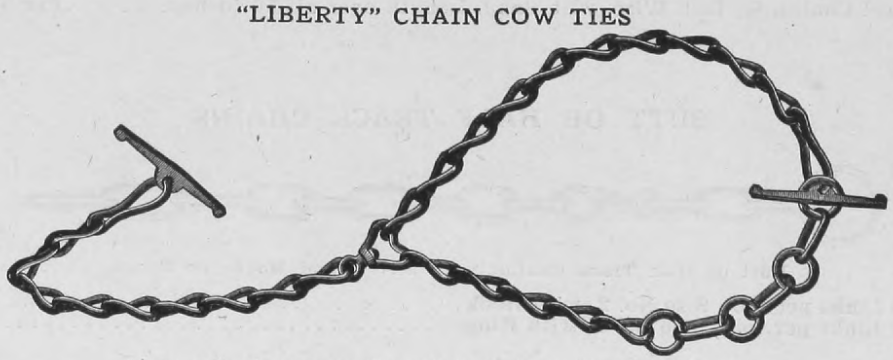
"LIBERTY" CLOSED RING



"Liberty" Chain Cow Ties, **Closed** Ring with Toggle, 4½ Feet Long.

"Liberty" Closed Ring	No.	230
	Size No.	3/0
	Per Dozen	$4.45

"LIBERTY" CHAIN COW TIES



"Liberty" Chain Cow Ties, **Ohio** Pattern, Two Toggles.

4½ Feet Long, 18 Inch Lead		5 Feet Long, 24 Inch Lead		5½ Feet Long, 30 Inch Lead	
No.	130	No.	430	No.	530
Size No.	3/0	Size No.	3/0	Size No.	3/0
Per Dozen	$3.90	Per Dozen	$4.10	Per Dozen	$4.35

CLEVELAND PUMP CHAIN

No. 6.

Cleveland Pump Chain—Made of high-grade specially drawn wire. Links independently. Hot galvanized after making, thus having no sheared ends unprotected. Weight, 30 pounds per 100 feet.

No. 6—Pump Chain .....Per 100 Feet, $.....

LUMBER CHAINS

Lumber Chains, with Grab Hook and Swivel.

1-4 inch Wire, Regular Length, 36 inches.....Per Dozen Pairs, $.....

5-16 inch Wire, Regular Length, 36 inches.....Per Dozen Pairs, ...

Note.—Swivel on Lumber Chains is now placed next to long links.

Packed—Entire Page—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HEEL CHAINS

Nos. 45 and 46.

Heel Chains, 5/16 Inch Wire, with Swivel Dee, Screw and Roller.

With 8 Links.		With 10 Links	
No. 45—	1½ inch Dee.....Per Dozen Pairs, $10.00	No. 46—	1½ inch Dee.....Per Dozen Pairs, $11.50
	1¾ inch Dee.....Per Dozen Pairs, 10.00		1¾ inch Dee.....Per Dozen Pairs, 11.50

No. 598.

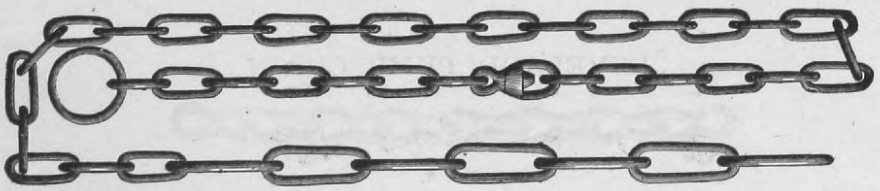
No. 598—Handy Heel Chains, 5/16 inch Wire, with Snap, Length over all 16 inches.....Per Single Dozen, $4.00

BUTT OR HALF TRACE CHAINS

Butt or Half Trace Chains, with Swivel and Hooks or Rings.

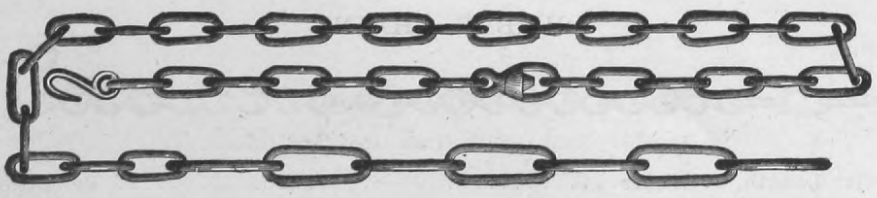
No. 32—3 feet, 10 Links per foot, Size No. 2, with **Hook**.....Per Pair, $0.90
No. 032—3 feet, 10 Links per foot, Size No. 2, with **Ring**.....Per Pair, .80

TRACE CHAINS



Long Trace Chains, with Swivel and **Ring.**

No. 02—6½ feet, 10 Links per foot, Size No. 2, with **Ring**.....Per Pair, $1.50



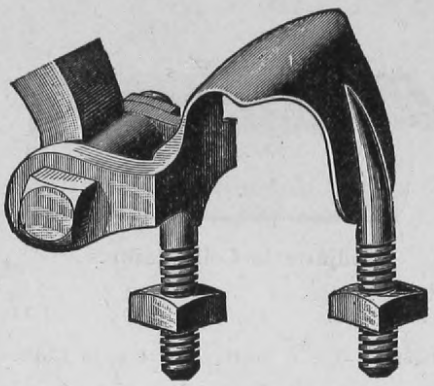
Long Trace Chains, with Swivel and **Hook.**

No. 2—6½ feet, 10 Links per foot, Size No. 2, with **Hook**.....Per Pair, $1.50

Packed—Entire Page—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FINISHED SHAFT COUPLINGS



Flanged Pattern, Finished, with Eyes, made of best Norway Iron.

Width of Eye, inches....	⅞	1	1⅛
Size of Bolt, inches.....	5/16	⅜	7/16
Length of Clip, inches..	2¾	3	3⅝
Diam. of Stem, inches..	5/16	5/16	⅜
Per Dozen Pairs.....	$9.60	9.60	14.40

COUPLING CLIPS AND BOLTS

Coupling Clips and Bolts, without Eyes.

Width of Eye, inches....	⅞	1	1⅛
Size of Bolt, inches.....	5/16	⅜	7/16
Length of Clip, inches..	2¾	3	3⅝
Diam. of Stem, inches..	5/16	5/16	⅜
Per Dozen Pairs.....	$6.00	6.00	6.84

Packed—Half Dozen Pairs in a Box.

Note.—The Clip length is given from Round to Round, measured on underside of Clip.

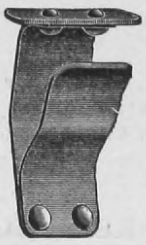
ANTI-RATTLERS

BURTON'S

No. 1.

Guaranteed to retain their strength and not to break.

BURTON'S



No. 2.

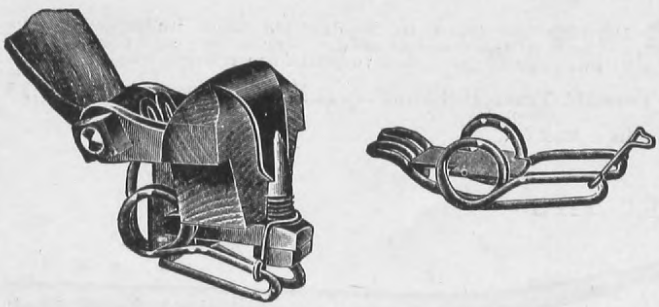
No. 1—Burton's Anti-Rattler and Bolt Holder combined.....Per Dozen Pairs, $1.60

Packed—One Dozen Pairs in a Box.

No. 2—Burton's Anti-Rattler, without Bolt Holder, ...Per Dozen Pairs, $1.40

Packed—One Dozen Pairs in a Box.

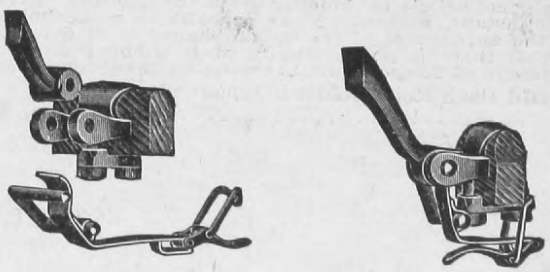
NEW 1901



New 1901—Wire Anti-Rattler. Will fit any Shackle .....Per Dozen Pairs, $1.40

Packed—One Dozen Pairs in a Box.

QUICK SHIFT



No. 3—Fernald Quick-Shift and Anti-Rattler combined, to fit ⅜, 5/16 or 7/16 inch Bolt; ⅜ inch sent unless otherwise ordered..... .....Per Dozen Pairs, $4.50

Packed—One Dozen Pairs in a Box.

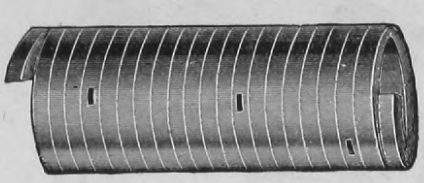
Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

LEATHER AXLE WASHERS

Nut and Collar Washers

Axle, inches.....	¾	⅞	1	1⅛	1¼
Per Box of 5 Sets,	$0.70	.80	.90	1.00	1.10

Packed—5 Sets in a Box, 20 Nut and 20 Collar.



Adjustable Coil Washers

Axle, inches.....	⅞	1	1⅛	1¼
Per 100.....	$0.90	1.00	1.10	1.20

Packed—100 in a Box, in 4 or 5 Coils.

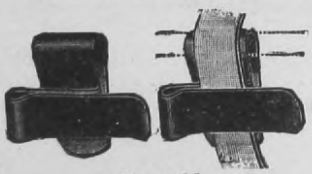
BUFFALO PATENT AXLE WASHERS

Contents of Case:

Two Sets for ¾-inch Axles.
Six Sets for ⅞-inch Axles.
Ten Sets for 1-inch Axles.
Four Sets for 1⅛-inch Axles.
Two Sets for 1¼-inch Axles.

Buffalo Counter Case, Containing **Twenty-four** Sets of Washers as above, Each Set in a Separate Package .....Per Case, $1.70

DASH REIN HOLDERS

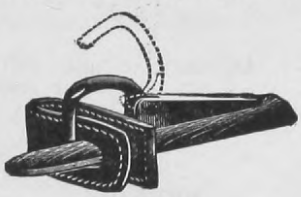


Fernald.

A perfect article for holding the Reins securely. Attached in an instant, without screws or bolts to make holes and mar the appearance of the dash. Shaped to fit over Rib of Dash so there is no possibility of it slipping either way. The length of Tongue permits the Reins to be easily secured.

Fernald Dash Rein Holders, Japanned.....Per Dozen, $2.50

DOUBLE TRACE HOLDERS



Fernald.

Permits the trace to be doubled back under when the front hole of the trace is used. Very strong and positive and will not permit the Trace to pull out or work loose.

Fernald Trace Holders.....Per Dozen, $2.25

Packed—One Dozen in a Box.

STEEL SHAFT TIPS

Buggy Steel Shaft Tips.....Per Dozen, $6.00 | **Surrey** Steel Shaft Tips.....Per Dozen, $8.50

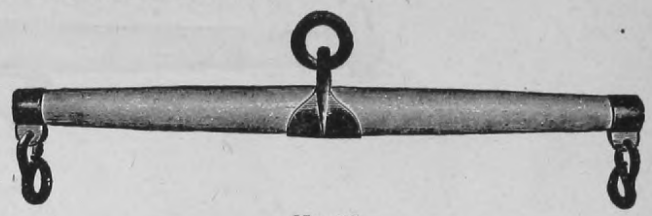
Packed—Two Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRONED WAGON SINGLETREES

No. 3B.

No. 3B—2⅝x36 inches, selected Ash, varnished, 9/16-inch Ring Center Clip, 7/16-inch Ring, 1⅜-inch Ferrules, ⅜-inch End Hooks. Per Dozen, $10.00



No. 3S.

No. 3S—2⅝x36 inches, selected Ash, varnished, 9/16-inch Ring Center Clip, ½-inch Ring, 1⅜-inch Ferrules, ⅜-inch End Hooks. Per Dozen, $10.00

Packed—Half Dozen in a Bundle.

No. 5A.

No. 5A—2⅝x34 inches, selected Ash, varnished, 9/16-inch Ring Center Clip, 7/16-inch Ring, ½-inch Straps, ⅜-inch End Hooks..... Per Dozen, $11.30

Packed—Half Dozen in a Bundle.

IRONED WAGON DOUBLETREES

No. 16.

No. 16—2x4x48 inches, selected Ash, varnished, Top Plate 2x6 inches, Bottom Plate 2¼x6 inches..... Per Dozen, $11.00

Packed—Half Dozen in a Bundle.

IRONED PLOW SINGLETREES

No. 30.

No. 30—2⅜x28 inches, selected Ash, varnished, 7/16-inch Ring Center Clip, ⅜-inch Ring, 1¼-inch Ferrules, 5/16-inch End Hooks. . Per Dozen, $8.50

No. 240.

No. 240—2½x26 inches, selected Ash, varnished, 7/16-inch Ring Center Clip, ⅜-inch Ring, 7/16-inch Straps, ⅜-inch End Hooks.... Per Dozen, $9.50

Packed—Half Dozen in a Bundle.

IRONED PLOW DOUBLETREES

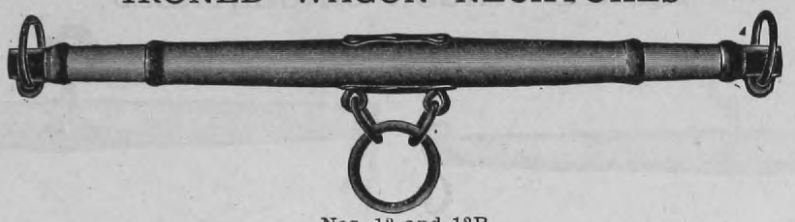
No. 41.

No. 41—2¾x36 inches, selected Ash, varnished, ⅝-inch Center Clip, ½-inch Center Hook, ½-inch End Clips ..... Per Dozen, $10.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

IRONED WAGON NECKYOKES

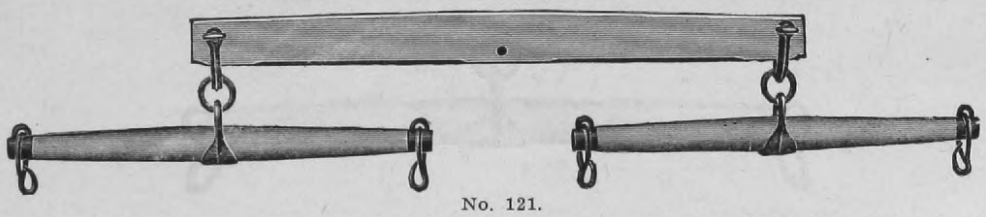


Nos. 12 and 12B.

No. 12—2⅝x40 inches, Selected Ash Varnished, 3¼ inch Center Rings, 7 inch Plate, 1⅜ inch End Ferrules, 3 inch End Rings.....Per Dozen, $.....

No. 12B—2¾x44 inches, Selected Ash Varnished, 3½ inch Center Ring, 7 inch Plate, 1½ inch End Ferrules, 3¼ inch End Rings.....Per Dozen, $.....

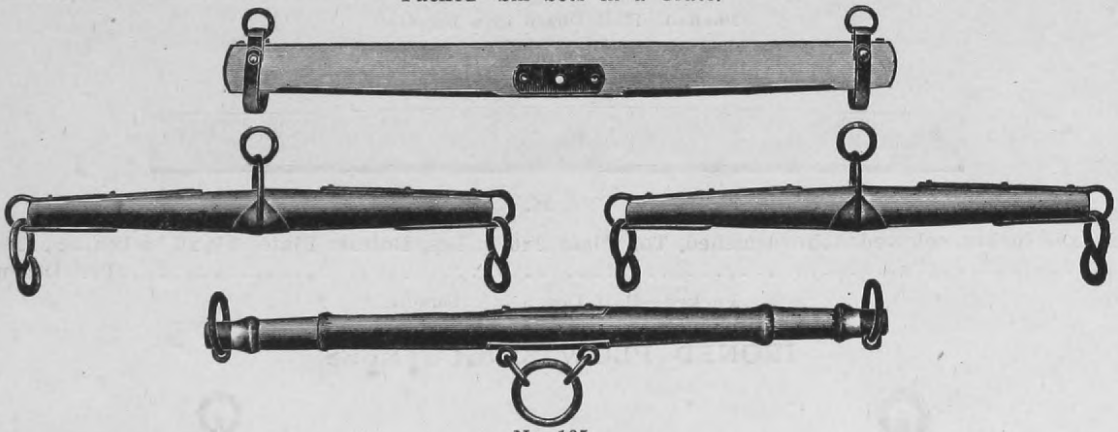
IRONED WAGON DOUBLETREE SETS



No. 121.

No. 121—This Set consists of 1 only Doubletree 1¾x3⅝x42 inches, with Malleable Clevises; 2 only Singletrees 2⅜x30 inches, weight of the complete set 24 pounds.....Per Set, $.....

Packed—Six Sets in a Crate.



No. 125.

No. 125—This Set consists of 1 only Doubletree 2x4½x48 inches, with Wrought Plate and Clevises; 2 only Singletrees 2⅝x36 inches, 1 only Neckyoke 2⅝x40 inches; weight of the complete set 40 pounds ..... Per Set, $.....

Packed—Six Sets in a Crate.

EXTRA SINGLE AND DOUBLETREE WOODS

Singletree Woods. Nos. 1 and 2.

Doubletree Woods. No. 016.

Singletree Woods Only { **No. 1**—2¾x36 inches, Selected Ash.....Per Dozen, $..... / **No. 2**—3 x38 inches, Selected Ash.....Per Dozen, ...

No. 016—Wagon **Doubletree Woods only,** Not Ironed, 2x4x48 inches, Selected Ash.....Per Dozen, ...

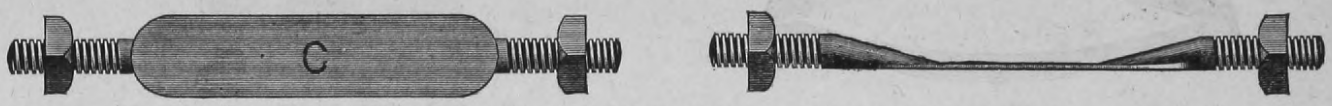
NECKYOKE WOODS

No. 4—2½x38 inches, Selected Ash.....Per Dozen, $.....

No. 5—2⅝x42 inches, Selected Ash.....Per Dozen, ...

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AXLE CLIPS

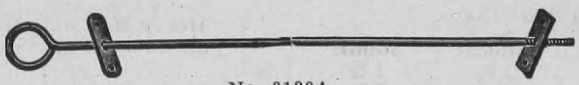


Bevel Edge. Flat part 7/8 inch wide, Shank, 5/16 inch diameter.

Nos.	0	1	2	3	4	5	6
Length of Flat Part, inches	2 3/4	3 1/4	3 3/4	4 1/4	4 3/4	5 1/4	6
Per 100	$7.00	7.00	8.00	9.00	10.00	11.00	12.50

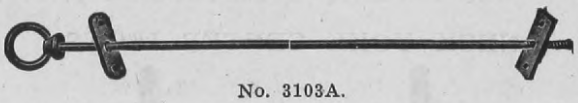
Packed—Fifty in a Box.

WAGON BOX RODS



No. 3120A.

No. 3120A—Common Eye, Narrow Track Wagon Box Rods, 3/8 inch x 3 1/4 feet, complete.....Per 100, $22.50



No. 3103A.

No. 3103A—Patent Shoulder, Narrow Track Wagon Box Rods, 3/8 inch x 3 1/4 feet, complete.....Per 100, $23.75

Packed—Twenty-five in a Bundle.

Note—Length given is from under shoulder to point of rod.

WAGON BOX STRAP BOLTS

No. 3153.

Nos.	3153C	3153D	3153G	3153H	3153M	3153P	3153S
Length over all, inches	10	12	12	14	12	14	16
Length of Shank, inches	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4
Diameter of Shank, inches	1/2	1/2	9/16	9/16	5/8	5/8	5/8
Per Set of Eight Bolts	$0.95	1.05	1.15	1.25	1.15	1.30	1.45

Packed—One Set of Eight Bolts in a Bundle.

POLE CAPS

No. 3255.

No. 3255—Steel Pole Cap and Hold Back, in one piece .....Per 100, $11.00

HAMMER STRAPS

No. 3235B.

No. 3235B—Steel Hammer Straps, 25/32 and 17/32 inch Holes, 7 3/4 inches from center to center of Holes .....Per 100, $6.60

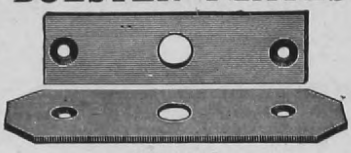
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SEAT SPRINGS

No. 2.

No. 2—Seat Springs, Two Leaf, 1½x26 inches .....Per Pair, $.....

BOLSTER PLATES



Flanged.
Length of Top Plate, 10 Inches; Length of Bottom Plate, 12 Inches.

Nos.	3200D	3200E	3200F
Width, inches	3	3¼	3½
Per Pair	$0.70	.75	.80

Eight Inches Center to Center of End Holes.

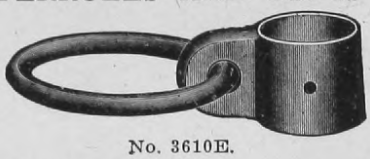
NECK YOKE END IRONS

No. 3605.

Malleable Ferrules and Steel Rings.

Nos.	3605B	3605D	3605E
Ferrule, Small End	1⅜	1½	1¾
Ferrule, Large End	1½	1⅝	1⅞
Size Steel in Ring	⅜	7/16	7/16
Per 100	$7.70	9.60	12.30

FERRULES AND RINGS

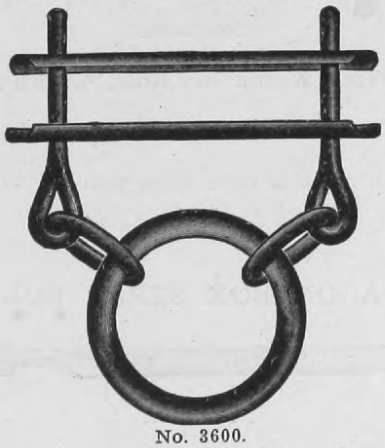


No. 3610E.

Heavy Malleable Iron Ferrules, and Steel Rings.
To pull direct from Ferrule. Use with Grab Link Chain.

No.	3610E
Ferrule, Small End	1¾
Ferrule, Large End	1⅞
Size of Ring	2x7/16
Per 100	$14.40

NECK YOKE CENTER IRONS

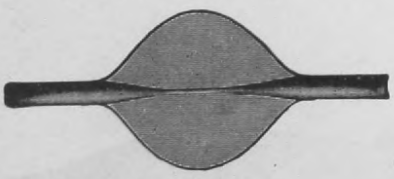


No. 3600.

Steel Rings, Welded Eyes.

Nos.	3600A	3600B
Size of Rings	3¼ x 9/16	3½ x ⅝
Eyes, inches	7/16	½
Links, inches	⅜	7/16
Per 100	$25.00	31.00

STRAIGHT SINGLETREE CLIPS



No. 3500C.

Straight Singletree Center Clips.

No.	3500C
Round Part, inches	⅝
Total Length, inches	11½
Per 100	$8.50

SINGLETREE CLIPS WITH RINGS

No. 3520.

Welded Singletree Center Clips with Rings.

Nos.	3520A	3520C	3520D
Round Part, inches	¾	⅝	9/16
Steel in Ring, inches	⅝	½	½
Per 100	$23.10	14.50	12.90

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

SINGLETREE TRIMMINGS

SINGLETREE STRAPS.

No. 3565A

Bent Wrought Steel Singletree Straps.

No.	3565A
Round Part, inch	½
Total Length, inches	19½
Per 100	$7.15

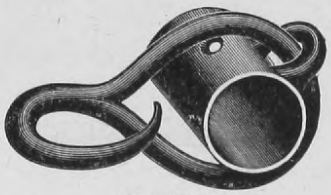
SINGLETREE HOOKS.

No. 3583.

Wrought Steel Singletree Hooks, large eyes.

Nos.	3583A	3583B
Size of Steel, inch	7/16	⅜
Per 100	$5.00	4.10

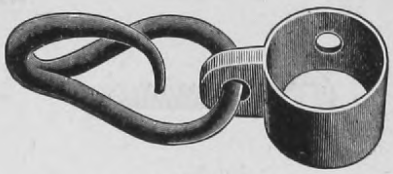
SINGLETREE HOOKS.



No. 3550.

Malleable Ferrules and Steel Rings, Back Draught.

Nos.	3550B	3550D	3550E
Ferrule, Small End	1⅜	1½	1⅝
Ferrule, Large End	1½	1⅝	1¾
Size Steel in Hook	⅜	7/16	7/16
Per 100	$8.10	10.70	12.20



No. 3555.

Heavy Malleable Ferrules and Steel Rings, Direct Draught.

Nos.	3555B	3555D	3555E
Ferrule, Small End	1⅜	1½	1¾
Ferrule, Large End	1½	1⅝	1⅞
Size Steel in Hook	⅜	7/16	7/16
Per 100	$9.50	12.50	15.40

MALLEABLE IRONS.

SINGLETREE HOOKS.

No. 120. In Pairs, Right and Left.

Nos.	120A	120B	120C	120E
Ferrule, Small End,	1	1⅛	1¼	1½
Ferrule, Large End,	1 1/16	1 3/16	1 5/16	1 9/16
Per Pound			$	

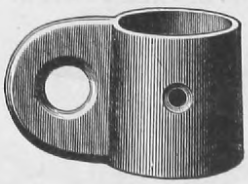
No. 130.

No.	130
Ferrule, Small End	1⅜
Ferrule, Large End	1½
Per Pound	$

SINGLETREE FERRULES WITH EYES.

No. 165. Regular.

Nos.	165A	165B	165C
Ferrule, Small End	1¼	1⅜	1½
Ferrule, Large End	1⅜	1½	1⅝
Per Pound		$	



No. 170. Heavy.

Nos.	170B	170C	170E
Ferrule, Small End	1⅜	1½	1¾
Ferrule, Large End	1½	1⅝	1⅞
Per Pound		$	

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MALLEABLE IRONS

WHIFFLETREE FERRULES.

No. 15. Round Pattern.

Nos.	15A	15B	15C	15D	15E	15F	15G	15J
Small End	½	⅝	¾	⅞	1	1⅛	1¼	1½
Large End	9/16	11/16	13/16	15/16	1⅛	1 3/16	1 5/16	1⅝
Per Pound								$

AXLE CLIP YOKES OR TIES.

No. 7115. Plain Pattern.

Nos.	7115A	7115B	7115C	7115D	7115E
Axle	⅞	1	1⅛	1¼	1⅜
Clip	5/16	5/16	5/16	5/16	5/16
Per Pound					$

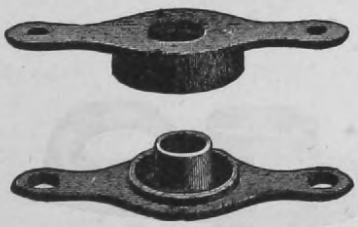
WHIFFLETREE COCKEYES.

No. 35.

No. 70.

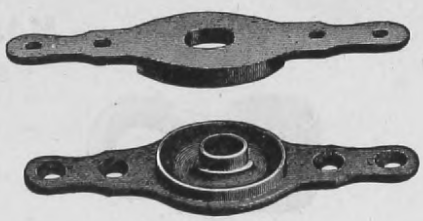
Nos.	35A	35B	Nos.	70A	70B
Shank	5/16	⅜	Shank	⅜	7/16
Length	2¾	3¼	Length	3	3¼
Per Pound	$		Per Pound	$	

WHIFFLETREE COUPLINGS.



No. 690B. High Pattern.

In Pairs.



No. 695. Low Pattern.

No.	690B	Nos.	695A	695C	695E	695G
Width	1½	Width	1⅜	1¾	2⅛	2½
Length	3¾	Length	3¾	4⅜	5⅛	5¾
Bolt	⅜	Bolt	5/16	⅜	7/16	7/16
Per Pound	$	Per Pound	$			

WHIFFLETREE PLATES.

No. 600B.

No. 625C.

Nos.	600B	625C
Length	3⅛	4 7/16
Bolt	⅜	7/16
Per Pound	$	

THUMB NUTS.

THREADED THUMB NUTS

Holes	¼	5/16	⅜
Per 100, $			

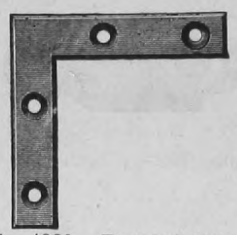
Packed—100 in a Box.

No. 5490.
Low Pattern Thumb Nuts.

Nos.	5490A	5490B	5490C
Holes	¼	5/16	⅜
Height	11/16	¾	⅞
Per Pound			$

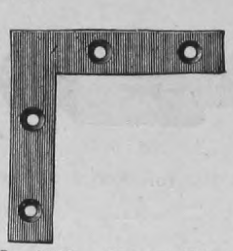
Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

MALLEABLE CORNER IRONS



No. 4380. Beveled Edge.

Nos.	4380A	4380B
Width	5/8	3/4
Length	3 1/2	3 1/2
Per Pound		$.....



No. 4385. Square Edge.

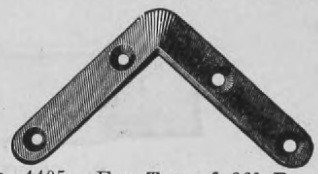
Nos.	4385B	4385C	4385E	4385F
Width	7/16	1/2	5/8	3/4
Length	1 5/8	2 1/4	2 3/4	3 1/2
Per Pound			$.....	

No. 4410B. For Inside of Square Corner.

No.	4410B
Width	9/16
Length from Angle	2 5/8
Per Pound	$.....

No. 4415A. For Inside of 60° Beveled Corner.

No.	4415A
Width	1/2
Length from Angle	2 1/2
Per Pound	$.....



No. 4405. For Top of 26° Beveled Corner.

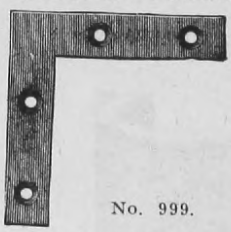
No.	4405
Width	3/4
Length from Angle	3 1/2
Per Pound	$.....

MALLEABLE CORNER IRONS

No. 4462A. For Inside of 62° Beveled Corner.

No.	4462A
Width	9/16
Length from Angle	3 1/8
Per Pound	$.....

WROUGHT STEEL CORNER IRONS



No. 999.

Four screw holes, for Flat of Square Corner.

Length	2	2 1/2	3	3 1/2	4
Width	3/8	3/8	1/2	5/8	5/8
For Screw, Nos.	5	5	6	8	8
No. 999 Per Dozen,	$0.22	.24	.29	.36	.38

Packed—Two Dozen in a Box.

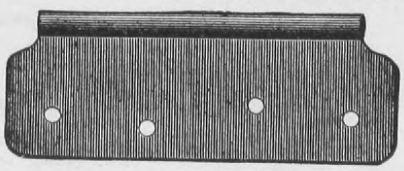
WROUGHT STEEL CORNER BRACES

No. 997. For Inside of Square Corner. 1½ to 4 inch have 4 screw holes; 6 inch, 6.

Length of Sides, inches	1 1/2	2	2 1/2	3	3 1/2	4	6
Width, inches	1/2	5/8	5/8	3/4	3/4	7/8	1 1/8
For Screw, Nos.	7	8	8	9	9	10	12
No. 997 Per Dozen,	$0.30	.40	.50	.60	.80	1.00	1.80

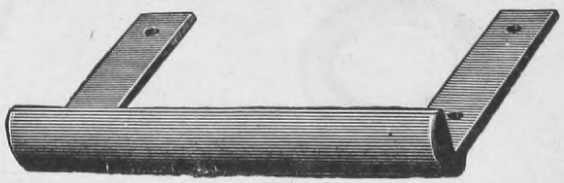
Packed—3½ inch and Smaller, Two Dozen in a Box; 4 and 6 inch, One Dozen.

MALLEABLE RUB OR WEAR IRONS



No. 1615.

No.	1615
Length	6
Width	2 1/4
Per Pound	$.....



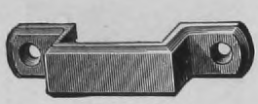
No. 1680.

No.	1680
Length	7
Width	4
Flange	1
Per Pound	$.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MALLEABLE IRONS

BOW IRONS OR BOX STAPLES



No. 6055.

Holes for No. 9 Screw.

Nos.	6055F	6055G
Depth, Inside	¾	¾
Width, Inside	1½	2
Per Pound ..... $		

No. 6060E.

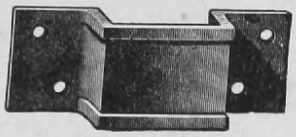
Holes for ¼ Inch Bolts.

No.	6060E
Depth Inside	1
Width, Inside	2
Per Pound ..... $	

EXPRESS STAKE IRONS

No. 5990C.

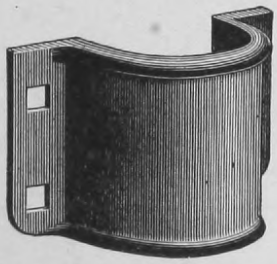
No.	5990C
Stake	1¼ x 2½
Depth	2
Holes	⅜
Per Pound ..... $	



No. 5995.

Nos.	5995A	5995B
Stake	1½ x 2½	1½ x 2¾
Depth	2½	2¾
Holes	⅜	⅜
Per Pound ..... $		

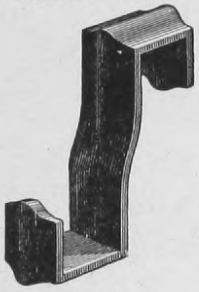
WAGON STAKE IRONS



No. 6010.

No.	6010F
Stake, Half Round	2⅛ x 2⅛
Depth	2¾
Holes	⅜
Per Pound ..... $	

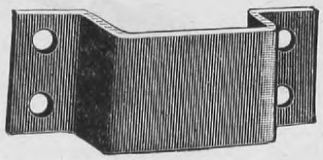
SEAT HOOKS



No. 5920.

Nos.	5920C	5920D
Length	3½	4
Hooks	1 and 1½	1 and 1½
Per Pound ..... $		

WROUGHT STEEL STAKE IRONS



Nos. 75 and 77.

Made of Pressed Steel, with 1¾ x 3 Inch Pockets.

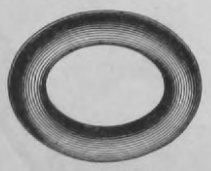
Nos.	75	77
Steel, inches	1½ x 3/16	2½ x 3/16
Each	$0.12	.16

OPEN RINGS

No. 30.
Wrought Open Rings.

No. 30—½ x 2½ inches...
.....Per Dozen, $.....

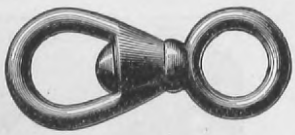
CLEVIS LINKS



No. 2800A.

No.	2800A
Size Wire	½
Length	3
Per Pound ..... $	

LARIAT SWIVELS

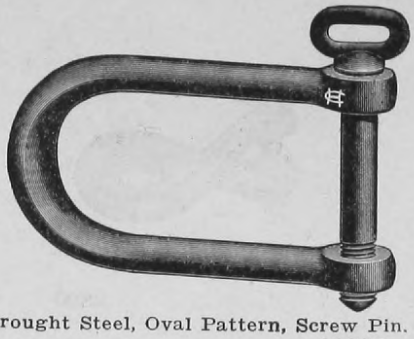


No. 7720.

Nos.	7720B	7720C
Length	3	3⅛
Eye	⅝	¾
Per Pound ..... $		

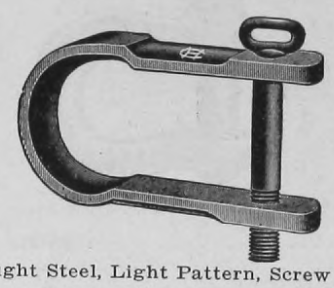
Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STEEL CLEVISES



Wrought Steel, Oval Pattern, Screw Pin.

Nos.	3455A	3455B
Opening of Clevis	2	2¼
Length Inside to Center of Pin	3¾	4¾
Length over all	5	6
Each	$0.45	.50



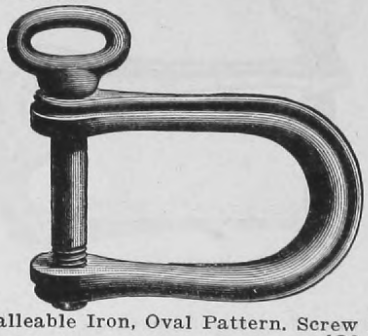
Wrought Steel, Light Pattern, Screw Pin.

Nos.	3425A	3425C
Opening of Clevis	2	2¼
Length Inside to Center of Pin	3½	4¾
Length over all	4¾	6¼
Per Pound	$.....	.....

MALLEABLE IRON CLEVISES

Malleable Iron, Ribbed Pattern, Screw Pin.

No.	368
Inside Width	2¼
Entire Length	5½
Weight per 100 Pieces	109
Per Pound	$.....



Malleable Iron, Oval Pattern. Screw Pin.

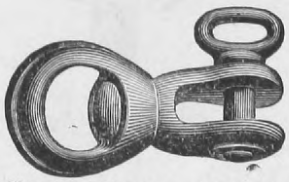
No.	480	500
Inside Width	2	2
Entire Length	4½	5¼
Weight per 100 Pieces	119¼	131½
Per Pound	$.....	.....

Malleable Iron, Oval Band Pattern, Screw Pin.

Nos.	395	410	420	427	430
Inside Width	2	2½	2	2¼	2½
Entire Length	4½	4½	6	6	6
Weight per 100 Pieces	109	113	141	152½	159
Per Pound	$.....				

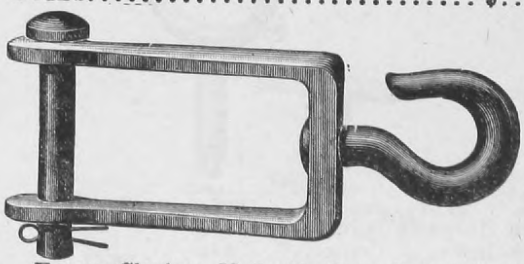
Whiffletree Clevises, Malleable Iron, for Heavy Work.

No.	635H
Length Inside	3¾
For Bolt	⅜
Weight, per 100 Pieces	44¾
Per Pound	$.....



Swivel Shackle Clevises, Malleable Iron.

No.	2824
Clevis Opening	¾
Swivel Opening	1½
Entire Length	4⅝
Weight per 100 Pieces	104
Each	$.....



Evener Clevises, Malleable Iron, Swivel Hook.

No.	2831
Inside Width	2½
Entire Length (4 in. clear)	9¼
Weight per 100 Pieces	365
Per Pound	$.....

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

END CLEVISES

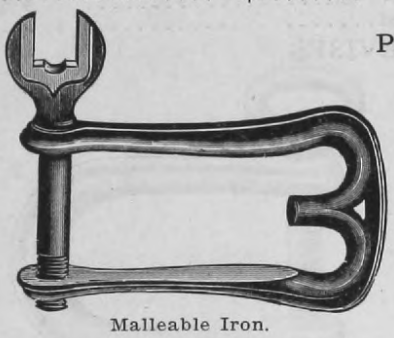
Malleable Iron, Screw Pin.

Nos.	2806	2810
Inside Width	¾	1
Entire Length	3	3½
Weight per 100 Pieces	53¾	72
Per Pound	$.....	.....

Malleable Iron, Screw Pin.

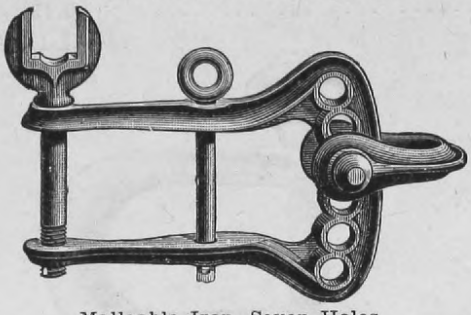
Nos.	2820	2820½
Inside Width	⅝	¾
Entire Length	4	4½
Weight per 100 Pieces	80¾	101¾
Per Pound	$.....	.....

PLOW CLEVISES



Malleable Iron.

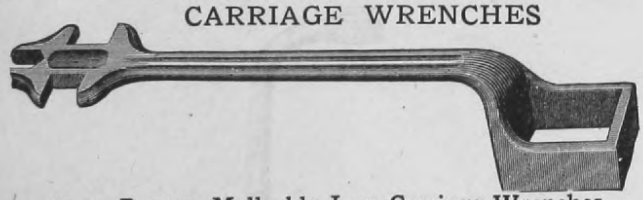
No.	2837
Beam	2
Center of Wrench to End of Beam	4
Entire Length	5¾
Weight per 100 Pieces	78
Per Pound	$.....



Malleable Iron, Seven Holes.

Nos.	2905	2910
Beam	2½	2¾
Center of Wrench to Center of Pin	4⅜	4⅛
Length of Beam Clevis	8¼	8½
Weight per 100 Pieces	285	300
Per Pound	$.....	.....

CARRIAGE WRENCHES



Deep Pattern Malleable Iron Carriage Wrenches

Nos.	7320B	7320C	7320D
Axle Nut	⅞	1	1⅛
Wrench Openings	½, ⅝, ¾	½, ⅝, ¾	½, ⅝, ¾
Per Pound		$.....	

DOUBLE END S WRENCHES

Malleable Iron Double End S Wrenches

Nos.	7350A	7350B	7350C	7350D
Openings, in	⅜ & ½	½ & ⅝	⅝ & ¾	¾ & ⅞
Extreme Lgth., in.	6	6¾	7⅜	8½
Per Pound		$.....		

OAR OR ROW LOCKS

Malleable Iron.

Nos.	7855A	7855B	7855C
Between Horns at Top	1¾	2	2¼
Between Horns at Center	2¼	2½	2¾
Depth of Socket	1⅝	1⅝	2⅛
Diameter of Shank	½	½	⅝
Plain ..... Per Pair,	$.....	.....	.....
Galvanized ..... Per Pair,	.....	.....	.....

Malleable Iron.

No.	7860
Between Horns at Top	1⅞
Depth of Socket	1⅝
Diameter of Shank	½
Diameter of Bolt	3/16
Galvanized ..... Per Pair,	$.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAMPION LUMBERING TOOLS

TIMBER GRAPPLES OR LUG HOOKS

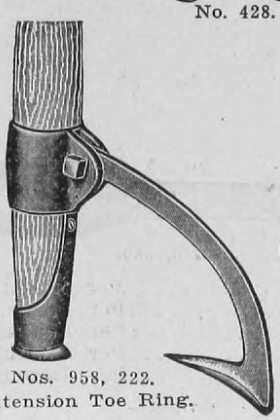
No. 428.

No. 428—Select Rock Maple Handles, 2½ inches in diameter at clasp, 48 inches long. Chisel Point Hooks made of ⅜x¾ inch Crucible Cast Steel, hung with a Swivel Joint or Hinge and will grapple anything from 3 to 16 inches. Malleable Iron Clasps, 2½ inches in diameter. .....Per Dozen, $21.90

Packed—Half Dozen in a Crate.

No. 770—Extra Handles for No. 428 Lug Hook, 2½ inches in diameter, 4 feet long. Made of Selected Rock Maple.....Per Dozen, 4.20

CANT HOOKS



Nos. 958, 222.
Extension Toe Ring.

Nos. 942, 483, 200.
Short Toe Ring.

No. 942 Baby—2½ foot Select Rock Maple Handle, 2 inch diameter at clasp, Forged Steel Clasp, Short Toe Ring. Duck Bill Hooks made of ⅞x7/16 inch Steel.....Per Dozen, $15.90

No. 958—4 foot Select Rock Maple Handle, 2¼ inch diameter at clasp, Wrought Steel Clasp, Improved Long Extension Toe Ring. Duck Bill Hooks made of ⅞x7/16 inch Steel.....Per Dozen, 19.60

No. 222—4½ foot Select Rock Maple Handle, 2½ inch diameter at clasp, Malleable Iron Clasp. Improved Long Extension Toe Ring. Duck Bill Hooks made of 1x7/16 inch Steel.....Per Dozen, 19.20

No. 483—4 foot Select Rock Maple Handle, 2¼ inch diameter at clasp, Wrought Steel Clasp, Short Toe Ring. Duck Bill Hooks made of 1x7/16 inch Steel..... Per Dozen, 20.10

No. 200—4½ foot Select Rock Maple Handle, 2½ inch diameter at clasp, Malleable Iron Clasp, Short Toe Ring. Duck Bill Hooks made of 1x7/16 inch Steel..... Per Dozen, 19.20

Packed—Half Dozen on a Rack.

PEAVIES

No. 2.
Split Socket.

No. 939.
Solid Socket.

No. 66.
Socket and Clasp Separate.

No. 2—4½ foot Select Rock Maple Handle, 2¼ inch diameter at end of socket; adjustable, malleable Iron Split Rib Socket. Duck Bill Hooks made of ⅞x7/16 inch Steel.....Per Dozen, $22.50

No. 939—4½ foot Second Growth Rock Maple Handle, 2 5/16 inch diameter at end of socket; solid, malleable Iron Rib Socket. Duck Bill Hooks made of ⅞x7/16 inch Steel. Extra light and strong throughout and especially adapted for use on rapid water.....Per Dozen, 24.00

No. 66—5 foot Select Rock Maple Handle, 2½ inch diameter at end of Socket; Wrought Steel Socket and Clasp. A new Clasp can be substituted without removing the Socket. Duck Bill Hooks made of ⅞x7/16 inch Steel .....Per Dozen, 28.10

Packed—Half Dozen on a Rack.

CANT HOOK AND PEAVEY HANDLES

Price Per Dozen.....Length, feet,	4	4½	5	5½	6
No. 1H—Select Hickory Handles, 2½ inch.....	$6.10	6.80	.....	.....	.....
No. 1—Select Rock Maple Handles, 2½ inch.....	4.60	5.10	5.50	6.20	6.80
No. 2—Rock Maple Handles, 2½ inch.....	3.90	4.30	4.80	5.30	5.80

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

LUMBERING TOOLS

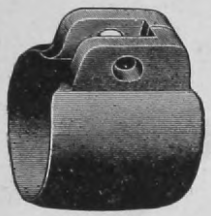
CANT HOOKS ONLY

No. 564.

Nos. 565 and 566.

No. 564—Duck Bill Cant Hooks only, for 2½ inch Tools; size of Steel, 1x7/16 inch.....Per Dozen, $ 9.70
No. 565—Duck Bill Cant Hooks only; size of Steel, 1x½ inches, length, 12 inches.....Per Dozen, 11.70
No. 566—Duck Bill Peavey or Cant Hooks only; size of steel, 1⅛x½ inch.....Per Dozen, 13.60

CLASPS AND TOE RINGS



No. 576.

No. 573.

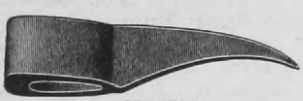
No. 581.

No. 579.

No. 580.

No. 576—2½ inch Hand Forged **Steel** Cant Hook Clasp.....Per Dozen, $6.00
No. 573—2½ inch Malleable **Iron** Cant Hook Clasp.....Per Dozen, 3.70
No. 581—2½ and 2¾ inch Forged **Steel** Short Toe Rings.....Per Dozen, 2.20
No. 579—2½ and 2¾ inch Malleable **Iron** Short Toe Rings.....Per Dozen, 1.20
No. 580—2½ and 2¾ inch Malleable **Iron** Extension Toe Rings.....Per Dozen, 1.90
Note—In ordering Toe Rings specify Size.

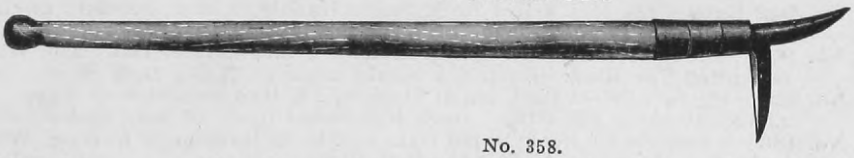
HOOKAROON PICKS



No. 599.

No. 599—Hookaroon Pick, with steel point for handling cedar ties, etc. Eye is made to fit axe handle.....Per Dozen, $6.40

PICKAROONS



No. 358.

No. 358—Pickaroon, length 2 feet, for handling railroad ties, pulp wood, mill refuse, etc.....Per Dozen, $12.90

PIKE POLES, COMPLETE

Nos. 413 to 416.

Selected Second-growth Ash, with Pike only.

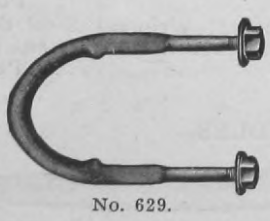
Nos.	413	414	415	416
Feet	12	14	16	18
Per Dozen	$18.10	22.30	29.10	37.70

Nos. 401 to 404.

Selected Second-growth Ash, with curved Pike and Hook.

Nos.	401	402	403	404
Feet	12	14	16	18
Per Dozen	$20.30	24.50	31.30	39.90

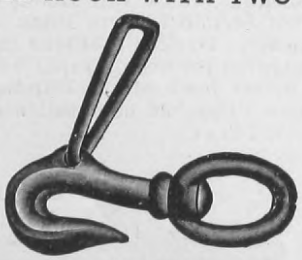
EVENER STAPLES



No. 629.

No. 629—Evener Staples or Dees, hand made.....Per Dozen, $8.00

SWIVEL HOOK WITH TWO RINGS



No. 627.

No. 627—Swivel Grab Hook of 1 inch Steel, with ⅝ inch Ring, and ¾x4 inch Hand Ring.....Per Dozen, $14.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LUMBERING TOOLS

SWAMP HOOKS

No. 550.

No. 550—Swamp Hooks, 1 inch Octagon Steel, heavy round Upset Points, Swedes Iron Grab Hooks and Rings.....Per Dozen, $19.60

LOADING HOOKS

No. 559.

No. 559—Loading Hooks, ¾ inch Square Steel, heavy round Upset Points and Swedes Iron Rings.....Per Dozen, $9.70

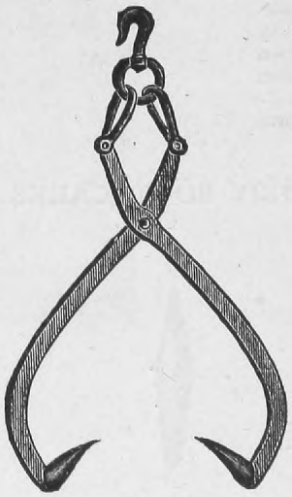
SWAMP HOOKS

No. 553.

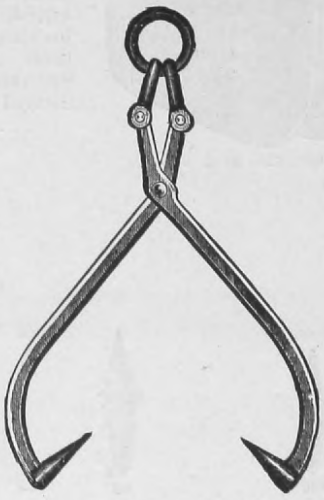
No. 553—Swamp Hooks, 1 inch Square Steel, heavy round Upset Points, Swedes Iron Grab Hooks and Rings.....Per Dozen, $19.60

SKIDDING TONGS

Nos. 500 and 501.
Octagon Steel.



No. 503.
Flat Steel.



Nos. 509 and 510.
Octagon Steel.

Made of Special Tong Steel with Heavy Upset Points.

With Plain Swivel Ring and Round Hook

No. 500—Skidding Tongs, 1 inch Octagon Steel, Opens 24 inches .....Per Dozen, $60.00
No. 501—Skidding Tongs, 1⅛ inch Octagon Steel, Opens 32 inches .....Per Dozen, 66.80
No. 503—Skidding Tongs, 1½x⅝ inch Flat Steel, Opens 32 inches.....Per Dozen, 66.80

With Rings Only—No Swivel Hook

No. 509—Skidding Tongs, 1⅛ inch Octagon Steel, Opens 32 inches.....Per Dozen, $62.80
No. 510—Skidding Tongs, 1¼ inch Octagon Steel, Opens 36 inches.....Per Dozen, 76.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LUMBERING TOOLS

Nos. 632 and 633.

ROUND HOOK LOADING BLOCKS

No. 632—Wrought Iron Loading Block, 5x1½ inch Iron **Rope** Sheave, Round Swivel Hook .....Per Dozen, $20.00

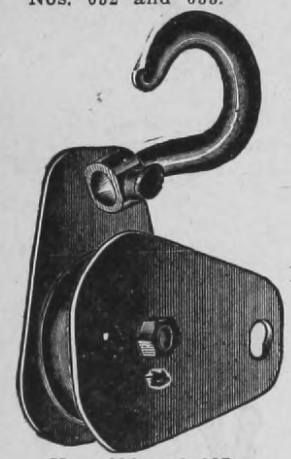
No. 633—Wrought Iron Loading Block, 5x1½ inch Iron **Chain** Sheave, Round Swivel Hook .....Per Dozen, 20.00

GRAB HOOK LOADING BLOCKS

No. 634—Wrought Iron Loading Block, 5x1½ inch Iron **Rope** Sheave, Swivel Grab Hook..... .....Per Dozen, $20.60

No. 635—Wrought Iron Loading Block, 5x1½ inch Iron **Chain** Sheave, Swivel Grab Hook..... .....Per Dozen, 20.60

Nos. 634 and 635.



Nos. 636 and 637.

LOADING AND SNATCH BLOCKS

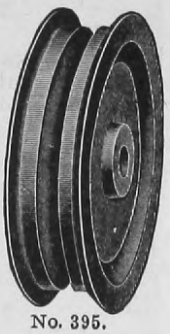
No. 636—Loading and Snatch Block combined, fitted with self-locking Clasp, 5½x1½ inch Iron **Rope** Sheave, Swedes Iron Swivel Hook.....Per Dozen, $31.20

No. 637—Loading and Snatch Block combined, fitted with self-locking Clasp, 5½x1½ inch **Iron Chain** Sheave, Swedes Iron Swivel Hook..... .....Per Dozen, 31.20

EXTRA SHEAVES

No. 394—Iron **Rope** Sheaves, 5x1½ inch, for Loading Blocks No. 632, 634 and 636..... .....Per Dozen, $6.80

No. 395—Iron **Chain** Sheaves, 5x1½ inch, for Loading Blocks No. 633, 635 and 637..... .....Per Dozen, 8.00



No. 395.

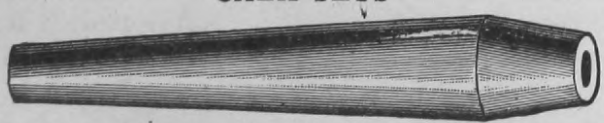
BEADED BOOT CALKS

For Log Drivers. Forged from Best Quality Crucible Steel.

Nos.....	000	00	0	1	2	3	4
Style.....	Very Small Ball	Extra Small Ball	Small Ball	Medium Ball	Large Ball	Small Heel	Large Heel
Per 1000....	$.....	.....	.....	.....	.....	.....	.....

Packed—Nos. 000 to 2, Ball Calks, 100 in a Box; 1,000 in a Package; Nos. 3 and 4, Heel Calks, 50 in a Box, 500 in a Package.

CALK SETS



Calk Sets, for setting all sizes of Boot Calks.... .....Per Dozen, $3.00

Packed—One Dozen in a Box.

CALK SET AND PUNCH

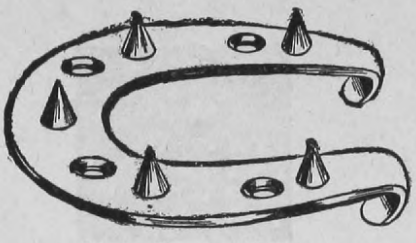
Calk Set and Punch Combined, for setting all sizes of Boot Calks.....Per Dozen, $5.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HEEL PLATES OR ICE CREEPERS

"NEVERSLIP"



Neverslip Heel Plate.

Prevents slipping while walking on roads, logs and ice.

Neverslip Heel Plate Applied.

Neverslip Heel Plates will fit Heels Nos. 7 to 10.....Per Dozen Pairs, $4.50

Packed—One Dozen Pairs, Assorted Sizes, in a Box.

ICE CREEPERS

O. K.

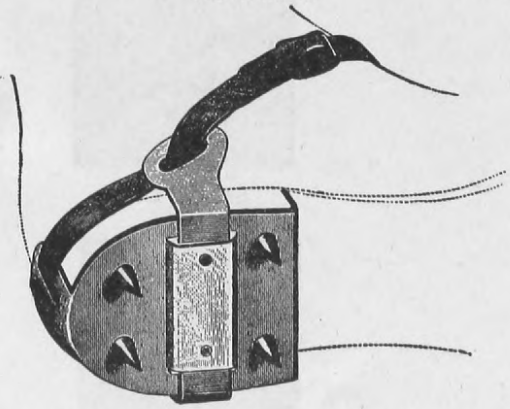
Nos. 0 and 1.

Made of a good quality of steel properly tempered, neatly finished, light and strong; can be adjusted to fit several sizes of heels, easily applied and quickly removed, as a club skate. Fishermen find these an excellent Creeper, as they easily clamp to the heels of rubber boots.

No. 0—Large Size .....Per Dozen Pairs, $4.00
No. 1—Medium Size .....Per Dozen Pairs, 4.00

Packed—One Dozen Pairs in a Box.

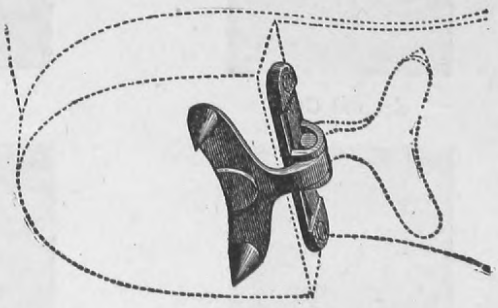
NEWARK



Newark Ice Creepers. All Steel, by adjusting the wings this creeper can be fitted to heels from 2¼ to 3¼ inches wide and can be worn on either shoe or rubber.....Per Dozen Pairs, $5.20

Packed—One Dozen Pairs in a Box.

SECURITY

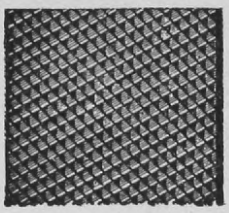
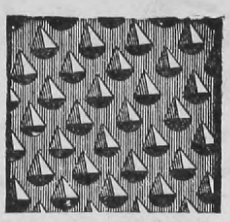
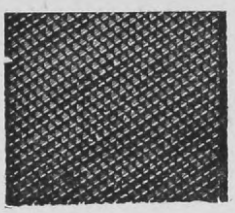
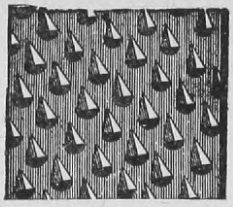
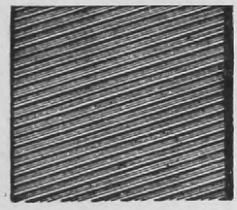
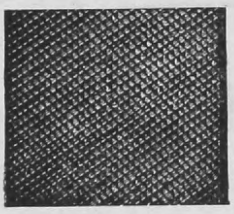
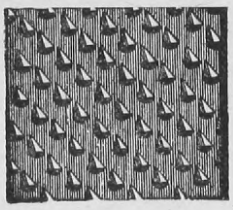
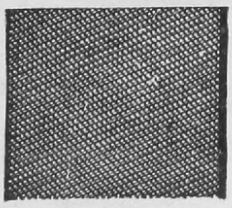
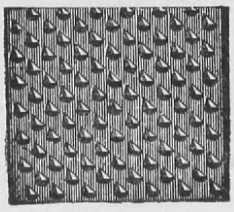
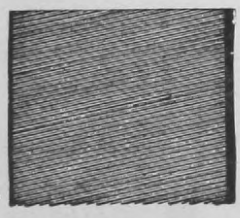
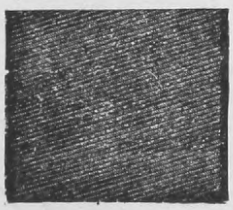
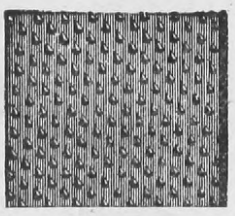
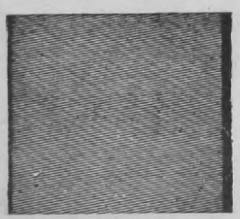
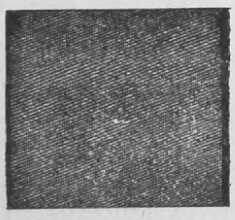
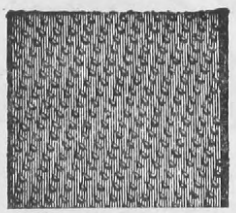


Security Ice Creepers. Will fit any ordinary boot or shoe. They are reversible, that is, fold up close in front of heel when not needed as shown in cut.....Per Dozen Pairs, $2.75

Packed—One Dozen Pairs in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ILLUSTRATIONS SHOWING CUTS OF FILES AND RASPS

SINGLE OR FLOAT CUT	DOUBLE CUT	RASP CUT
Rough	 Rough	 Horse
Middle	 Middle	 Rough
 Bet'n Bast'd and Middle	 Bastard	 Middle
Bastard	 Second Cut	 Bastard
 Second Cut	 Smooth	 Second Cut
 Smooth	 Dead Smooth	 Smooth

Note—The above cuts are engraved from files 12 inches long; if longer than 12 inches, the cuts will be larger; if smaller, they will be less in proportion.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GENERAL DESCRIPTION OF FILES AND RASPS

Note.—Files and Rasps have three distinguishing features:

1st. **Their Length.**—Which is always measured exclusive of their tang.

2d. **Their Kind or Name.**—Which has reference to the shape or style.

3d. **Their Cut.**—Which has reference not only to the character, but also to the relative degrees of coarseness of the teeth.

The Length

The length of a file is the distance between its heel (or part of the file where the tang begins) and the point (or end opposite). The tang (or portion of the file prepared for the reception of the handle) is never included in the length. In general, the length of files bears no fixed proportion to either their width or thickness, even though they be of the same kind.

The Kind

By kind, we mean the varied shapes or styles of files which are distinguished by certain technical names, as, for instance, Flat, Mill, Half-Round, etc.

The kinds are divided, from the form of their cross sections, into three geometrical classes, namely: Quadrangular sections, Circular sections, and Triangular sections. Odd and irregular forms are collected under Miscellaneous sections.

These sections are in turn subdivided, according to their general contour or outline, into Taper and Blunt.

Taper

This designates a file the point of which is more or less reduced in size (both width and thickness) by a gradually narrowing section extending from one-half to two- thirds the length of the file, from the point.

Blunt

This designates a file that preserves its sectional shape throughout, from point to tang.

Cut

The cut of files is divided, with reference to the character of the teeth, into single cut, double cut and rasp cut; and with reference to the **coarseness** of the teeth, into rough, middle, bastard, second cut, smooth and dead smooth. Regarding the latter we may say very briefly that the coarse and bastard cuts are used upon the coarser, heavier classes of work, while the second cut and smooth are used for the finer grades and for finishing the work started by the coarse and bastard. The rough and dead smooth are seldom called for, but correspond to the above use.

Single Cut

The single cut file is one in which a single, unbroken course of chisel-cuts is made across its surface, arranged parallel to each other but with a horizontal obliquity to the central line. Particularly adapted for saw filing. Used on lathe work by machinists; also used by woodworkers, carriage builders, etc.

Double Cut

The double cut file has two courses of chisel-cuts crossing each other, the second course with rare exceptions being finer than the first. Especially adapted for use in machine shops, locomotive works, foundries and for similar classes of work.

Rasp Cut

Rasp cut differs from single or double cut in the respect that the teeth are disconnected from each other, each tooth being made by a single pointed tool, called a punch. Used by blacksmiths, horse shoers, plumbers, cabinetmakers, woodworkers, etc.

TERMS COMMONLY USED TO DESCRIBE FILES

Back

A term commonly used to describe the convex side of half-rounds, cabinets, pitsaws and other files of similar cross-sectional shape.

Bellied

A term sometimes used to describe a file having a fullness in the center.

Equaling

A term applied to describe a blunt file upon which is produced an exceedingly slight belly or curvature, extending from point to tang, the file apparently remaining blunt.

Float

The coarser grades of single cut files are not infrequently called floats, when cut for the plumber's use or for use upon soft metals or wood.

Hopped

A term known amongst the file makers, and used to represent a very coarse or open spacing of the teeth (sometimes exceeding ½"), mostly applied to the backs of half-rounds and to the edges of quadrangular sections.

Middle Cut

A term used to designate the cut of a file when it is of a grade of coarseness between the rough and bastard. It is but little used in this country.

Re-Cut or Re-Cutting

The working over of old or worn out files by the several processes of annealing, grinding out the old teeth, recutting, hardening. etc., and thus again preparing them for use.

This operation is sometimes repeated two and even three times, but the economy of re-cutting at all is very much questioned, and the practice is done away with in most of the best appointed shops of the present day.

Safe Edge (or Side)

Terms used to denote that a file has one or more of its edges or sides smooth or uncut, that it may be presented to the work without injury to that portion which does not require to be filed.

Superfine or Super Cut

A term applied by the Lancashire file makers to designate a grade of cut designated by us as Dead Smooth.

Digitized by UNIVERSITY OF MICHIGAN
Digitized by UNIVERSITY OF MICHIGAN

PRICE LIST OF FILES AND RASPS

As adopted by the File Manufacturers' Association of the United States, as their Selling List Per Dozen.

List of November 1, 1899. **Price Per Dozen**

Inch	Mill and Round			Flat		
	Bast'd	2d Cut	Smo'th	Bast'd	2d Cut	Smo'th
4	3.00	3.50	3.90	3.70	4.30	4.70
5	3.20	3.80	4.10	3.90	4.60	4.90
6	3.50	4.00	4.50	4.30	4.80	5.30
7	3.90	4.60	4.90	4.80	5.50	6.10
8	4.30	4.90	5.40	5.30	6.10	6.60
9	4.90	5.80	6.30	6.30	7.20	7.90
10	5.60	6.40	7.00	7.00	8.10	8.70
11	6.70	7.80	8.50	8.60	9.80	10.70
12	7.50	8.60	9.40	9.70	11.00	12.10
13	9.40	10.70	11.70	11.80	13.60	14.70
14	10.70	12.20	13.10	13.30	15.30	16.70
15	13.10	15.00	16.10	16.00	18.30	20.00
16	14.70	16.80	17.90	17.80	20.10	22.30
17	18.20	20.20	21.70	21.50	24.20	26.50
18	20.20	22.70	24.30	23.90	26.80	29.20
19	24 60	27.50	29.40	28.40	31.60	34.60
20	27 40	30.70	32.90	31.50	35.30	38.30

Mill Blunt, Double Cut, advance 2 in.
Mill Dbl. Cut, adv. 1 in.
Mill Narrow Point, adv. 1 in.
Mill Machine, adv. 1 in.
Mill Triangular & Sq., adv. 1 in.
Farmers' Own, adv. on Bast'd, 1 in.

Cant (Blunt) Dbl. Cut, adv. 2 in.

Inch	Square			Hand and Pillar		
	Bast'd	2d Cut	Smo'th	Bast'd	2d Cut	Smo'th
4	3.80	4.60	4.90	3.70	4.30	4.80
5	4.10	4.80	5.30	3.90	4.70	5.30
6	4.60	5 10	5.50	4.30	5.10	5.60
7	5.10	5.80	6.30	4.90	5.80	6.30
8	5.50	6.30	7.00	5.40	6.30	6.70
9	6.60	7.70	8.30	6.70	7.80	8.30
10	7.40	8.50	9.10	7.50	8.70	9.40
11	9.10	10.40	11.30	9.40	10.90	11.80
12	10.20	11.50	12.80	10.70	12.30	13.50
13	12.50	14.30	15.40	13.30	15.20	16.20
14	13.90	16.10	17.50	15.00	17.00	18.20
15	16.90	19.20	20.90	17.90	20.60	21.70
16	18.70	21.20	23.30	20.10	22.80	24.20
17	22.50	25.40	27.50	24.20	27.10	28.60
18	25.10	28.20	30.40	26.80	29.90	31.50
19	29.70	33.20	35.70	31.90	35.40	37.60
20	32.80	36.70	39.30	35.10	39.20	41.60

Square Blunt, adv. 1 in.

Slotting (Blunt), adv. 2 in.
Cotter Blunt or Taper, adv. 2 in.
Reaper, adv. 1 in. on 2d Cut.

Inch	Hlf. Rd. & 3 Sq.			Warding		
	Bast'd	2d Cut	Smo'th	Bast'd	2d Cut	Smo'th
4	4.80	5.60	6.10	4.00	4.80	5.40
5	5.40	6.10	6.40	4.50	5.30	5.80
6	6.10	6.70	7.10	4.90	5.90	6.40
7	7.00	7.70	8.20	5.90	6.90	7.50
8	7.50	8.30	8.90	6.40	7.50	8.20
9	8.50	9.40	9.90	7.80	9.00	9.90
10	9.10	10.10	10.70	8.70	10.10	11.00
11	10.70	11.80	12.70	10.90	12.70	13.70
12	11.80	13.00	13.90	12.30	14.30	15.40
13	14.10	15.40	16.60	15.20	17.40	18.70
14	15.50	17.00	18.30	17.00	19.40	21.00
15	18.50	20.40	21.70			
16	20.60	22.50	24.20			
17	24.70	27.00	28.90			
18	27.50	29.90	32.00			
19	32.80	35.70	38.10			
20	36.20	39.40	42.30			

Ginsaw, take Bast'd price.
Crossing, adv. 2 in.
Tumbler, adv. 2 in.
Feather Edge (Blunt), adv. 2 in.
High Back, Half Round, adv. 2 in.

Stavesaw

8 in.....	$9.40

Stavesaw Improved

6 in.....	$ 6.40
7 in.....	7.40
8 in.....	8.10
9 in.....	9.70
10 in.....	10.70
12 in.....	15.40

Inch	Mill One Round Edge			Mill Two Round Edges		
	Bast'd	2d Cut	Smo'th	Bast'd	2d Cut	Smo'th
4	3.40	3.90	4.40	3.80	4.40	4.90
5	3.60	4.30	4.60	4.00	4.80	5.10
6	3.90	4.50	5.10	4.40	5.00	5.60
7	4.40	5.20	5.50	4.90	5.80	6.10
8	4.80	5.50	6.10	5.40	6.10	6.80
9	5.50	6.50	7.10	6.10	7.30	7.90
10	6.30	7.20	7.90	7.00	8.00	8.80
11	7.50	8.80	9.60	8.40	9.80	10.60
12	8.40	9.70	10.60	9.40	10.80	11.80
13	10.60	12.00	13.20	11.80	13.40	14.60
14	12.00	13.70	14.70	13.40	15.30	16.40
15	14.70	16.90	18.10	16.40	18.80	20.10
16	16.50	18.90	20.10	18.40	21.00	22.40
17	20.50	22.70	24.40	22.80	25.30	27.10
18	22.70	25.50	27.30	25.30	28.40	30.40

Inch	Tapers		Slim Tapers		Bandsaw Blunt & Taper	
	Single Cut	D'uble Cut	Single Cut	D'uble Cut	Regl'r	Slim
3	2.10	2.50	2.10	2.50	2.50	2.50
3½	2.10	2.50	2.10	2.50	2.50	2.50
4	2.20	2.90	2.20	2.60	2.90	2.60
4½	2.40	3.10	2.30	3.00	3.10	3.00
5	2.60	3.50	2.50	3.20	3.50	3.20
5½	3.00	4.00	2.90	3.50	4.00	3.50
6	3.40	4.70	3.10	3.90	4.70	3.90
7	4.30	5.60	3.80	4.50	5.60	4.50
8	5.40	6.70	4.50	5.30	6.70	5 30
9	6.60	8.10	5.40	6.30	8.10	6.30
10	8.10	9.70	6.40	7.50	9.70	7.50
11	10.70	12.10	8.30	9.10	12.10	9.10
12	12.50	14.70	9.50	11.00	14.70	11.00
13	15.90	17.50	12.10	13.10	17.50	13.10
14	18.20	20.60	13.80	15.40	20.60	15.40

Inch	Pit Saw	Cant Saw	Cross Cut	Hook Tooth	Plas'r Knife	Insert'd Tooth or Chisel Tooth
	Single Cut	Single Cut	Single Cut	Single Cut	Single Cut	
4	4.80	4.30	4.80	.....	.....	.....
5	5.40	4.70	5.40	.....	.....	.....
6	6.10	5.40	6.10	6.70	.....	.....
7	7.00	6.10	7.00	7.70	.....	.....
8	7.50	6.40	7.50	8.30	6.40	8.30
9	8.50	7.80	8.50	9.40	.....	9.40
10	9.10	8.70	9.10	10.10	8.60	10.10
11	10.70	10.40	10.70	11.80	.....	.....
12	11.80	11.40	11.80	13.00	12.10	.....

Climax, adv. 2 in. on Half Round Bastard.
Round Gulleting, take Pit Saw price.

Double-Ender, with Handle.

7	8	9	10
3.50	3.90	4.40	4.90

Inch	Horse Rasps			File Rasps	
	Plain	Beveled & ¾ Rasp	Tang'd	Flat	Hf.Rd.
6	.....	.....	.....	7.40	8.10
7	.....	.....	.....	8.60	9.30
8	.....	.....	.....	9.40	10.10
9	.....	.....	.....	11.40	12.20
10	9.40	10.70	12.80	12.80	13.70
11	11.40	12.90	15.20	15.50	16.80
12	12.80	14.40	16.80	17.50	18.70
13	15.20	17.00	19.60	20.90	22.40
14	17.80	20.10	23.10	23.20	24.80
15	20.90	23.60	27.30	27.80	29.70
16	24.40	27.50	32.20	30.80	32.90
17	28.90	31.50	.....	36.20	38.90
18	32.90	36.20	.....	40.90	43.60

Inch	Wood Files			Wood Rasps		
	Flat	Hf.Rd.	Cabin't	Flat	Hf.Rd.	Cabin't
6	4.30	6.10	8.10	7.40	8.10	10.10
7	4.80	7.00	9.30	8.60	9.30	11.70
8	5.30	7.50	10.10	9.40	10.10	12.80
9	6.30	8.50	12.20	11.40	12.20	15.50
10	7.00	9.10	13.70	12.80	13.70	17.50
11	8.60	10.70	16.80	15.50	16.80	20.70
12	9.70	11.80	18.70	17.50	18.70	22.80
13	11.80	14.10	22.40	20.90	22.40	26.80
14	13.30	15.50	24.80	23.20	24.80	29.60
15	16.00	18.50	29.70	27.80	29.70	33.90
16	17.80	20.60	32.90	30.80	32.90	36.90
17	21.50	24.70	38.90	36.20	38.90	42.40
18	23.90	27.50	43.60	40.90	43.60	46.90

Inch	Shoe Rasps		
	Flat	Hf.Rd.	Oval
6	8.10	8.10	9.30
7	9.30	9.30	10.10
8	10.10	10.10	12.20
9	12.20	12.20	13.70
10	13.70	13.70	16.80
11	16.80	16.80	18.70
12	18.70	18.70	22.40
13	22.40	22.40	.....
14	24.80	24.80	.....

Last Makers' Rasps
1 in. advance on Cabinet Rasp

Inch	Knife		
	Bast'd	2d Cut	Smo'th
4	5.40	6.10	6.40
5	6.10	6.70	7.10
6	6.90	7.50	7.90
7	7.80	8.50	8.90
8	8.50	9.10	9.50
9	9.40	10.60	11.30
10	10.10	11.50	12.30
11	12.20	13.70	14.60
12	13.70	15.20	16.10
13	16.30	17.90	19.20
14	18.20	19.90	21.20

Sizes below 4 inches, not extended, take 4 in. price.
Half inches not specified, take next higher full inch price.
Dead Smooth, double the price of Bastard Cut.
One Round Edge, advance 12½ per cent.
All Lengths above those listed, advance 20 per cent on next lower inch price.

Blunt Files not specified advance 1 in. on respective kinds and cuts.
Single or Float Cut not specified, on regular shapes takes Double Cut price.
Equalings (Bellied), advance 2 in. on respective kinds and cuts.
Two Round Edges, advance 25 per cent.
Files varying from standard sizes subject to special prices.

Cuts not specified, made upon regular blanks, advance 1 inch on respective kinds and nearest cut.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

FILES

IGNETO FILES

Especially adapted for filing and brightening contact points of Spark Plugs, Magnetos, Coils, Electric Bells and Switches.

Igneto Files, length of blade, 3¾ inches, length over all, 6¾ inches, fastened one dozen on an Easel Display Card ..... Per Card, $3.00

Note.—Sold in full Cards only—We do not break Cards.

AUGER BIT

For filing all sizes of Auger Bits without filing away the Screw or Lip.

Moore's Auger Bit Files, 7 inches in length ..... Per Dozen, $1.25

Packed—Half Dozen in a Box.

REGULAR TAPERS, SINGLE CUT

Length, inches		3	3½	4	4½	5	5½	6	7	8	10
Buhl Sons Co	Per Dozen,	$2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40	8.10
Nicholson	Per Dozen,	2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40	.....
Black Diamond	Per Dozen,	2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40	.....
American	Per Dozen,	2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40	.....

Packed—One Dozen in a Box.

SLIM TAPERS, SINGLE CUT

Length, inches		3	3½	4	4½	5	5½	6	7	8
Buhl Sons Co	Per Dozen,	$2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50
Nicholson	Per Dozen,	2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50
Black Diamond	Per Dozen,	2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50
American	Per Dozen,	2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50
Economy	Per Dozen,	2.10	2.10	2.20	2.30	2.50	2.90	3.10	.....	.....

Packed—One Dozen in a Box.

EXTRA SLIM TAPERS, SINGLE CUT

Length, inches		4	4½	5	5½	6	7	8
Buhl Sons Co	Per Dozen,	$2.20	2.30	2.50	2.90	3.10	3.80	4.50
Nicholson	Per Dozen,	2.20	2.30	2.50	2.90	3.10	.....	.....
Black Diamond	Per Dozen,	2.20	2.30	2.50	2.90	3.10	.....	.....
American	Per Dozen,	2.20	2.30	2.50	2.90	3.10	.....	.....

Packed—One Dozen in a Box.

CARPENTERS' SPECIAL "EXTRA, EXTRA" SLIM TAPERS, SINGLE CUT

"Extra, Extra" Slim Tapers, Single Cut

Length, inches		4	4½	5	5½	6
Buhl Sons Co	Per Dozen,	$2.20	2.30	2.50	2.90	3.10

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

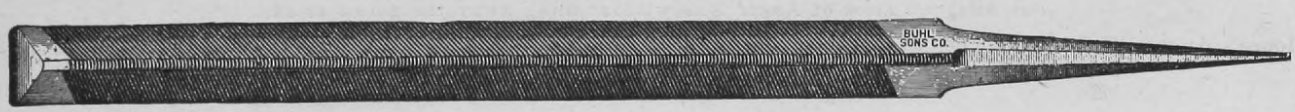
FILES

DOUBLE END TAPERS

Length, inches		7	8	9	10
Buhl Sons Co	Per Dozen,	$3.50	3.90	4.40	4.90
Nicholson	Per Dozen,	3.50	3.90	4.40	4.90
Black Diamond	Per Dozen,	3.50	3.90	4.40	4.90
American	Per Dozen,	3.50	3.90	4.40	4.90

Packed—One Dozen in a Box—with Handles.

REGULAR BLUNT BAND SAW, SINGLE CUT



Length, inches		5	6
Buhl Sons Co	Per Dozen,	$3.50	4.70

Packed—One Dozen in a Box.

Slim Blunt Band Saw, Single Cut

Length, inches		5	6
Buhl Sons Co	Per Dozen,	$3.20	3.90

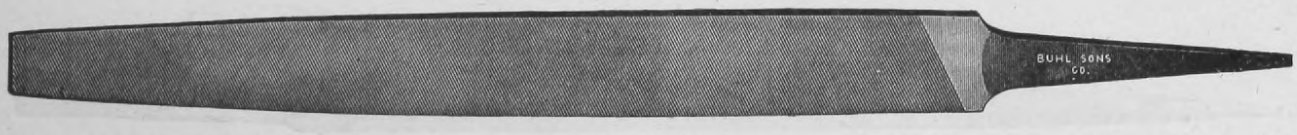
Packed—One Dozen in a Box.

CANT SAW OR LIGHTNING, SINGLE CUT

Length, inches		6	8
Buhl Sons Co	Per Dozen,	$5.40	6.40

Packed—One Dozen in a Box.

MILL BASTARD



Length, inches		3	4	5	6	7	8	9	10	12	14	16
Buhl Sons Co	Per Dozen,	$3.00	3.00	3.20	3.50	3.90	4.30	4.90	5.60	7.50	10.70	14.70
Nicholson	Per Dozen,	....	3.00	....	3.50	3.90	4.30	4.90	5.60	7.50	10.70	14.70
Black Diamond	Per Dozen,	....	3.00	....	3.50	3.90	4.30	4.90	5.60	7.50	10.70	14.70
American	Per Dozen,	....	3.00	....	3.50	3.90	4.30	4.90	5.60	7.50	10.70	14.70
Economy	Per Dozen,	....	....	....	3.50	3.90	4.30	....	5.60	....	.....	.....

Packed—3 to 10 inch One Dozen—12 to 16 Half Dozen in a Box.

MILL BASTARD, ONE SAFE EDGE

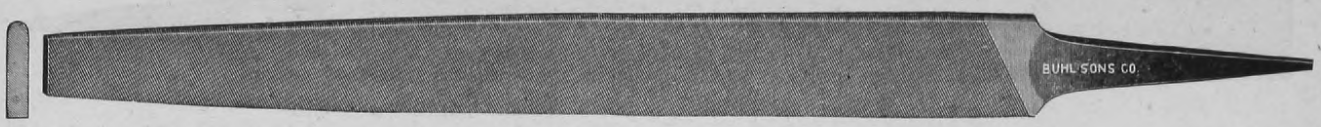
Length, inches		8	10
Buhl Sons Co	Per Dozen,	$4.30	5.60

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FILES

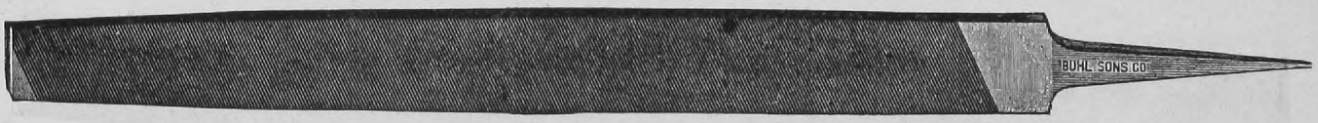
MILL BASTARD, ONE ROUND EDGE



Length, inches	8	10
Buhl Sons Co. Per Dozen,	$4.80	6.30

Packed—One Dozen in a Box.

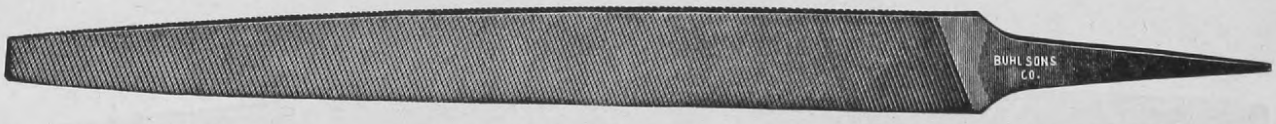
MILL SECOND CUT



Length, inches	6	7	8	10	12
Buhl Sons Co. Per Dozen, $	4.00	4.60	4.90	6.40	8.60
Nicholson Per Dozen,	4.00	4.60	4.90	6.40	8.60

Packed—4 to 10 inch, One Dozen—12 inch, Half Dozen in a Box.

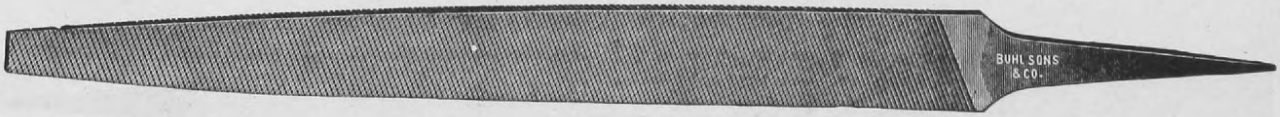
FLAT BASTARD



Length, inches	4	5	6	8	10	12	14	16	18
Buhl Sons Co. Per Dozen,	$3.70	3.90	4.30	5.30	7.00	9.70	13.30	17.80	23.90
Nicholson Per Dozen,	3.70	.....	4.30	5.30	7.00	9.70	13.30	17.80	.....
Black Diamond Per Dozen,	3.70	.....	4.30	5.30	7.00	9.70	13.30	17.80	.....
American Per Dozen,	3.70	.....	4.30	5.30	7.00	9.70	13.30	17.80	.....
Economy Per Dozen,	.....	.....	4.30	5.30	7.00	9.70	13.30	.....	.....

Packed—3 to 10 inch, One Dozen—12 to 16 inch, Half Dozen in a Box.

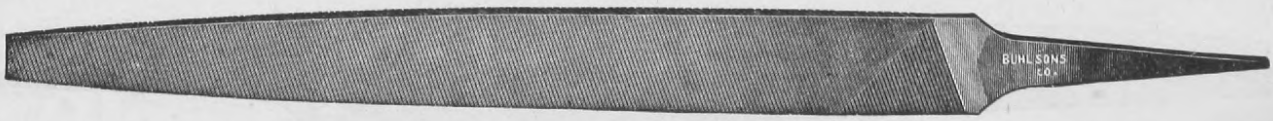
FLAT SECOND CUT



Length, inches	4	6	8	10	12	14	16
Buhl Sons Co. Per Dozen,	$4.30	4.80	6.10	8.10	11.00	15.30	20.10

Packed—4 to 10 inch, One Dozen—12 to 16 inch, Half Dozen in a Box.

FLAT SMOOTH



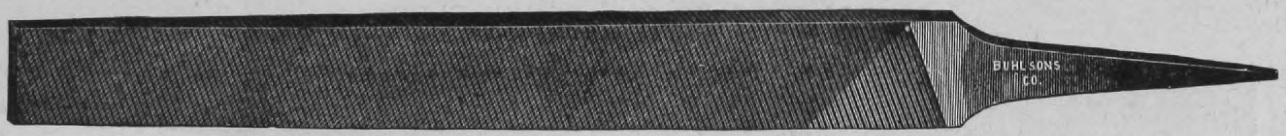
Length, inches	3	4	6	8	10	12	14	16
Buhl Sons Co. Per Dozen,	$4.70	4.70	5.30	6.60	8.70	12.10	16.70	22.30

Packed—3 to 10 inch, One Dozen—12 to 16 inch, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FILES

HAND BASTARD



Hand Bastard Files are tapering in thickness and parallel in width.

Length, inches	8	10	12	14	16
Buhl Sons Co.....Per Dozen,	$5.40	7.50	10.70	15.00	20.10

Equaling Bastard

Equaling Bastard Files are slightly bellied and apparently parallel in both thickness and width.

Length, inches	10	12	14	16
Buhl Sons Co.....Per Dozen,	$10.70	15.00	20.10	26.80

Packed—8 inch, One Dozen; 10 to 16 inch, Half Dozen in a Box.

HAND SECOND CUT

Length, inches	10	12	14	16
Buhl Sons Co.....Per Dozen,	$8.70	12.30	17.00	22.80

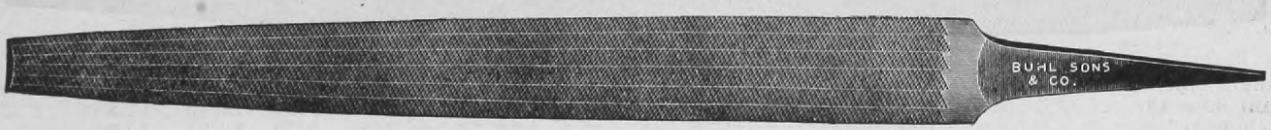
Packed—10 to 16 inch, Half Dozen in a Box.

Hand Smooth

Length, inches	6	8	10	12	14	16
Buhl Sons Co.....Per Dozen,	$5.60	6.70	9.40	13.50	18.20	24.20

Packed—6 and 8 inch, One Dozen; 10 to 16 inch, Half Dozen in a Box.

HALF ROUND BASTARD

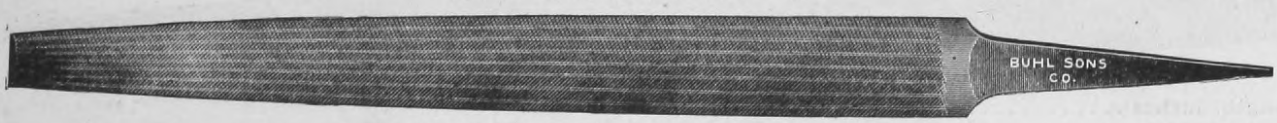


Double Cut on both Half Round and Flat Sides.

Length, inches	3	4	4½	5	6	8	10	12	14	16	18
Buhl Sons Co.....Per Dozen,	$4.80	4.80	5.40	5.40	6.10	7.50	9.10	11.80	15.50	20.60	27.50
Nicholson .....Per Dozen,	....	4.80	...	...	6.10	7.50	9.10	11.80	15.50	20.60	....
Black Diamond.....Per Dozen,	....	4.80	...	...	6.10	7.50	9.10	11.80	15.50	20.60	....
American .....Per Dozen,	....	4.80	...	...	6.10	7.50	9.10	11.80	15.50	20.60	....
Economy .....Per Dozen,	....	...	...	...	6.10	7.50	9.10	11.80	15.50	....	....

Packed—3 to 10 inch, One Dozen; 12 to 18 inch, Half Dozen in a Box.

HALF ROUND SECOND CUT



Single Cut on Half Round Side, **Double Cut** on Flat Side.

Length, inches	6	8	10	12	14	16	18
Buhl Sons Co.....Per Dozen,	$6.70	8.30	10.10	13.00	17.00	22.50	29.90

Packed—6 to 10 inch, One Dozen; 12 to 18 inch, Half Dozen in a Box.

HALF ROUND SMOOTH

Single Cut on Half Round Side, **Double Cut** on Flat Side.

Length, inches	3	4	5	6	8	10	12	14	16	18
Buhl Sons Co.. ....Per Dozen,	$6.10	6.10	6.40	7.10	8.90	10.70	13.90	18.30	24.20	32.00

Packed—3 to 10 inch, One Dozen; 12 to 18 inch, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FILES

ROUND BASTARD

Length, inches	3	4	5	6	8	10	12	14	16	18
Largest Diameter, inches	1/8	5/32	3/16	1/4	5/16	3/8	9/16	5/8	3/4	7/8
Buhl Sons Co Per Dozen,	$3.00	3.00	3.20	3.50	4.30	5.60	7.50	10.70	14.70	....
Nicholson Per Dozen,	....	3.00	3.20	3.50	4.30	5.60	7.50	10.70	14.70	....
Black Diamond Per Dozen,	....	3.00	3.20	3.50	4.30	5.60	7.50	10.70	14.70	20.20
American Per Dozen,	....	3.00	3.20	3.50	4.30	5.60	7.50	10.70	14.70	20.20
Economy Per Dozen,	....	...	...	3.50	4.30	5.60	7.50	....	....	....

Packed—3 to 10 inch, One Dozen; 12 to 18 inch, Half Dozen in a Box.

ROUND SECOND CUT

Length, inches	3	4	5	6	8	10	12	14	16
Largest Diameter, inches	1/8	5/32	3/16	1/4	5/16	3/8	9/16	5/8	3/4
Buhl Sons Co Per Dozen,	$3.50	3.50	3.80	4.00	4.90	6.40	8.60	12.20	16.80

Packed—3 to 10 inch, One Dozen; 12 to 16 inch, Half Dozen in a Box.

ROUND SMOOTH

Length, inches	3	4	6	8	10	12	14	16
Largest Diameter, inches	1/8	5/32	1/4	5/16	3/8	9/16	5/8	3/4
Buhl Sons Co Per Dozen,	$3.90	3.90	4.50	5.40	7.00	9.40	13.10	17.90

Packed—3 to 10 inch, One Dozen; 12 to 16 inch, Half Dozen in a Box.

SQUARE BASTARD

Length, inches	3	4	5	6	8	10	12	14	16	18
Largest Dimension, inches	3/32	5/32	3/16	7/32	5/16	3/8	1/2	5/8	3/4	7/8
Buhl Sons Co Per Dozen,	$3.80	3.80	4.10	4.60	5.50	7.40	10.20	13.90	18.70	25.10
Nicholson Per Dozen,	....	3.80	....	4.60	5.50	7.40	10.20	13.90	18.70	25.10
Black Diamond Per Dozen,	....	3.80	....	4.60	5.50	7.40	10.20	13.90	18.70	25.10
American Per Dozen,	....	3.80	....	4.60	5.50	7.40	10.20	13.90	18.70	25.10
Economy Per Dozen,	....	....	....	4.60	5.50	7.40	10.20	....	....	25.10

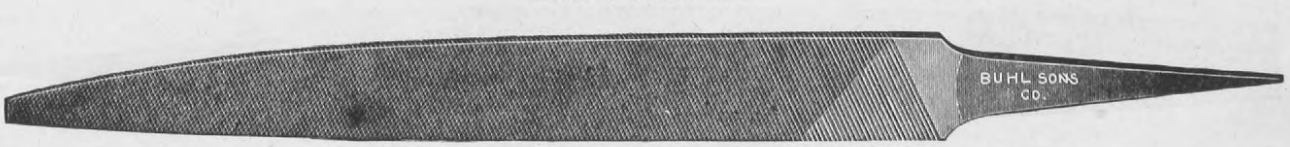
Packed—3 to 10 inch, One Dozen; 12 to 18 inch, Half Dozen in a Box.

SQUARE BLUNT BASTARD

Length, inches	12	14	16
Largest Dimension, inches	1/2	5/8	3/4
Buhl Sons Co Per Dozen,	$12.50	16.90	22.50

Packed—Half Dozen in a Box.

KNIFE BASTARD



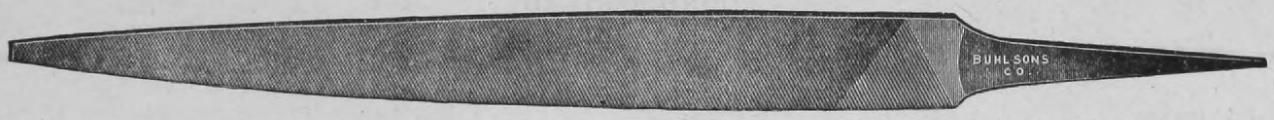
Length, inches	3	4	4½	5	6
Buhl Sons Co Per Dozen,	$5.40	5.40	6.10	6.10	6.90

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FILES

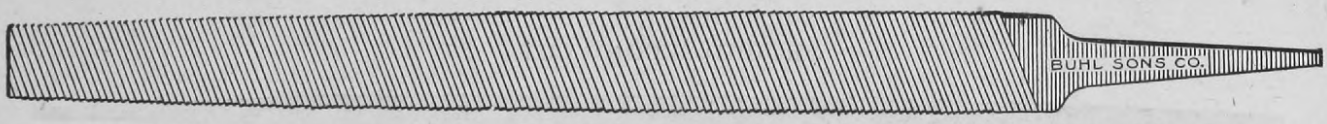
WARDING SMOOTH



Length, inches	3½	4	5	6	7	8	9	10
Buhl Sons Co. Per Dozen,	$5.40	5.40	5.80	6.40	7.50	8.20	9.90	11.00

Packed—One Dozen in a Box.

FLAT FLOAT



No. 1, For Hard Metal

Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$7.00	9.70	13.30

No. 2, For Soft Metal

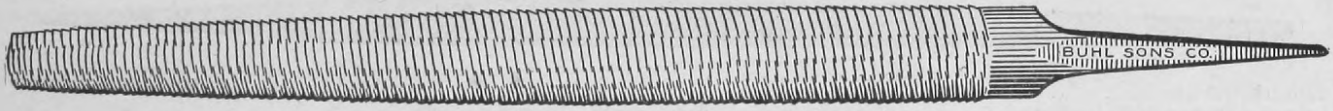
Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$7.00	9.70	13.30

No. 3, For Wood

Length, inches Per Dozen,	$7.00	9.70	13.30
Buhl Sons Co.	10	12	14

Packed—10 inch One Dozen—12 and 14 inch Half Dozen in a Box.

HALF ROUND FLOAT



No. 11, For Hard Metal

Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$9.10	11.80	15.50

No. 4, For Soft Metal

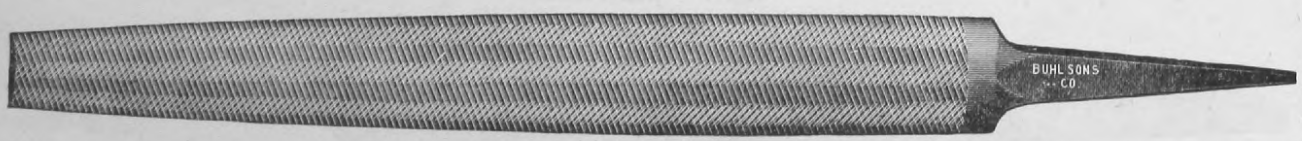
Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$9.10	11.80	15.50

No. 5, For Wood

Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$9.10	11.80	15.50

Packed—10 inch One Dozen—12 and 14 inch Half Dozen in a Box.

HALF ROUND CABINET

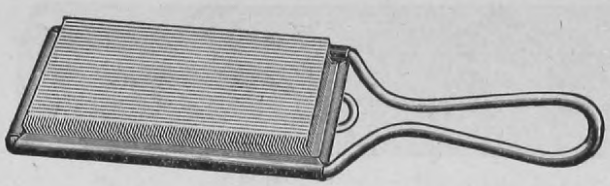


Length, inches	10	12	14
Buhl Sons Co. Per Dozen,	$13.70	18.70	24.80

Packed—10 inch One Dozen—12 and 14 inch Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FILE CLEANERS

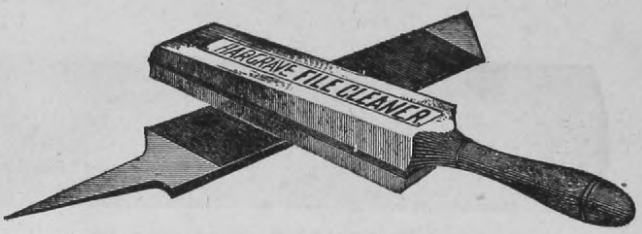


No. 10.

Colton's File Cleaners, Steel Back, Frame and Face, tempered steel wire bristles. Furnished with soft steel tapered pick to remove anything which will not yield to brush.

No. 10—Colton File Cleaner.....Per Dozen, $2.50

Packed—One Dozen in a Box.



No. 20.

On the **Hargrave** File Cleaner the teeth are of tempered steel wire and will not turn over by coming in contact with file. Handles are Hardwood and neatly finished.

No. 20—Hargrave File Cleaner.....Per Dozen, $2.75

Packed—One Dozen in a Box.

FILE BRUSHES

No. 30.

No. 30—Nicholson File Brushes with card and scorer .....Per Dozen, $6.75

Packed—Half Dozen in a Box.

FILE CARDS

No. 40.

No. 40—Nicholson File Cards, with Scorer.....Per Dozen, $4.50

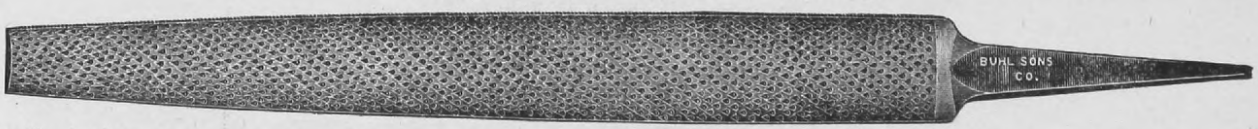
Packed—Half Dozen in a Box.

HALF ROUND SHOE RASPS

Length, inches	8	10
Buhl Sons Co.....Per Dozen,	$10.10	13.70

Packed—Half Dozen in a Box.

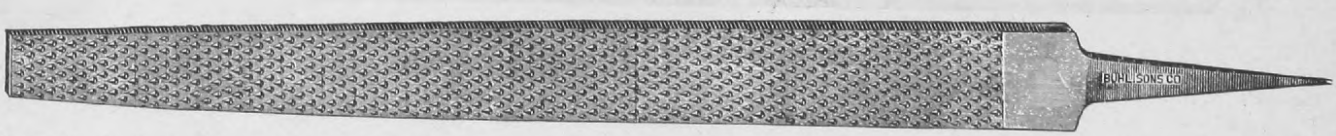
HALF ROUND CABINET RASPS



Length, inches	10	12	14
Buhl Sons Co.....Per Dozen,	$17.50	22.80	29.60

Packed—10 inch, One Dozen; 12 and 14 inch, Half Dozen in a Box.

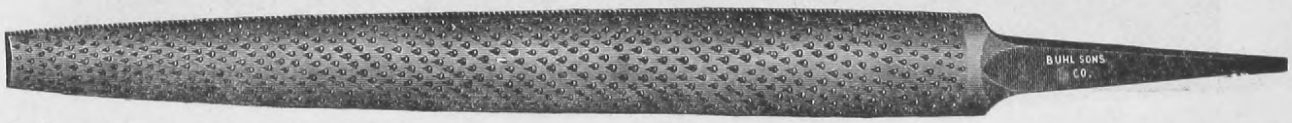
FLAT WOOD RASPS



Length, inches	10	12	14
Buhl Sons Co.....Per Dozen,	$12.80	17.50	23.20

Packed—10 inch, One Dozen; 12 and 14 inch, Half Dozen in a Box.

HALF ROUND WOOD RASPS



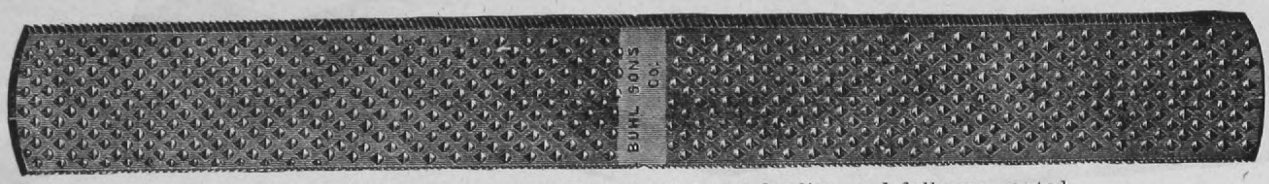
Length, inches	10	12	14
Buhl Sons Co.....Per Dozen,	$13.70	18.70	24.80

Packed—10 inch, One Dozen; 12 and 14 inch, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BUHL SONS CO. HORSE RASPS

PLAIN

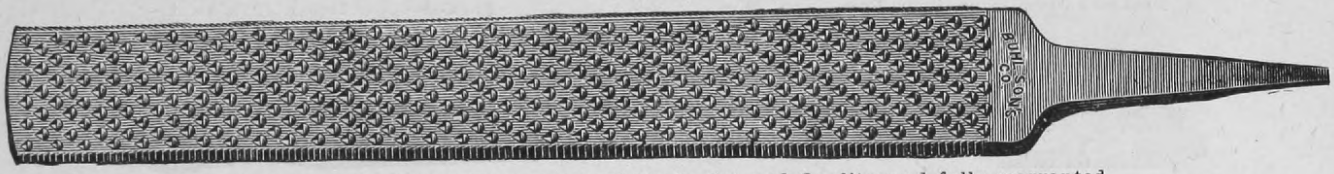


Buhl Sons Co. Horse Rasps are uniform in Cut and Quality, and fully warranted.

Inches	14	16	18 Slim
Buhl Sons Co ..... Per Dozen,	$17.80	24.40	25.90

Packed—Half Dozen in a Box.

TANGED



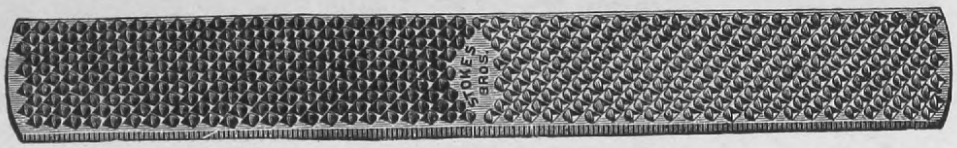
Buhl Sons. Co. Horse Rasps are uniform in Cut and Quality and fully warranted.

Inches	14	16
Buhl Sons Co ..... Per Dozen,	$23.10	32.20

Packed—Half Dozen in a Box.

STOKES' HORSE RASPS

PLAIN



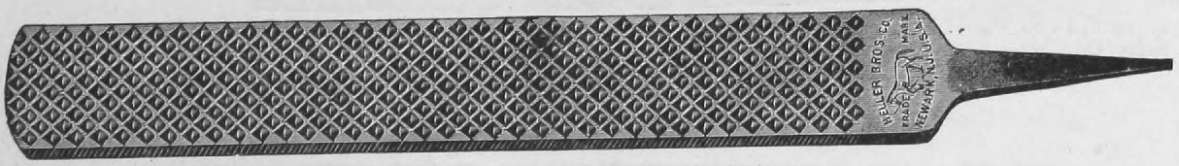
Stokes' Plain Horse Rasps, Warranted.

Inches	14	16	18 Slim
Stokes' ..... Per Dozen,	$17.80	24.40	25.90

Packed—Half Dozen in a Box.

HELLER'S HORSE RASPS

TANGED



Heller's Celebrated Horse Rasps, Tanged.

Inches	14	16
Heller's ..... Per Dozen,	$23.10	32.20

Packed—Half Dozen in a Box.

PLAIN

Heller's Celebrated Horse Rasps, Plain.

Inches	14	16	18 Slim
Heller's ..... Per Dozen,	$17.80	24.40	25.90

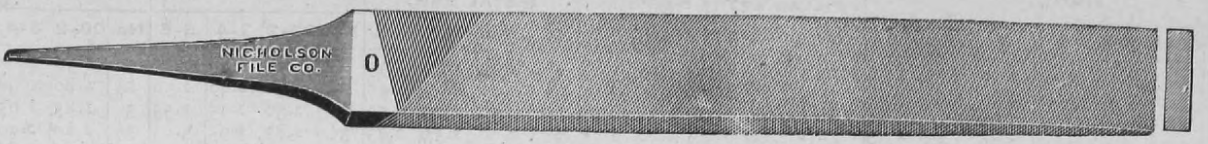
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NICHOLSON EXTRA [X·F] FINE SWISS FILES

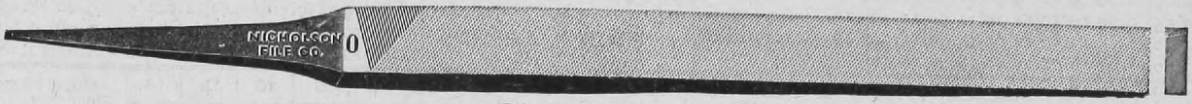
The following illustrations show the more common shapes and cuts, Full Size.

HAND.

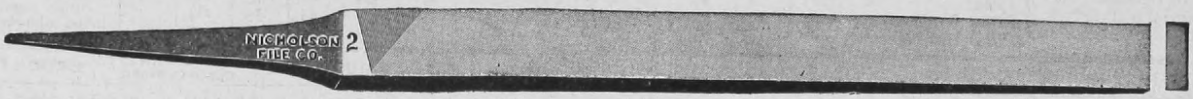


Hand, 4 inch. No. 0.

PILLAR.



Pillar, 4 inch. No. 0.

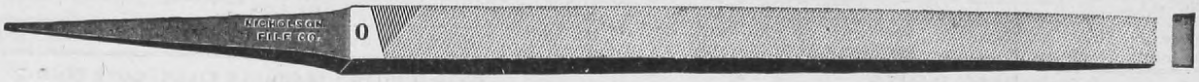


Pillar, 4 inch. No. 2.

Pillar, 4 inch. No. 4.

Pillar, 4 inch. No. 6.

NARROW PILLAR.

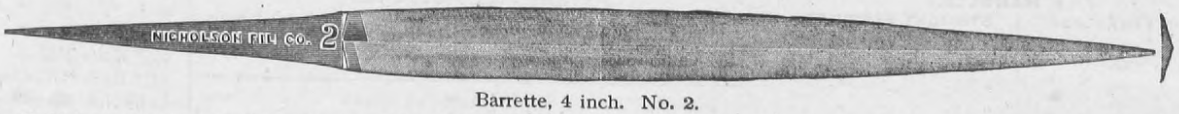


Narrow Pillar, 4 inch. No. 0.

EXTRA NARROW PILLAR.

Extra Narrow Pillar, 4 inch. No. 0.

BARRETTE.



Barrette, 4 inch. No. 2.

Note.—X. F. is a term given to a brand of Nicholson Files, and signifies extra fine. In general it applies to that class of files used by jewelers, watch and tool makers and for similar fine work, in which the best material and superior workmanship are required.

The cut is designated by numbers ranging from No. 00, the coarsest, to No. 8, the finest.

While for many kinds of work the Increment Cut Files are all that is required, for more particular purposes this extra quality is demanded. These files are manufactured in a factory by themselves, with special facilities.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

NICHOLSON EXTRA [X*F] FINE SWISS FILES

STANDARD PRICE LIST PER DOZEN

Adopted Nov. 1, 1913

HAND.

No.	00-2	3-4	5	6	7	8
2&2½″	1.85	1.95	2.05	2.20	2.35	2.50
3	2.20	2.30	2.40	2.60	2.90	3.10
3½	2.45	2.60	2.75	3.00	3.25	3.50
4	2.70	2.85	3.00	3.25	3.55	3.80
4½	3.15	3.35	3.55	3.85	4.25	4.45
5	3.45	3.65	3.95	4.40	4.75	5.00
6	4.10	4.40	4.65	5.00	5.55	6.05
7	5.50	5.75	6.05	6.65	7.25	7.75
8	6.30	6.60	7.15	7.75	8.30	9.30
9	8.25	8.80	9.60	9.90	10.50	11.60
10	9.55	9.90	10.50	11.10	11.50	12.30
12	12.30	12.60	13.60	14.00	14.70	15.50
14	15.00	15.00	16.00	17.00	18.20	19.50

PILLAR; PILLAR NARROW, PILLAR EXTRA NARROW.

No.	00-2	3-4	5-6	7-8
2&2½″	1.65	1.70	1.75	1.85
3	1.85	1.95	2.05	2.15
3½	2.10	2.20	2.35	2.45
4	2.35	2.50	2.60	2.75
4½	2.75	2.85	3.00	3.25
5	3.05	3.20	3.40	3.60
6	3.30	3.50	3.65	3.90
7	4.15	4.40	4.75	5.00
8	5.50	5.80	6.05	6.60
9	6.30	6.65	7.15	7.90
10	8.55	8.80	9.30	9.70
12	11.20	12.00	14.10	15.50

3-SQUARE AND METAL SAW.

No.	00-2	3-5	6-8
2″	1.75	1.75	1.75
2½	2.20	2.35	2.50
3	2.20	2.35	2.50
3½	2.40	2.55	2.75
4	2.85	3.00	3.20
4½	3.20	3.35	3.55
5	3.45	3.60	3.85
6	4.40	4.55	4.75
7	5.80	6.15	6.60
8	7.40	7.95	8.50
9	8.50	9.20	9.50
10	9.15	9.55	9.90
12	11.20	11.60	12.00

KNIFE.

No.	00-2	3-4	5-6
2″	1.75	1.75	1.75
2½	2.30	2.40	2.50
3	2.30	2.45	2.55
3½	2.85	2.95	3.05
4	3.30	3.40	3.55
4½	3.85	4.00	4.30
5	4.30	4.55	4.85
6	4.95	5.50	6.05
7	6.60	7.15	7.70
8	8.80	9.20	9.60
9	9.90	10.45	11.00
10	10.30	10.70	11.10
12	12.30	12.70	13.10

WARDING.

No.	00-2	3-4	5-6	7-8
2″	1.50	1.65	1.75	1.90
2½	1.80	1.90	2.00	2.20
3	1.85	1.95	2.10	2.25
3½	2.20	2.30	2.40	2.65
4	2.60	2.85	3.10	3.35
4½	3.00	3.25	3.45	3.80
5	3.30	3.55	3.85	4.20
6	4.10	4.40	4.65	4.95
7	5.05	5.50	6.10	6.70
8	6.10	6.60	7.20	7.80
9	7.40	8.25	8.80	9.40
10	9.00	9.60	10.00	10.40
12	11.40	12.20	12.60	13.00

Width in Decimal parts of an inch stated as near as practicable.

	Inches	2	2½	3	3½	4	4½	5	6	7	8	10	12	14
	Hand	.33	.38	.43	.48	.53	.58	.62	.72	.81	.90	1.09	1.27	1.45
	Pillar	.23	.26	.29	.32	.35	.38	.42	.48	.54	.60	.73	.85	
	Pillar Narrow	.17	.19	.22	.24	.27	.29	.31	.36	.41	.45	.55	.64	
	Pillar Ex. Narrow	.12	.13	.14	.16	.18	.19	.21	.24	.27	.30	.36	.42	

Pillar, Pillar Narrow, and Pillar Extra Narrow, with one or both edges cut, take same List Price as with two safe edges.

Other regular widths not listed take regular list prices.

HALF ROUND.

No.	00-2	3-5	6-8
2″	1.75	1.85	1.95
2½	2.30	2.40	2.60
3	2.30	2.40	2.60
3½	2.50	2.70	2.95
4	2.75	3.40	3.70
4½	3.10	3.90	4.30
5	3.45	4.30	4.65
6	4.40	5.25	5.90
7	6.05	7.15	7.95
8	7.45	8.75	9.55
9	9.90	12.10	13.20
10	10.70	13.80	16.20
12	12.90	16.90	19.30

CROSSING.

00-2	3-5	6-8
1.65	1.65	1.65
2.20	2.25	2.35
2.25	2.30	2.40
2.50	2.55	2.85
3.40	3.60	3.85
3.95	4.35	4.65
4.40	4.95	5.50
5.25	5.90	6.60
7.40	8.10	8.75
8.50	9.25	10.10
11.00	13.50	15.20
11.50	14.30	16.90
14.70	18.50	22.00

BARRETTE.

No.	00-2	3-5	6-8
2″	1.70	1.70	1.70
2½	2.05	2.15	2.25
3	2.10	2.15	2.25
3½	2.45	2.55	2.65
4	3.40	3.50	3.60
4½	3.85	4.05	4.30
5	4.70	4.95	5.25
6	6.05	6.30	6.60
7	7.70	8.00	8.25
8	9.15	9.35	9.55
10	12.30	12.50	12.80
12	15.50	15.70	16.00

SQUARE.

No.	00-2	3-5	6-8
2″	1.20	1.20	1.20
2½	1.30	1.30	1.30
3	1.35	1.35	1.35
3½	1.60	1.60	1.60
4	2.20	2.35	2.50
4½	2.50	2.70	2.85
5	2.75	2.90	3.05
6	3.55	3.75	3.95
7	4.40	4.65	4.95
8	5.50	6.05	6.60
9	6.05	6.80	7.75
10	7.15	8.00	8.80
12	8.80	9.60	10.40

ROUND.

00-2	3-5	6-8
.90	.90	.90
1.05	1.05	1.05
1.05	1.05	1.05
1.25	1.25	1.25
1.75	1.85	1.95
1.90	2.05	2.25
2.05	2.30	2.50
2.55	2.85	3.15
3.30	3.85	4.40
4.40	4.95	5.50
7.15	8.25	9.55
9.30	10.10	11.30

CANT & BARRETTE CUT ALL SIDES

00-2	3-5	6-8
2.20	2.20	2.20
2.85	2.95	3.05
2.85	2.95	3.05
3.70	3.85	3.95
4.40	4.60	4.80
5.50	5.95	6.05
6.05	6.30	6.55
7.35	7.60	7.75
8.60	8.90	9.10
10.00	10.40	10.60

CROCHET & PIPPIN.

No.	00-2	3-5	6-8
2″	1.65	1.90	2.20
2½	2.20	2.45	2.75
3	2.20	2.50	2.75
3½	2.60	2.85	3.15
4	3.15	3.45	3.70
4½	3.55	3.95	4.15
5	3.85	4.30	4.70
6	4.95	5.40	5.75
7	6.60	7.15	7.70
8	8.25	8.75	9.15
10	11.60	12.00	12.45

INCH.

	2	2½	3	3½	4	4½	5	6	7	8	10	12
Equaling, All cuts	1.50	1.75	1.80	2.20	2.75	3.25	3.70	4.25	4.95	6.90	10.00	13.50
Slitting, "	1.95	2.20	2.20	2.60	3.50	4.40	5.25	6.70	8.20	9.40	12.60	16.00
Rd. Straight, "	.....	.....	1.10	1.50	1.90	2.10	2.30	2.75	3.85	5.05		
Drill or Joint, " Rd. or Sq. Edge	.....	.....	1.95	2.10	2.35	2.70	3.05	3.70	4.40	4.95		
Thickness of Drill or Joint { Thin	.....	.....	.02	.03	.04	.05	.06	.08	.09	.10		
Thickness of Drill or Joint { Thick	.....	.....	.06	.07	.08	.09	.10	.12	.13	.14		

Pivot Files and Burnishers Right and Left Cut in either Sharp or Conical Corners.

	Files	Burnishers
2½″ with Tang	3.30	2.75
2½″ with Handle	3.55	3.00
2½″ Double	6.60	6.00

Screw Head, with or without Tang

2″	1.90
2½	2.20
3	2.25
3½	2.60
4	3.50

Ratchet, 3″ 2.25

Die Sinkers, Assorted Shapes.

Nos.	0-1-2
3″	2.15
3½	2.50

Broach, All Cuts, From Gauge 40 to 65 inclusive, $1.10 per dozen.

NEEDLE FILES.

		Round	Other Shapes	Assorted
Round Handle	10 c/m or 4″	.95	1.50	1.45
	12 c/m or 4¾″	.95	1.50	1.45
	14 c/m or 5½″	1.10	1.65	1.60
	16 c/m or 6¼″	1.25	1.90	1.85

		Round	Square	Other Shapes	Assorted
Square Handle or Escapement	14 c/m or 5½″	1.20	1.40	2.00	1.90

Of the following twelve varieties, viz: Round, Half-Round, Flat, Oval, Knife, Square, Three-Square, Slitting, Equaling, Joint, Barrette and Marking (if Round Handle) or Half-Round Blunt (if Square Handle).

Put up in Dozens, either assorted (one of each kind) or in kinds.

Assorted Dozens will always be sent when order does not state otherwise.

BENCH FILING MACHINE FILES, CUTS 00-0-2.

Length over all 3¼″ with ¼″ shank, all shapes or assorted, $3.00.

Length over all 3¼″ with ⅛″ shank, all shapes or assorted, $2.45.

PARALLEL MACHINE FILES, CUTS 00-0-2.

All regular sizes, 5″ long.

Round.....$2.30	Three Square.....$2.45	Oval.....$4.45
Square..... 2.75	Crochet..... 3.85	Lozenge..... 4.20
Pillar..... 3.05	Pippin..... 4.15	Knife-..... 4.30
Half Round..... 3.50	Crossing..... 4.40	Rd. or Sq. Edge Joint 2.40

TOOLS AND SPECIALTIES—List of Feb. 1, 1916.

FILE HANDLES.

Spun Ferruled.		Straight Ferruled.	
No. 00	$1.80 per doz.	No. 11	.50 per doz.
" 0	1.60 " "	" 12	.60 " "
" 1	1.40 " "	" 13	.70 " "
" 2	1.20 " "	" 14	.75 " "
" 3	1.00 " "	" 15	.80 " "
" 4	.80 " "		

FILE CLEANERS.

File Card, with Scorer . . . . 4.50 per doz.
File Brush, with Card and Scorer . 6.75 " "

PATENT FILE HOLDERS.

Surface Holder . . . . No. 4, 1.60, No. 5, 1.90 each.

Stub Files and Holder, Set of 6 Files, assorted } Price per set, 9.00; Extra Files, 0.45 "

Bent Rifflers, Handled, Set of 6, assorted shapes . . . 3.00
Machinist Scrapers, Handled, Set of 6, assorted shapes . 2.75

HORSE MOUTH RASPS.

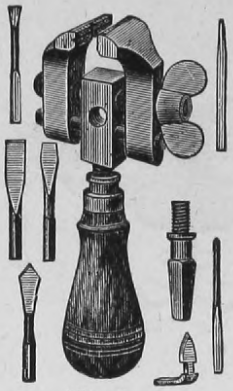
Long Handle Plain, 15.00 per doz. Nickeled, 24.00 per doz.
Jointed, Nickeled . . . . . 33.00 " "

MANICURE FILES.

3″ Double End Nail.....Doz.	$5.00
4″ " " "	5.90
5″ " " "	6.80
5½″ Knife Nail	6.90
5½″ Knife Nail, Cleaner Point...	8.00
Knife Nail, Blade Tip, Handled.	9.00
Curved Nail, Cleaner Point.....	7.90
Handled Nail, Cleaner Point.....	9.00
Corn Knife.....	6.90
Corn Knife, Curved, Handled	6.90

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAND VISES

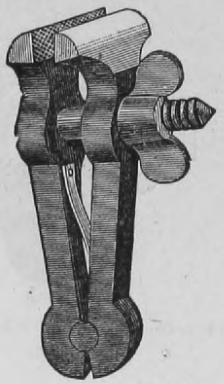


No. 1.

Tempered Steel Jaws, Cocobolo Handle, Jaws 1¼ inches wide; opens 1⅛ inches. The Handle is hollow and the Bit Shank and Tools Shown above are placed inside.

No. 1—Alford Hand Vise, complete, ... Per Dozen, $27.50

Packed—Half Dozen in a Box.



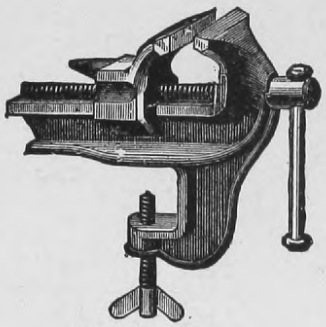
No. 140.

Black Wrought Iron with Polished Steel Jaws.

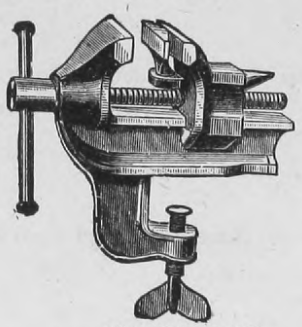
No. 140—Hand Vises	Inches	4	5
	Per Dozen	$3.00	4.10

Packed—Half Dozen in a Box.

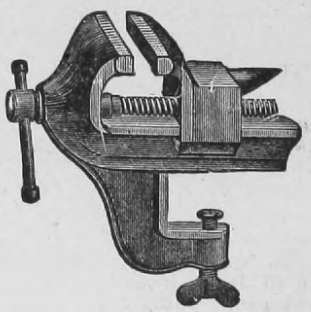
BONNEY VISES



Nos. 1 to 2.



Nos. 2½ to 3½.



Nos. 4 and 6.

With Solid Steel Screws

No. 1 —1½ inch Jaws. . . . . Per Dozen, $3.75

No. 1½—1¾ inch Jaws. . . . . Per Dozen, 5.00

No. 2 —2 inch Jaws. . . . . Per Dozen, 6.50

No. 2½—2 inch Steel Jaws . . . . . Per Dozen, $ 9.75

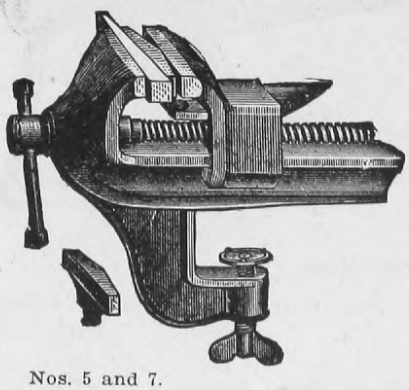
No. 3 —2¼ inch Steel Jaws, with Swivel Jaw Attachment . . . . . Per Dozen, 12.00

No. 3½—2¼ inch Plain Jaws. . . . . Per Dozen, 8.50

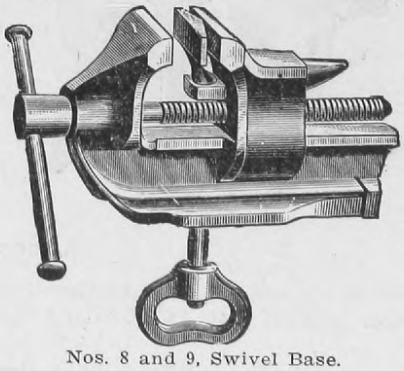
With Heavy Solid Steel Screws

No. 4—2¾ inch Iron Jaws. . . . . Per Dozen, $16.50

No. 6—2¾ inch Steel Jaws. . . . . Per Dozen, 19.50



Nos. 5 and 7.



Nos. 8 and 9, Swivel Base.

With Extra Heavy Solid Steel Screws

No. 5—2¾ inch Iron Jaws, with Swivel Jaw Attachment . . . . . Per Dozen, $19.50

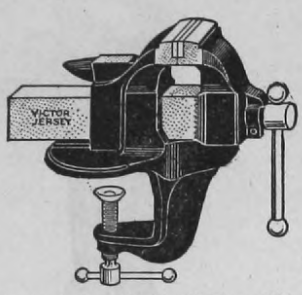
No. 7—2¾ inch Steel Jaws, with Swivel Jaw Attachment . . . . . Per Dozen, 22.50

No. 8—2¾ inch Steel Jaws . . . . . Per Dozen, $19.50

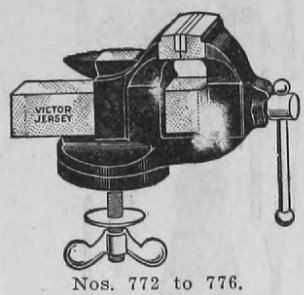
No. 9—2¾ inch Steel Jaws, with Swivel Jaw Attachment . . . . . Per Dozen, 22.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

VICTOR JERSEY VISES



Nos. 761 to 766. Style of Nos. 741 to 746.



Nos. 772 to 776.

Victor Jersey Vises are strong and serviceable. The Screw (body, head and collar) is in one piece, turned from Cold Rolled Steel, and has a square, lathe-cut thread. Jaws are ground to insure that they meet squarely when tightened. Working parts highly polished; Bodies finished in Brown Japan.

Clamp Base, Plain Iron Jaws

Nos.	741	742	743	744	745	746
Width of Jaws, inches	1½	1¾	2	2¼	2½	3
Weight each, pounds	3	3¼	3½	4	5	8¾
Each	$0.70	.90	1.00	1.25	1.50	2.00

Clamp Base, Hardened Tool Steel Jaws

Nos.	761	762	763	764	765	766
Width of Jaws, inches	1½	1¾	2	2¼	2½	3
Weight each, pounds	3	3¼	3½	4	5	8¾
Each	$0.95	1.15	1.30	1.55	1.85	2.50

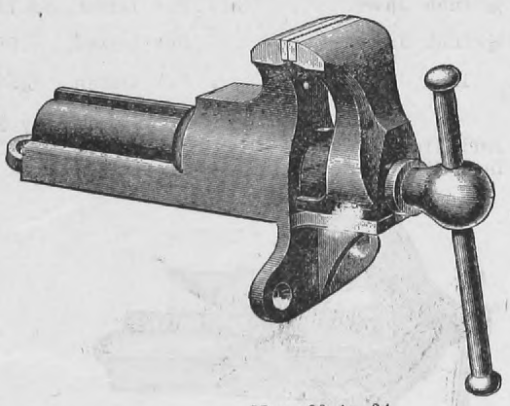
Swivel Base, Hardened Tool Steel Jaws

Nos.	772	773	774	775	776
Width of Jaws, inches	1¾	2	2¼	2½	3
Weight each, pounds	3	3½	4½	5½	9½
Each	$1.25	1.45	1.75	2.10	2.85

JERSEY VISE ASSORTMENT

No. 12.

OVAL SLIDE BENCH VISES



Nos. 60 to 64.

Assortment of "Victor" Jersey Vises

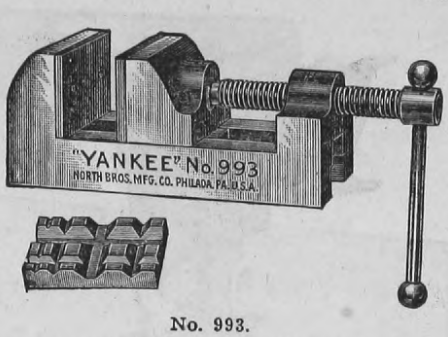
No. 12—Assortment consisting of Display Stand and **12** Vises as follows **Two** each, Nos. 741, 742 and 743; **One** each, Nos. 744, 745, 746, 761, 763 and 772 ..... Per Assortment $14.20

Oval Slide Bench Vises, Japanned, Steel Faced Jaws

Nos.	60	61	62	63	64
Width of Jaws, inches	2½	2¾	3	3½	4⅛
Jaws Open, inches	3	3¾	4	4¾	4¾
Weight each, pounds	5	8	12	19	27
Each	$1.70	2.20	3.00	3.80	5.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YANKEE VISES



No. 993.

The **Yankee** Vise can be used not only on Base, but on either side or even on end. Body and Sliding Jaw are of cast iron with hardened steel faces. The Sliding Jaw extends through slot one inch wide in body of vise thus securing parallel movement; the screw is ⅝ inch in diameter, the Base 7¼ inches long and 2¾ inches wide. A Hardened Steel Block is provided with V-Shaped grooves for holding round or irregular shaped work.

No. 993—Yankee Vise, Jaws 2¾ inches wide and open 3⅛ inches, weight 9 pounds.....Each, $6.00

Packed—One in a Box.

No. 1993.

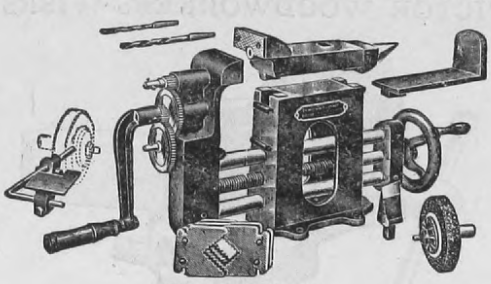
This is the No. 993 Yankee Vise mounted on **Swivel Base**, 4¼ inches in diameter, for use on Bench and its upper part quickly detachable for use on Drill Press; it is mounted easily and firmly locked or released by short movement of lever on one side.

A hardened Steel Block is provided with V-Shaped grooves for holding round or irregular shaped work.

No. 1993—Yankee Vise with Swivel Base, Jaws 2¾ inches wide and open 3⅛ inches, weight 13½ pounds.....Each, $8.50

Packed—One in a Box.

STEWART HANDY WORKERS



Complete Outfit.

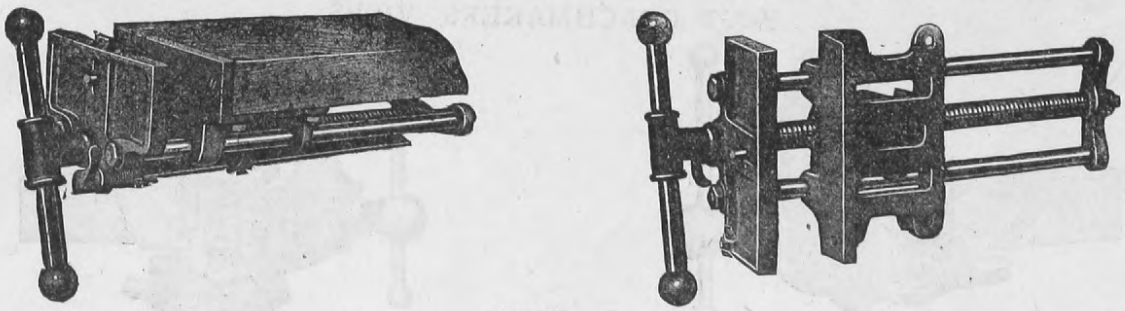
The **Stewart Handy Worker** comprises a two-speed drill press, grinding outfit, powerful vise and pipe vise, heavy anvil, metal cutter, and a sturdy three-speed machine with clamp spindle for attaching and operating emery wheels, scratch brushes, buffing wheels, etc.

Dimensions—Vise, width of jaws, 4½ inches, jaws open 4½ inches; Pipe Vise taking up to 1½ inch Pipe; carborundum Wheel 5 inches in Diameter.

Stewart Handy Worker, complete with all attachments as illustrated above.....Each, $12.50

Packed—One Complete Outfit in a Case, Shipping Weight, 100 Pounds.

QUICK ACTING WOODWORKERS' VISES



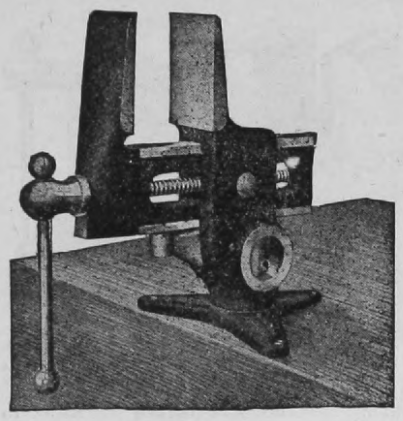
No. 400.

Buhl Improved Quick Acting Manual Training and General Woodworkers' Vises, with Adjustable Dog and Continuous Compression Screw. The Gray Iron Jaws are ground perfectly true and finely finished; the Sliding and Guide Bar and Nut are of Steel, and the Screw of "A No. 1" Tool Steel, with a buttressed thread which insures the maximum of wear, while securing the greatest possible compressive power plus an instantaneous action with a scarcely perceptible friction. The rear Jaw forms the body of the Vise that is secured to the lower side of the bench top and supports the guide rods, nuts and screw.

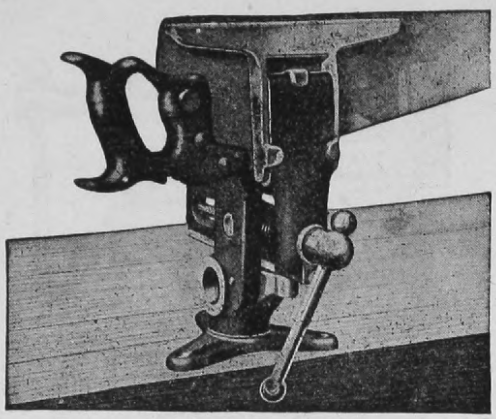
No.	400
Jaws, inches	4x10
Jaws Open, inches	12
Weight each, pounds	45
Each	$9.75

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

"CARPENTER" VISES



"Carpenter" Vise No. 1.

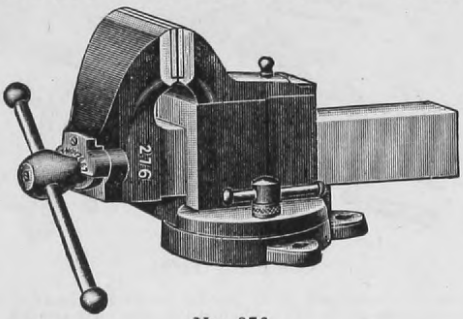


"Carpenter" Vise No. 1 with Saw Clamps.

The **"Carpenter"** Vise is designed and built to meet the requirements of the Woodworker. Body and Base are made of semi-steel, while the screw, handle and nut are made from Carbon Steel. Size of Jaws 2½x3½ inches and open 5 inches, complete weight, 15 pounds. Used in either a horizontal or vertival position and automatically locks at any point on the complete circle. Body and Base are interchangeable. Extra Bases can be furnished for using the vise at different points. A Saw Clamp can be easily attached by slipping two jaws over the jaws of the "Carpenter."

No. 1—"Carpenter" Vise with One Base ..... Each, $5.00
"Carpenter" Saw Clamps ..... Per Set, .60
Extra Bases for **"Carpenter"** Vise ..... Each, .75

VICTOR WOODWORKERS' VISES

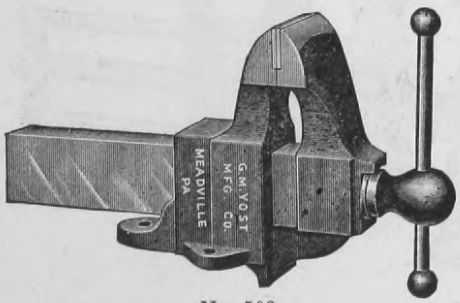


No. 276.

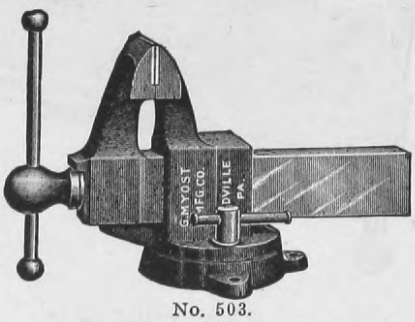
Parker's Victor Semi-Steel Woodworkers' Vises, **Swivel** Bottom, and **Self-Adjusting** Back Jaw, which adapts itself to holding irregular shaped articles.

Nos.	276	277
Width of Jaws, inches	4	4½
Jaws, Open, inches	7½	9½
Weight each, pounds	40	65
Each	$9.50	13.00

YOST COACHMAKERS' VISES



No. 502.



No. 503.

Yost Coachmakers' Vise, especially designed for woodworkers, carriage builders and carpenters. Made of Cast Iron, with smooth Steel Jaws. The large bearing surface of the Jaws gives the vise a firm hold without marring the material it is holding.

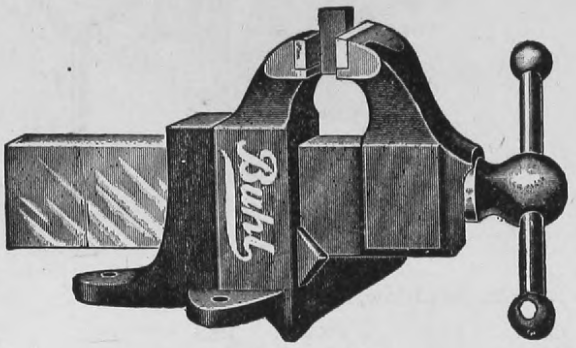
Stationary Bottom		Swivel Bottom	
No.	502	No.	503
Width of Jaws, inches	4½	Width of Jaws, inches	4½
Jaws Open, inches	9	Jaws Open, inches	9
Weight, each, pounds	47	Weight each, pounds	54
Each	$9.00	Each	$11.00

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

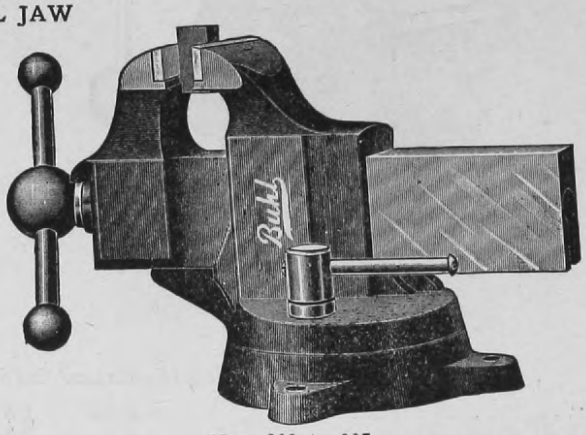
BUHL MACHINISTS' VISES

"Buhl" Vises are built on honor and according to our own specifications based on experience and a series of severe tests. All the weak points in other vises have been carefully considered and eliminated in the "Buhl" Vise by putting more metal in our vise properly proportioned for greater strength and durability. We invite comparison in every detail and your severest tests.

PARALLEL JAW



Nos. 103 to 107.



Nos. 203 to 207.

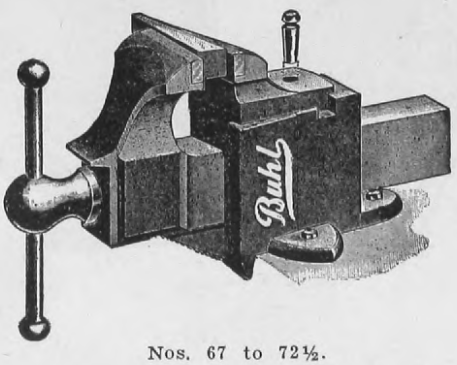
Buhl Machinists' Stationary Bottom, Solid Jaw, Parallel Vises

Nos.	103	103½	104	104½	105	105½	106	107
Width of Jaw, inches	3	3½	4	4½	5	5½	6	7
Jaws Open, inches	4	5	6	6½	7½	9	10	12
Weight each, pounds	22	27	42	53	72	102	130	210
Each	$6.00	7.00	8.50	10.00	13.00	18.50	25.00	37.50

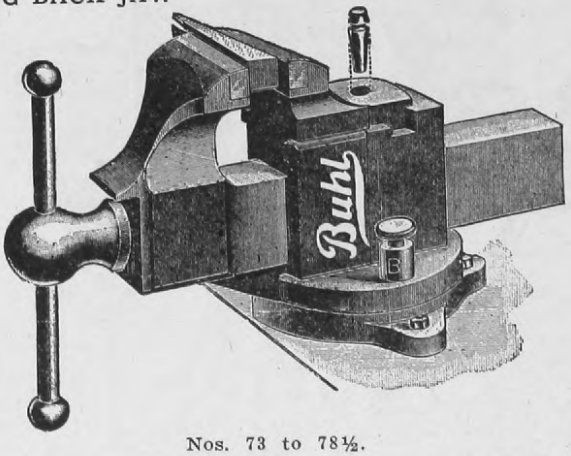
Buhl Machinists' Swivel Bottom, Solid Jaw, Parallel Vises

Nos.	203	203½	204	204½	205	205½	206	207
Width of Jaws, inches	3	3½	4	4½	5	5½	6	7
Jaws Open, inches	4	5	6	6½	7½	9	10	12
Weight each, pounds	28	37	52	65	90	117	152	235
Each	$7.50	8.75	10.50	12.50	16.00	22.00	30.00	42.50

SELF-ADJUSTING BACK JAW



Nos. 67 to 72½.



Nos. 73 to 78½.

Buhl Machinists' Stationary Bottom, Self-Adjusting Back Jaw Vises.

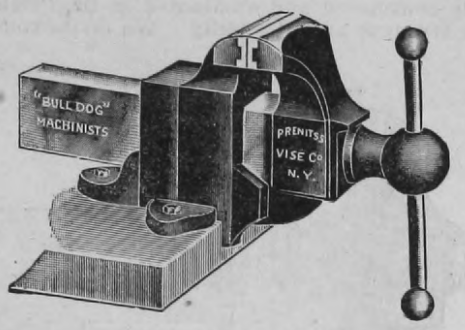
Nos.	67	68	69	71	72	72½
Width of Jaw, inches	3½	4	4½	5½	6	7
Jaws Open, inches	4¾	5¼	6	9	10	12
Weight each, pounds	28	41	54	110	146	184
Each	$7.00	9.00	10.50	17.00	24.00	30.00

Buhl Machinists' Swivel Bottom, Self-Adjusting Back Jaw Vises.

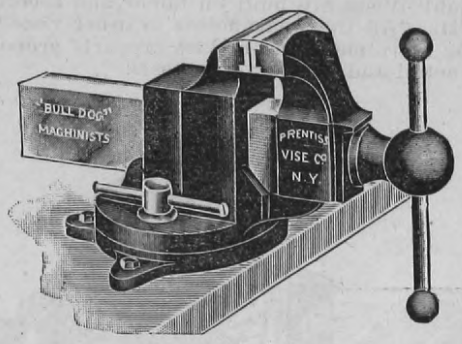
Nos.	73	74	76	77	78	78½
Width of Jaw, inches	3½	4	4½	5½	6	7
Jaws Open, inches	4¾	5¼	6	9	10	12
Weight each, pounds	32	46	65	118	168	207
Each	$8.50	10.50	12.50	19.00	27.00	35.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BULL DOG MACHINISTS' VISES



Nos. P50 to P57.



Nos. P90 to P97.

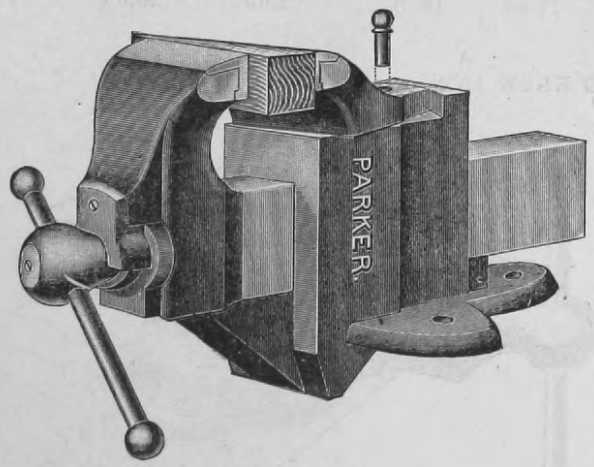
Prentiss Bull Dog Machinists' Stationary Bottom, Solid Jaw, Parallel Vises

Nos.	P50	P51	P52	P53	P54	P55	P56	P57
Width of Jaws, inches	3 1/4	3 5/8	4 1/8	4 5/8	5	5 1/2	6	7
Jaws Open, inches	4	5 1/2	6	7	8	9	10	12
Weight each, pounds	22	28	42	52	72	100	135	210
Each	$6.00	7.00	8.50	10.00	13.00	18.50	25.00	37.50

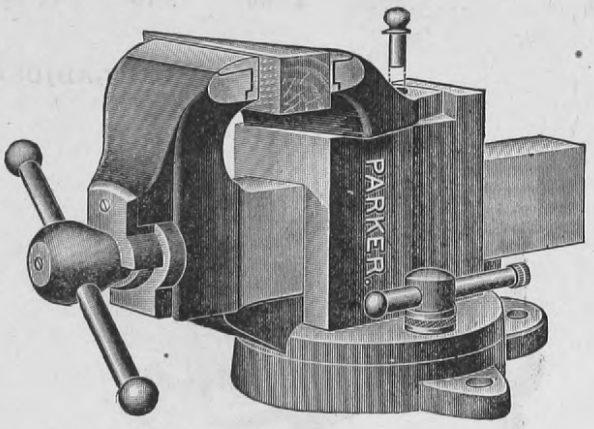
Prentiss Bull Dog Machinists' Swivel Bottom, Solid Jaw, Parallel Vises

Nos.	P90	P91	P92	P93	P94	P95	P96	P97
Width of Jaws, inches	3 1/4	3 5/8	4 1/8	4 5/8	5	5 1/2	6	7
Jaws Open, inches	4	5 1/2	6	7	8	9	10	12
Weight each, pounds	28	36	52	64	85	115	155	235
Each	$7.50	8.75	10.50	12.50	16.00	22.00	30.00	42.50

VICTOR BENCH VISES



Nos. 370 to 375.



Nos. 270 to 275.

Parker's Victor Semi-Steel Bench Vises, **Stationary** Bottom, and **Self-Adjusting** Back Jaw, which adapts itself to holding irregular shaped articles. The steel Faces are milled and fitted to the jaws and are renewable.

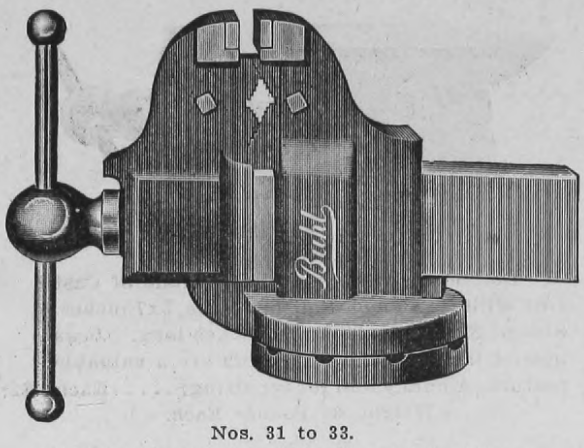
Nos.	370	371	372	373	374	375
Width of Jaws, inches	3 1/4	3 5/8	4 1/2	5	5 1/2	6 1/4
Jaws Open, inches	3 3/8	5	6	7	9	9 3/4
Weight each, pounds	25	40	59	73	98	150
Each	$6.50	7.00	10.00	14.00	17.00	24.00

Parker's Victor Semi-Steel Bench Vises, **Swivel** Bottom, and **Self-Adjusting** Back Jaw, which adapts itself to holding irregular shaped articles. The Steel Faces are milled and fitted to the jaws and are renewable.

Nos.	270	271	272	273	274	275
Width of Jaws, inches	3 1/4	3 5/8	4 1/2	5	5 1/2	6 1/4
Jaws Open, inches	3 3/8	5	6	7	9	9 3/4
Weight each pounds	32	49	69	86	117	170
Each	$7.00	8.50	12.50	16.00	19.00	27.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL COMBINATION VISES



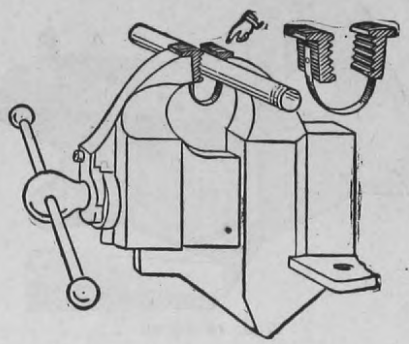
Nos. 31 to 33.

Buhl Combination Machinists' and Pipe Vises.

Swivel Bottom, Steel Faced Jaws. Absolutely guaranteed against defects in material and workmanship.

Nos	31	32	33
Width of Jaws, inches	3½	4½	5
Holds Pipe, inches...	⅛ to 2½	⅛ to 3½	⅛ to 4½
Weight, pounds.....	50	68	115
Each	$16.00	22.00	32.00

VISE JAWS



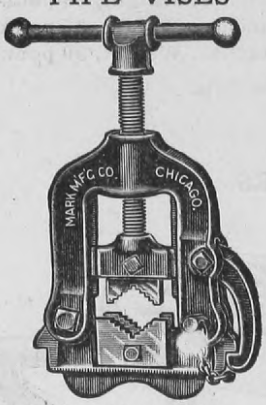
Elgin.

The Elgin Vise Jaw is easily attached to any Vise; will fit any size Pipe.

Elgin—Vise Jaws .....Per Dozen, $3.50

Packed—Half Dozen in a Box.

PIPE VISES

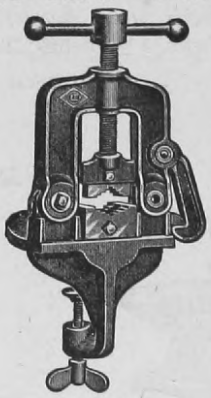


Nos. 01 and 02.

Mark Latch Pattern Malleable Pipe Vises, Hinged Frame, with Hook Lock and Bolt, as shown in cut. Jaws are made of Tool Steel, hardened and tempered. Yoke and Base are made of Malleable Iron.

No. 01—Holds ⅛ to 2½-inch Pipe.....Each, $10.00
No. 02—Holds ¼ to 3½-inch Pipe.....Each, 14.00

KIT PIPE VISES

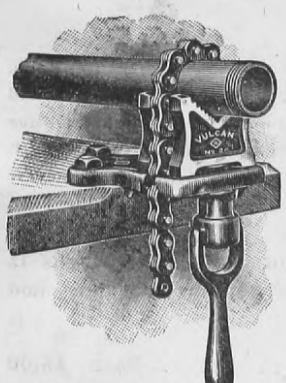


No. OK.

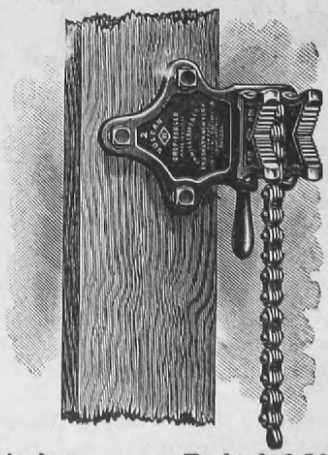
Erie Malleable Kit Pipe Vises, Hinged Frame, with Hook, Lock and Bracket for clamping to bench or table. Made entirely of Malleable Iron and Steel. Guaranteed against breakage. Strongest and most convenient Kit Vise made.

No. OK—Holds ⅛ to 2-inch Pipe.....Each, $10.00

CHAIN PIPE VISES



Vulcan Chain Pipe Vises, made entirely of Wrought and Drop Forged Steel; all parts interchangeable; adapted for use on post or bench, unbreakable in service. Compact in design, quick in operation and sure but not destructive in its grip on pipe, etc. **No. 1** has an extended tooth which prevents bending of the smallest sizes of pipe, etc.



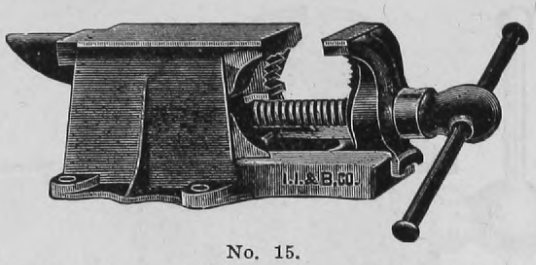
No. 1—Holds ⅛ to 2-inch Pipe. Weight, about 4 pounds each; Size, folded, 4x 5x 6 inches.....Each, $ 3.50
No. 2—Holds ¼ to 4-inch Pipe. Weight, about 10 pounds each; Size, folded, 6x 8x 8 inches.....Each, 7.50
No. 4—Holds ¾ to 8-inch Pipe. Weight, about 30 pounds each; Size, folded, 8x10x12 inches.....Each, 18.00

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMBINED ANVILS AND VISES

Nos. 10 to 40.



No. 15.

No. 15—Combined Anvil and Vise. Made of Cast Iron with Hardened, Polished Face, 3x7 inches. Size of Screw, ⅞ inch; 10 inches long. Jaws open 4 inches. The Pipe Jaws are a valuable feature. A handy tool for repairing.....Each, $2.70
Weight, 30 Pounds Each.

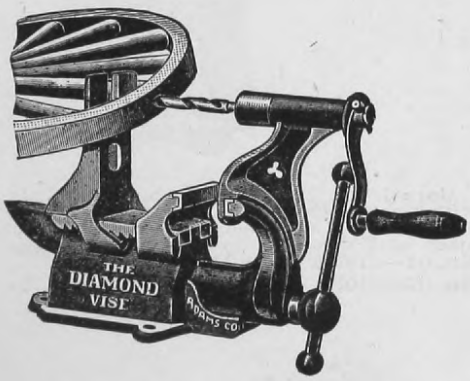
Cheney Combined Anvils and Vises

Steel Faced Jaws, chill hardened and smooth faced Anvils, Wrought Screws and Steel Hardies. By removing Pin, the **Swivel Jaw** will turn so as to hold odd shaped articles, as shown in the cut.

No. 10—Width of Jaws, 2½ inches; Jaws open 3 inches; Face of Anvil, 4½x2 inches; Weight, 9 pounds. Each, $3.50
No. 20—Width of Jaws, 3½ inches; Jaws open 4 inches; Face of Anvil, 6½x3 inches; Weight, 25 pounds. Each, 4.50
No. 30—Width of Jaws, 4 inches; Jaws open 5 inches; Face of Anvil, 8x3½ inches; Weight, 35 pounds. Each, 5.50
No. 40—Width of Jaws, 4½ inches; Jaws open 6 inches; Face of Anvil, 8½x4 inches; Weight, 50 pounds. Each, 6.50

Medium Sizes, Nos. 20 and 30, Have the Largest Sale.

DIAMOND COMBINATION VISES



To hold Pipe, move small Jaw back one notch; this makes three sharp jaws which will clamp pipe as large as two inch. In cutting threads on pipe this should be done on the right hand side of Vise, as shown above, as pipe is thereby held more securely. **Jaws,** faced with steel ⅞ inch wide, 4 inches long, firmly fastened to jaw, checked and hardened. **Face** of Anvil, 3 inches by 7 inches (not including horn), chilled, ground and polished, and polished surface covered with lacquer. **Screw,** Steel, ¾ inch by 10½ inches, 6½ threads to an inch, cut 7 inches on the screw. Head polished. **Screw Handle,** 9/16 inch by 9¼ inch steel, polished. **Nut** is ingeniously formed of cast iron, 1½ inches thick so as to guide jaw; also remains in a firm position.

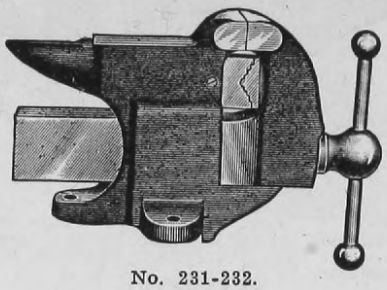
Vise weighs 38 pounds; boxed, weighs 42 pounds. **Painted** green where not polished. **Drill Attachment** weighs 13 pounds; boxed, weighs 15 pounds. Will take Square Shank Drills up to ¾-inch. **First-class** for any machinist and very convenient for all private workshops.

Diamond
- Vises only, without Drill Attachments; Face of Anvil, 3x7 inches.....Each, $5.00
- Drill Attachments only, without Vises.....Each, 2.70
- Vises, with Drill Attachments complete.....Each, 7.70

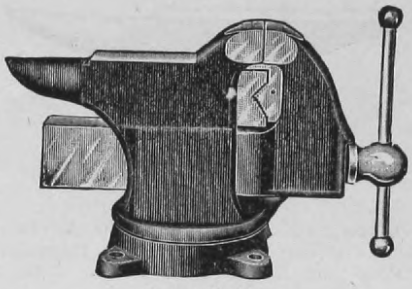
Packed—Each Vise and each Drill Attachment boxed separately.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

AUTO VISES



No. 231-232.



No. 240-241.

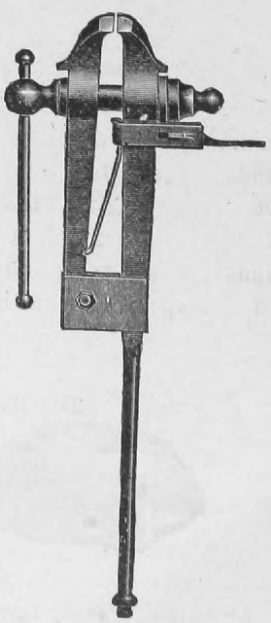
A combination Pipe Vise and Anvil, especially adopted for Automobile Repair Work. It has regular vice jaws for all kinds of machinists' work, pipe jaws for holding pipe and rods and can also be used as an Anvil.

Stationary Bottom		
Nos.	**231**	**232**
Width of Jaws, inches	3	3½
Capacity Pipe, inches	⅛ to 1½	⅛ to 2
Weight each, pounds	32	65
Each	$10.00	14.00
Extra Pipe Jaws	1.30	1.50

Swivel Bottom		
Nos.	**240**	**241**
Width of Jaws, inches	3	3½
Capacity Pipe, inches	⅛ to 1½	⅛ to 2
Weight each, pounds	42	80
Each	$13.00	16.00
Extra Pipe Jaws	1.30	1.50

BLACKSMITHS' VISES

Superior Finish Wrought Steel, Solid Box Blacksmiths' Vises. With Polished Jaws, Wrought Steel Screws, patented Concave and Convex Ball Bearing Washers, removing liability of stripping the thread or breaking the screws.



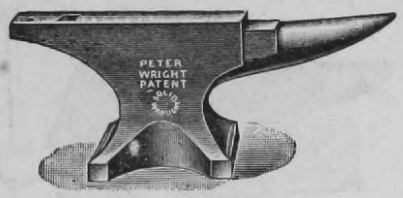
No. 35—Width of Jaws, 3¾ inches; Jaws open 3¾ inches.....Each, $10.00
No. 40—Width of Jaws, 4 inches; Jaws open 4 inches.....Each, 10.50
No. 45—Width of Jaws, 4¼ inches; Jaws open 4¼ inches.....Each, 11.00
No. 50—Width of Jaws, 4½ inches; Jaws open 4½ inches.....Each, 11.50
No. 60—Width of Jaws, 5 inches; Jaws open 5 inches.....Each, 13.00
No. 70—Width of Jaws, 5¼ inches; Jaws open 5¼ inches.....Each, 15.00
No. 80—Width of Jaws, 5½ inches; Jaws open 5½ inches.....Each, 17.50
No. 90—Width of Jaws, 5¾ inches; Jaws open 5¾ inches.....Each, 20.00
No. 100—Width of Jaws, 6 inches; Jaws open 6 inches.....Each, 22.00
No. 115—Width of Jaws, 6¼ inches; Jaws open 6½ inches.....Each, 25.00
No. 125—Width of Jaws, 6½ inches; Jaws open 6½ inches.....Each, 27.50
No. 150—Width of Jaws, 7 inches; Jaws open 7 inches.....Each, 36.00
No. 180—Width of Jaws, 7½ inches; Jaws open 8 inches.....Each, 47.00
No. 200—Width of Jaws, 8 inches; Jaws open 8 inches.....Each, 56.00

Note.—Numbers also indicate weight of Vises.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLACKSMITHS' ANVILS

PETER WRIGHT



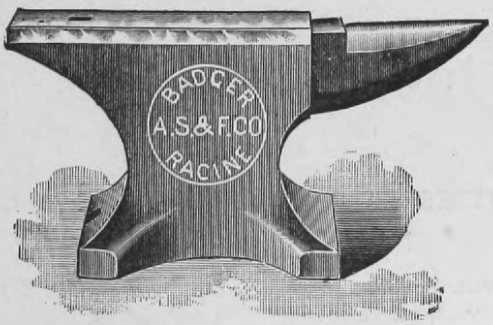
Peter Wright's Patent Solid Wrought Anvils, faced with special Sheffield Shear Steel, converted from Swedish Iron. The Bick, Face and End are all in one solid forging, so that it is impossible to break them.

Base Sizes, 80 to 350 pounds.....Per Pound, $.....

Extra Sizes

351 to 600 lbs.,	Advance over Base..Per Pound,	$0.00½
70 to 79 lbs.,	Advance over Base..Per Pound,	.01
60 to 69 lbs.,	Advance over Base..Per Pound,	.01½
50 to 59 lbs.,	Advance over Base..Per Pound,	.02
Under 50 lbs.,	Advance over Base...Per Pound,	.03

BADGER



Badger Steel Faced Anvils.

Nos.	**0**	**2**	**3**	**4**	**5**	**6**
Pounds	10	20	30	40	50	60
Each	$2.75	4.00	4.50	5.25	6.00	6.50
Nos.	**7**	**8**	**9**	**10**	**12**	**15**
Pounds	70	80	90	100	120	150
Each	$7.25	8.00	9.00	10.00	12.00	15.00

HAY-BUDDEN

The **Hay-Budden** Anvil is made by the latest improved methods from the best "American" Wrought Iron and Steel and is guaranteed.

GUARANTEE

Should this anvil break at the waist within one year from date of purchase, it will be replaced without charge.

CAUTION

This anvil is tempered in a manner to suit the majority of smiths. No claim for defective temper will be allowed.

Base Sizes, 80 to 425 pounds.....Per Pound, $.....

Extra Sizes

426 to 625 lbs.,	Advance over Base..Per Pound,	$0.00½
626 to 800 lbs.,	Advance over Base..Per Pound,	.02
70 to 79 lbs.,	Advance over Base..Per Pound,	.00½
60 to 69 lbs.,	Advance over Base..Per Pound,	.01
50 to 59 lbs.,	Advance over Base..Per Pound,	.02
40 to 49 lbs.,	Advance over Base..Per Pound,	.03
30 to 39 lbs.,	Advanie over Base..Per Pound,	.05
20 to 29 lbs.,	Advance over Base..Per Pound,	.08
10 to 19 lbs.,	Advance over Base..Per Pound,	.15

Approximate Dimensions of General Blacksmiths' Anvils

Weight Pounds	Face, Inches	Horn Inches	Hardie Hole	Pritchel Hole
10	2 x 6	3½	½	5/16
20	2¼ x 7	4	5/8	3/8
30	2½ x 8	5	5/8	3/8
40	2¾ x 9	6	3/4	7/16
50	3 x 9½	6½	3/4	7/16
60	3¼ x10	7	3/4	7/16
70	3⅜ x11	7½	3/4	7/16
80	3½ x12	8½	3/4	7/16
100	3⅝ x13½	9	3/4	7/16
125	3¾ x15	10	7/8	9/16
150	4 x16½	10½	7/8	9/16
175	4¼ x17	11	1	9/16
200	4½ x18	11½	1⅛	11/16
250	4¾ x20	12½	1⅛	11/16
300	5 x21	13	1¼	11/16
350	5½ x22	13½	1¼	11/16
400	6 x23	14½	1⅜	11/16
450	6½ x24	15½	1⅜	11/16
500	6¾ x25	16	1½	13/16
600	7 x26	17	1½	13/16
700	7½ x27	18	1¾	7/8
800	8 x28	19	1¾	7/8

Note.—Dimensions given above are approximate. Hardie Hole Sizes on all lists indicate size of tool that Hardie Hole will take.

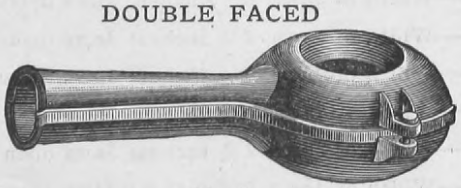
TUYERE IRONS

SINGLE FACED

No. 1.

No. 1—Single Faced Duck Nest Tuyere Irons, weight 12 pounds.....Each, $1.50

DOUBLE FACED



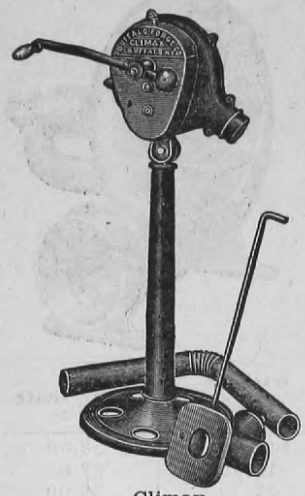
No. 2.

No. 2—Double Faced Duck Nest Tuyere Irons, weight 17 pounds.....Each, $1.75

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BLACKSMITHS' BLOWERS

CLIMAX



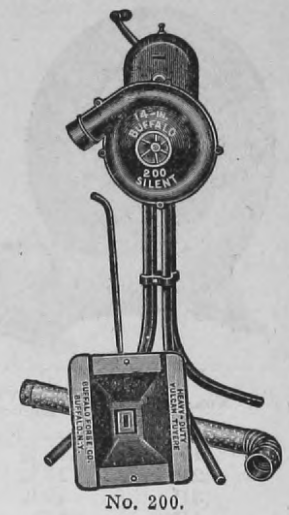
Climax.

VULCAN TUYERE IRONS

Heavily reinforced to insure against burning out; the nest is detachable from the base so either part can be repaired or replaced. The Ash Grate is balanced so that it opens and closes again automatically. Will heat entire length of a 12-inch iron as quickly as a 7-inch iron in any other Standard Tuyere.

Buffalo Heavy Duty Vulcan Tuyere Irons; Weight 56 pounds .....Each, $6.00

BUFFALO SILENT



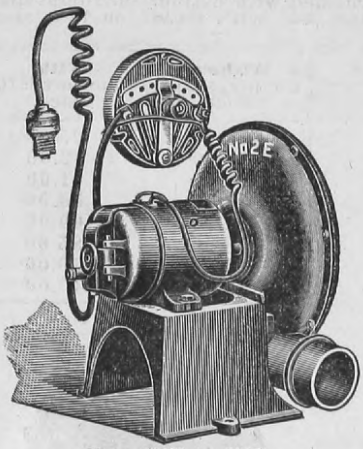
No. 200.

Climax Blacksmiths' Blowers

Made to meet the demand for a particularly low-priced geared hand Blower. Has Helical High Speed Gears and compact Blower Head. The Fan Pinion runs in a bath of oil and lubricates the other working parts by splashing. The Tuyere Iron has a revolving ball valve which affords regulation of the fire and prevents accumulation of clinkers.

Climax Blacksmith's Blowers, with 12-inch Fan, Tuyere Iron and Pipe; Weight, 130 pounds.....Each, $27.00

BUFFALO ELECTRIC



Nos. 2EV to 3EC

"Buffalo 200 Silent" Blacksmiths' Blowers

Every piece of material used in the construction of these Blowers is examined and tested separately for soundness and strength, and designed to give positive insurance against friction, wear, dislocation or breakage. The Gearing is the most perfect, strongest and most noiseless yet devised. All Gears are cut on the most accurate machines, and both the crank shaft and fan shaft have ball bearings at end thrust. On account of the Helical Steel Pinion and Fan Shaft, with Triple Length Babbitted Bearing and Ball Bearing End Thrust, an extremely small amount of friction and superior strength is obtained. The Gears are really of the same type used in the most approved high speed turbines, milling machines, etc. The unique scroll shaped Fan is the result of the latest discoveries in pneumatics, and most successfully overcomes churning and eddy currents—a factor to be reckoned with in all forge blowers. The blast outlet is arranged along the line of least resistance. Gear Case is dust and leak-proof and, being in one piece, insures perfect alignment of gears. Each Blower is furnished with Vulcan Heavy Duty Tuyere Iron and Pipe. Guaranteed for 10 years.

No. 200-12—With 12-inch Fan; Weight, 153 pounds.....Each, $37.00
No. 200-14—With 14-inch Fan; Weight, 155 pounds.....Each, 37.50

Buffalo Electric Blowers

These Blowers can be fitted to any forge, brick or iron, and are made ready for use by connecting the motor to an ordinary electric lamp socket. Wire and plug are also furnished to save cost of insulation. The large diameter and superior design of fan, with blast delivery along the least line of resistance, gives minimum friction, longest life and lowest power consumption. Oil reservoirs have ample capacity for three-months operation without refilling; oil cups are set solidly in casing and cannot be knocked off. Motor is accessible through hinged doors; equipped with Universal motors.

VARIABLE SPEED BLOWERS

Equipped with Speed Regulator, giving full control of the fire. Designed to operate with equal efficiency on either direct or alternating current, 25, 40 or 60-cycle, single phase, 110 or 220 Volts.

Nos.	2EV	2EHV	3EV
For Fires	1	1 or 2	2 or 3
Height over all, inches	15	15	15
Diameter of Outlet, ins.	3	3	4
Revolutions per minute.	2200	3000	3000
Weight, pounds	50	55	60
110 or 220-volt Circuit, Each	$40.00	56.00	72.00

NOTE.—When ordering state Voltage.

CONSTANT SPEED BLOWERS

Perfect control of the fire is obtained by the Blast Gate. Furnished for direct current, 110 or 220 Volts, and for alternating current, 60 cycles, single phase, 110 or 220 Volts.

Nos.	2EC	2EHC	3EC
For Fires	1	1 or 2	2 or 3
Height over all, inches	15	15	15
Diameter of Outlet, ins.	3	3	4
Revolutions, per min., A. C.	1700	3400	3000
Revolutions, per min., D. C.	1800	3000	3000
Weight, pounds	50	55	60
With A. C. Motor, 110 or 220 Volts, Each,	$40.00	60.00	80.00
With D. C. Motor, 110 or 220 Volts, Each,	$40.00	50.00	64.00

NOTE.—When ordering specify Voltage and if used for Direct or Alternating Current.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

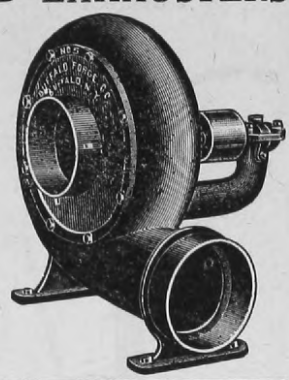
STEEL PRESSURE BLOWERS

Buffalo Steel Pressure Blowers

For supplying blasts to forge fires, cupolas, furnaces and any work where air is to be forced a long distance, as in pneumatic tube systems, etc. A distinctive feature of these blowers are the Oil Ring Bearings. The lower half of the bearing has an oil chamber into which a ring, hung over the fan shaft, dips. It is revolved by the rotation of the shaft, conveying the oil to the shaft, from which it is distributed full length of the bearing by means of specially designed oil grooves. By this method a positive feed is obtained and, as the oil supply is increased with the speed of the shaft, it is impossible for the latter to heat. The Journals are extra long and lined with the best babbitt metal. End play is prevented by an adjustable fibre plate at end of bearing. Oil reservoirs are exceptionally large, having capacity sufficient for a month's run. The solid peripheral shell, with side plates bolted on, cannot leak, and ready access to the interior can be had by removing one of the plates. **No. 7** has two pulleys, while all others have but one. All Discharges as per illustration. Special Discharges 10 per cent. extra.

Nos.	Height over all, Inches	Diameter of Outlet, Inches	Weight, Pounds	Size of Pulley, Inches		Without Countershaft Each	With Countershaft Each
				Diameter	Face		
1P	12½	3½	55	2¼	1¾	$12.00	$ 20.00
2P	15¼	4	75	2¾	2¼	18.00	28.00
3P	19¼	4¾	95	3	2⅝	26.00	38.00
4P	23½	5	135	4	3	36.00	52.00
5P	25¾	5⅜	180	4¼	3	44.00	64.00
6P	29¾	6¼	265	4½	3½	55.00	80.00
7P	33¼	7¼	308	5	4½	70.00	105.00

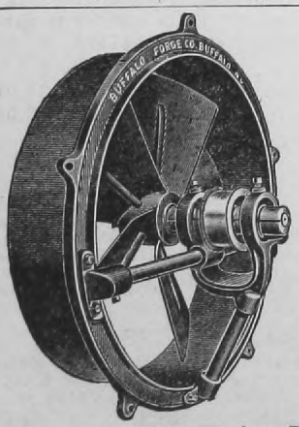
BLOWERS AND EXHAUSTERS



Buffalo "B" Volume Blowers and Exhausters

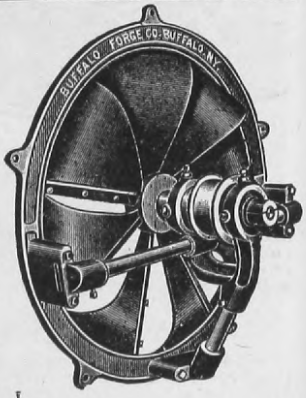
The oil ring bearings used in these blowers have been developed through years of experience and have given perfect satisfaction. They are thoroughly dustproof, self-oiling and of ample proportions to keep wear and heating at minimum, and enable these blowers to run without attention for weeks. The solid peripheral shell prevents all possibility of leakage and insures permanent alignment of the bearings. These Blowers are regularly furnished with bottom horizontal discharge, and pulley on the right side when facing outlet as shown in cut. Same Discharge, but with pulley on left, also furnished at same price when so ordered. Special Discharges 10 per cent extra.

Nos.	Height over all, Inches	Diameter of Outlet, Inches	Weight, Pounds	Size of Pulley, Inches		Without Countershaft, Each	With Countershaft, Each
				Diameter	Face		
000	14¾	5⅛	47	2¾	2¼	$15.00	$ 25.00
1	15⅞	4⅞	55	3	2½	20.00	32.00
2	20½	6 1/16	95	3¼	2⅝	25.00	41.00
3	25	7⅝	155	4	3¼	33.00	53.00
4	28	9	190	5	4	44.00	69.00
5	31⅝	10⅝	265	5¾	4½	55.00	85.00
6	37⅛	11	365	6½	5½	70.00	110.00
7	42⅝	14	550	7½	6½	90.00	140.00



DISC WHEELS AND PROPELLER FANS

To obtain the best results, Disc Wheels or Propeller Fans, as the case may be, should be placed in the wall, window or door close to the ceiling without any open space around it, and run from left to right so it will exhaust from the room. Cool fresh air should be allowed to enter from the opposite end of room in order to create a constant movement. Both bearings are on the inside, thus avoiding the necessity of going outside to oil up. They will run continuously at high speed without any attention but an occasional oiling.



1910 Design Buffalo Disc Wheels

For exhausting hot air, smoke, fumes and odors from stores, shops, foundries, laundries, etc.

Diam. of Wheel Inches	Normal Speed	Cubic Feet of Air per Minute	Horse Power	Size of Pulley Inches	Weight Pounds	Price Each
18	1000	2200	.25	2 x4	75	$ 40.00
24	800	4000	.50	2 x4	100	50.00
30	650	6200	.75	2¾x6	170	65.00
36	525	8800	1.00	3 x7	230	85.00
42	450	12000	1.50	3⅛x8	325	110.00
48	400	18000	2.00	4 x9	445	125.00

1910 Design Buffalo Propeller Fans

These Fans will move a greater amount of air, size for size, than any other type of ventilating fan.

Diam. of Wheel Inches	Normal Speed	Cubic Feet of Air per Minute	Horse Power	Size of Pulley Inches	Weight Pounds	Price Each
18	900	3200	.8	2 x4	75	$ 40.00
24	800	6300	1.4	2 x4	100	50.00
30	650	10000	1.8	2⅜x6	175	65.00
36	525	14000	2.4	3 x7	240	85.00
42	450	19300	3.2	3½x8	325	110.00
48	400	25200	4.0	4 x9	450	125.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLACKSMITHS' PORTABLE FORGES

BUFFALO

No. 150.

No. 999.

No. 150 Buffalo Agricultural Forge

Designed for the lighter class of outdoor work, such as rivet heating, light repairing and for farmers' general use. It is of rigid construction and will not rust out; the gearing action is practically noiseless and there is nothing to get out of order or require adjusting or repairing.

No. 150—With Dash. Diameter of Hearth, 18 inches; Diameter of Fan, 8 inches; Weight, 70 pounds.....Each, $14.00

No. 151—With Half Hood, otherwise as No. 150.....Each, 16.00

No. 999 Buffalo Agricultural Forge

Strongly built, not a weak spot in the entire construction. Blast is strong, insuring a good fire, and the spacious hood effectively gathers all smoke and gases up the chimney. The Hearth is large and roomy so that tools can be laid on same without interfering with the work. Has no complicated parts and nothing to break, rust or wear out. Fitted with large, strong Water Tank.

No. 999—With Half Hood and Water Tank. Hearth, 25x36 inches; Diameter of Fan, 12½ inches; Weight, 190 pounds..... Each $22.00

No. 351.

No. 351 Buffalo Agricultural Forge

Can be used on all light and medium outdoor work, especially adapted for rivet heating, etc. This is a good substantial forge, with a spacious hearth and extra powerful blower. Strongly braced.

No. 351—With Half Hood. Diameter of Hearth, 22 inches; Diameter of Fan, 9 inches; Weight, 85 pounds..... Each, $27.00

No. 131.

No. 131 Buffalo Cast Iron Forge

A good Forge for toolmakers, jewelers, repairing, tempering, etc., built of heavy Cast Iron, with legs rigidly braced. Hood is of heavy sheet iron. Equipped with an extra powerful blower the crank of which can be turned in either direction to produce an equally strong blast.

No. 131—With Half Hood. Diameter of Hearth, 22 inches; Diameter of Fan, 12 inches; Weight, 135 pounds..... Each $30.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

No. 625 and 625A.

BLACKSMITHS' PORTABLE FORGES

BUFFALO

No. 625 Buffalo Rivet Forges

For railroads, shipbuilders, boiler makers, machine shops, bridge builders and structural iron workers. Equipped with Buffalo 200 Silent Blower. Fire Pan is of heavy rolled Steel Plate, strongly riveted. Particularly adapted for heating rivets and other small work. Wind Shield and Blower can be detached and packed in fire pan for transportation.

No. 625—With Dash. Diameter of Hearth, 18 inches; Diameter of Fan, 12 inches; Weight, 110 pounds.....Each, $35.00

No. 625A—With Dash. Diameter of Hearth, 22 inches; Diameter of Fan, 12 inches; weight, 120 pounds... ...Each, 38.00

No. 650.

No. 650 Buffalo Blacksmiths' Forges

An ideal Forge for all-around blacksmithing and horseshoeing; has sufficient capacity for heavy work, and at the same time affords easy regulation for a smaller fire. Equipped with Buffalo 200 Silent Blower and Heavy Duty Vulcan Tuyere Iron and Self-Closing Ash Gate.

No. 650—With Half Hood and Water Tank. Hearth, 28x40 inches; Diameter of Fan, 14 inches; Weight, 310 pounds. .....Each, $54.00

No. 604E.

No. 604E Buffalo Steel Plate Electric Forges

A large spacious Forge, with capacity for the heaviest work. Constructed of Steel, with heavy angle iron legs, rigidly braced. Welds 3½ inch iron. Equipped with Variable or Constant Speed Electric Blower and Heavy Duty Vulcan Tuyere Iron.

No. 604E—With Half Hood and Water Tank. Hearth, 30x36 inches; Weight, 235 pounds.

Variable Speed, **110** or **220** Volts.....Each, $63.00
Constant Speed, **Alternating** Current, **110** or **220** Volts...Each, 63.00
Constant Speed, **Direct** Current, **110** or **222** Volts.....Each, 63.00

Without Water Tank, deduct $3.00.

Note.—In ordering specify if Electric Blower is to be furnished with **Variable** Speed or **Constant** Speed Motor, with **Alternating** or **Direct** Current; also state **Voltage.**

No. 660E, Style of Nos. 665E, 666E and 680E.

Buffalo Electric Down Draft Forges

Strongly built of the highest grade material and provided with patented "Down Draft" Hood with Cinder Catcher, which prevents smoke and gases from escaping into the shop, and returns a large portion of the smoke and unburnt gas to the fire, thus economizing on fuel and making a more intense heat. Have extra large and heavy Tuyere Iron and Automatic Ash Gate.

Takes Iron up to 12 inches long in one heat and is easily adjusted to the smallest fire. **Equipped** with Variable or Constant Speed Electric Blowers, shown on page 199; also Tool Rests.

No. 660E has a One Piece Cast Iron Pan and Tubular Steel Legs. **No. 666E** is of All Steel construction, tough and unbreakable. **No. 680E** is made entirely of Cast Iron, except legs, extra heavy and rigid and intended for extreme service.

Nos.	Hearth, Inches	Weight, Pounds	With Variable Speed Blower, 110 or 220 Volts, Each	With Constant Speed Blower 110 or 220 Volts,	
				A. C.	D. C.
660E	28x40	620	$83.00	87.00	77.00
665E	31x44	695	98.00	102.00	92.00
666E	30x36	470	93.00	97.00	87.00
680E	38x42	775	113.00	117.00	107.00

Without Water Tank, deduct $3.00.

Note.—In ordering specify if Electric Blower is to be furnished with **Variable** Speed or **Constant** Speed Motor and **Alternating** or **Direct** Current; also state **Voltage.**

UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BLACKSMITHS' TONGS

Nos. 1 to 5.

Straight Lip, Drop Forged, Solid Steel, Oil Finished.

Nos	1	2	3	4	5
Length, Inches	18	20	22	24	26
Weight Per Pair, Pounds	2	2½	3	3½	3⅞
Per Pair	$.....	.....	.....	.....	.....

BLACKSMITHS' LATHE TONGS

Nos. 6 to 12.

For holding Bolts and Round Iron, Drop Forged, Solid Steel, Oil Finished.

Nos	6	8	10	12
For Round Iron, Inches	⅜	½	⅝	¾
Length, Inches	20	20	22	22
Weight Per Pair, Pounds	2¼	2¼	3¼	3¼
Per Pair	$.....	.....	.....	.....

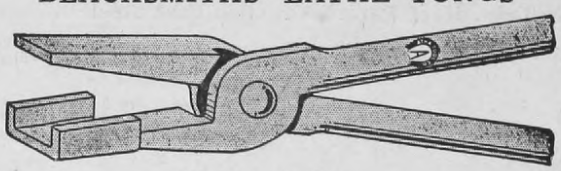
BLACKSMITHS' PICK-UP TONGS

No. 220.

Used for Picking Up Hot Irons.

No.	220
Length, Inches	22
Weight Per Pair, Pounds	2½
Per Pair	$.....

BLACKSMITHS' LATHE TONGS

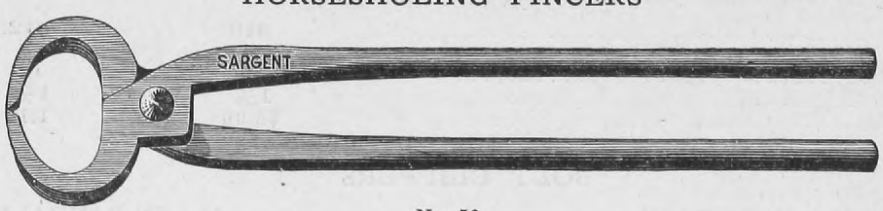


Nos. 16 to 24.

For Holding Bar Stock When Forging Lathe Tools.

Nos.	16	18	20	22	24
Length, Inches	16	18	20	22	24
Holding Stock, Ins.	¾ x ⅜	¾ x ⅜	1 x ½	1 x ½	1¼ x ⅝
Wt., Per Pair, Lbs.	2½	2¾	3	3⅛	3¼
Per Pair	$.....	.....	.....	.....	.....

HORSESHOEING PINCERS

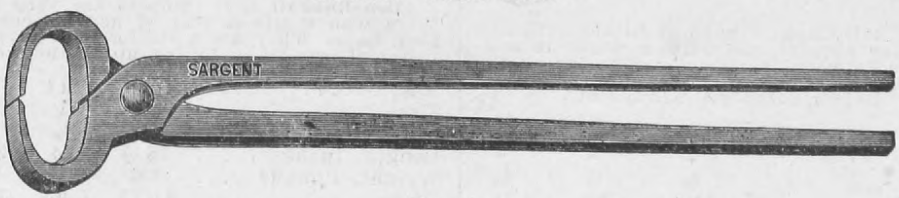


No. 52.

No. 52—Wrought Iron, Steel Face, Warranted	Inches	10	12	14
	Per Dozen	$15.00	17.00	19.00

Packed—One-third Dozen in a Box.

HOOF NIPPERS



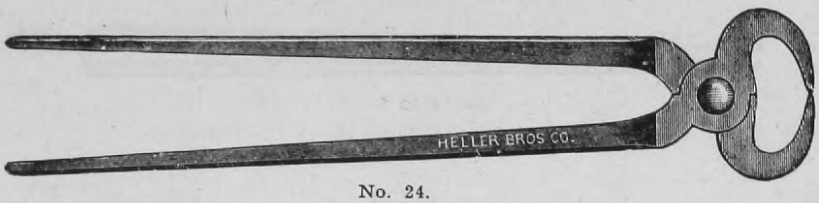
No. 32.

No. 32—Solid Cast Steel, Hammered, Polished Jaws, Warranted	Inches	12	14
	Per Dozen	$24.00	26.00

Packed—One-third Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOOF NIPPERS

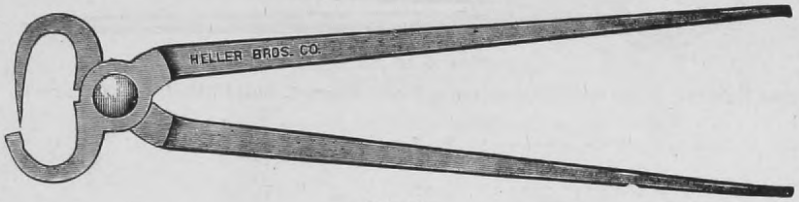


No. 24.

Heller Bros. Hoof Nippers, Crucible Cast Steel.....	**Nos**.....	**24A**	**24**
	Size, Inches.....	12	14
	Per Dozen	$24.00	28.80

Packed—Half Dozen in a Box.

HOOF PARERS

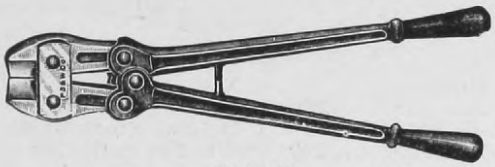


No. 23.

Heller Bros. Hoof Parers, Crucible Cast Steel.....	**Nos**.....	**23A**	**23**
	Size, Inches.....	12	14
	Per Dozen.....	$24.00	28.80

Packed—Half Dozen in a Box.

BOLT CLIPPERS AND WIRE CUTTERS



"Pexto"

A high quality, moderately priced cutter designed especially for the Sheet Metal Worker to take care of the large variety of work which comes into the shop.

Has compound lever, with polished forged steel head and black handles, and will outlast many pairs of cutting nippers on heavy cutting for which these Bolt and Wire Cutters are intended.

Nos.	**310**	**312**	**315**
Cuts, Bolts or Wire, Inches.....	⅛	3/16	¼
Length, Inches.....	10	12	15
Weight, Pounds	1½	1¾	2½
Each	$0.90	1.10	1.66

BOLT CLIPPERS

PORTER'S NEW EASY

Porter's New Easy Bolt Clippers have great strength and simple adjustments for keeping the cutting edges in contact. Rubber Buffers between the handles save jar on the hands and wrists. All parts made of the best material and by skilled workmen. Repair parts will always fit.

Nos.	**0**	**1**	**2**	**3**
Size	0	1	2	3
Cuts, Bolts, Inches.....	5/16	⅜	½	⅝
Length, Inches	18	24½	30	36
Weight, Pounds	3	5¾	9	13
Each	$3.75	5.00	7.00	9.00
Extra Jaws, Right Hand.	$0.68	.83	1.18	1.50
Extra Jaws, Left Hand...	.68	.83	1.18	1.50

ALLEN-RANDALL

Allen-Randall Bolt Clippers are very popular with many users who desire a tool of heavier construction than the New Easy. They are a strong tool, having a set screw adjustment capable of taking up all the wear of the knives.

Nos.	**10**	**11**	**12**	**13**	**14**
Size	0	1	2	3	4
Cuts, Bolts, Inches..	5/16	⅜	½	⅝	¾
Length, Inches	18½	24	30¼	36	42
Weight, Pounds	3⅓	5⅓	9⅙	13	18½
Each	$3.75	5.00	7.00	9.00	12.00
Extra Jaws, Right Hand	.50	.65	.85	1.15	1.80
Extra Jaws, Left Hand	.50	.65	.85	1.15	1.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WELDING COMPOUNDS

Climax Welding Compound, for welding Iron and Steel. A much less quantity of this compound is needed than of Borax.

In 5 Pound Boxes .....Per Pound, $.....
In 10 Pound Boxes .....Per Pound, ...
In ½ Barrels of 300 Pounds....Per Pound, ...
In Full Barrels of 600 Pounds...Per Pound, ...

Cherry Heat Welding Compound, the best flux known for welding Iron to Iron, Steel to Steel and Malleable Iron to Steel.

In 5 Pound Boxes .....Per Pound, $.....
In 10 Pound Boxes .....Per Pound, ...

WELDING COMPOUND

E-Z Welding Compound will weld all grades of Steel and make a stronger and smoother weld at 250 degrees lower heat than any other compound.

In 5 Lb. Boxes.Per Pound, $.....
In 10 Lb. Boxes.Per Pound, ...

WELDING PLATES

Laffitte Welding Plates a chemical compound made in the form of a plate, for all kinds of Steel, Malleable Iron and Steel Castings at a low heat. Size of Plate, 4x8 inches.

Light ....Per 100 Plates, $.....
Heavy ...Per 100 Plates, ...
Packed—10 Plates in a Box.

SOLDERING PASTE

Burnley's Soldering Paste is a combination of pure chemicals, designed to supply a first-rate soldering flux. Thick like Vaseline, no liquid to spill.

In 4 Oz. Cans.Per Doz. Cans, $.....
In 8 Oz. Cans.Per Doz. Cans, ...
Packed—4 ounce Cans, 3 Doz. in a Box; 8 ounce Cans, In Open Stock.

BRAZING COMPOUND

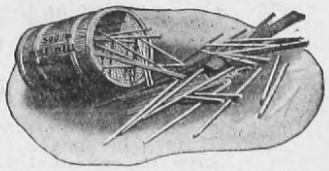
Anti-Borax Brazing Compound is guaranteed to be more efficient than Borax or any mixture of Borax; therefore, a much smaller quantity will do the work.

In 1 Pound Boxes.....Per Pound, $.....
In 5 Pound Boxes.....Per Pound, ...

BORAX

Powdered .....Per Pound, $.....
Packed—About 350 Pounds in a Barrel.

CAST WELDING RODS



Our Welding Rods are standard for all welders and are recognized in quality, texture and fusibility. They are 18 inches in length and are used for repairing broken irons, brass, aluminum or malleable castings in connection with welding equipment.

Diameter, Inches	¼	5/16		3/8
Cast Iron Welding Rods, 18 Inches Long, ...Per 100 lbs.,	$10.00	8.50		7.50
Pounds of a Size	100 lbs.	50 lbs.	25 lbs.	Less
Aluminum Welding Rods, ¼, 5/16, 3/8x18 inches .....Per Pound,	$1.70	1.72	1.74	1.78
Tobin Bronze or Manganese Welding Rods, ¼, 5/16, 3/8x18 inches; Per Pound,	$0.70	.72	.74	.78

Packed—100 Pounds in a Keg.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"KEYSTONE" RATCHET DRILLS

The **"Keystone" Ratchet** Drill is made entirely of Steel, hardened all over and will outwear two of the soft kind. Has a short head with full length feed. Wearing parts are hardened and durable. Has no small screws.

REVERSIBLE SQUARE SLEEVE RATCHET

Nos. 1 to 4—"Keystone" Ratchet for Square Shank Drills. Furnished with Nos. 1 and 2 Sockets; No. 1 Standard Square Taper Socket is ⅝x⅜ by 1½ inches long. No. 2 Standard Square Taper Socket is ¾x½ by 1¾ inches long.

Nos. 1 to 4.

SQUARE SHANK SLEEVE

No. 1 Sleeve fits No. 21 Ratchet .....Each, $1.00
No. 2 Sleeve fits Nos. 22 and 23 Ratchets. Each, 1.25
No. 4 Sleeve fits Nos. 24, 25, 26 and 27 Ratchets .....Each, 1.50

REVERSIBLE MORSE TAPER RATCHET

Nos. 21 to 24—"Keystone" Ratchet for Morse Taper Socket Drills. By inserting a Square Shank Drill Sleeve this Ratchet can also be used with Square Shank Drills.

Nos. 21 to 24.

With Square Taper Socket. **With Morse Taper Socket.**

Nos.	Length Inches	Drill Socket Square Taper	Length of Head Inches	Feed Inches	Each	Nos.	Length Inches	Drill Socket Morse Taper	Takes Morse Taper Drill Inches	Length of Head Inches	Feed Inches	Each
1	10	No. 1	5⅝	2¼	$5.00	21	10	No. 2	39/64 to 29/32	6¼	2¼	$5.25
2	14	No. 1	7⅞	2½	5.75	22	14	No. 3	59/64 to 1¼	8¼	2½	6.00
3	16	No. 1	7⅞	3	6.50	23	16	No. 3	59/64 to 1¼	8¼	3	6.75
4	18	No. 2	8¾	3½	7.25	24	18	No. 4	1 17/64 to 2	8¾	3½	7.50

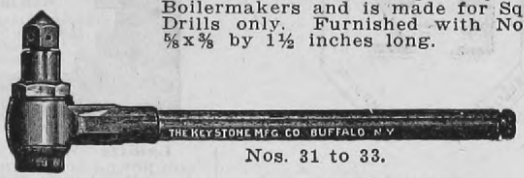
"KEYSTONE" WESTON RATCHET

The "Keystone" Weston is an exceptionally strong Ratchet and is adapted for Square Shank Drills only. Furnished with Nos. 1 and 2 Sockets; No. 1 Standard Square Taper Socket is ⅝x⅜ by 1½ inches long, No. 2 Standard Square Taper Socket is ¾x½ by 1¾ inches long.

Nos. A12 to A16.

"KEYSTONE" REVERSIBLE BOILER RATCHET

The "Keystone" Reversible Boiler Ratchet with short feed is especially adapted for Boilermakers and is made for Square Shank Drills only. Furnished with No. 1 Socket, ⅝x⅜ by 1½ inches long.

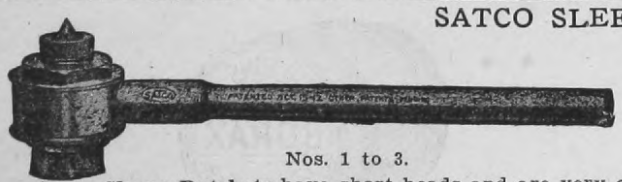


Nos. 31 to 33.

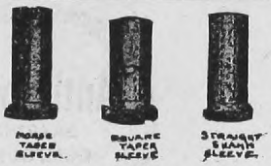
With Square Taper Socket. **With Square Taper Socket.**

Nos.	Length Inches	Drill Socket Square Taper	Length of Head Inches	Feed Inches	Each	Nos.	Length Inches	Drill Socket Square Taper	Length of Head Inches	Feed Inches	Each
A12	12	No. 1	7⅛	2¼	$7.60	31	10	No. 1	3⅝	1	$5.00
A14	14	No. 1	8⅛	3	8.00	32	14	No. 1	4⅜	1½	5.75
A16	16	No. 2	8⅝	3	8.75	33	16	No. 1	4⅝	1½	6.50

SATCO SLEEVE RATCHETS

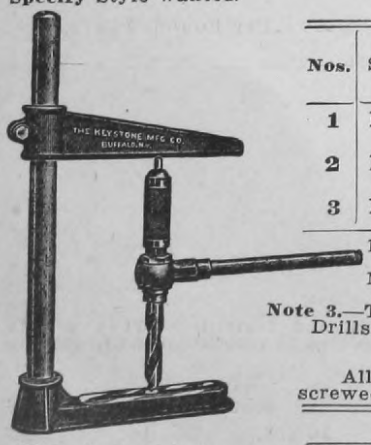


Nos. 1 to 3.



Satco Sleeve Ratchets have short heads and are very compact, enabling operator to work in very close quarters. Interchangeable sleeves enable user to use any style of drill shanks—Morse taper, square shank, round straight shank and flat twisted drills; also sleeve wrench for square and hexagon nuts. Reversible from end of handle by a patented invisible device.

Equipment. Each Ratchet shipped complete with one sleeve only, Morse Taper, Square Taper, or Straight Shank.—**Specify** Style wanted.



Nos. 0, 1 and 2 Drilling Posts.

Satco Sleeve Ratchets.

Nos.	Sockets	Lgth. In.	Lgth. Head In.	Feed In.	Wt. Lbs.	Price Each
1	Note 1	9½	2	1½	1½	$8.00
2	Note 2	12	2½	2¼	3½	12.00
3	Note 3	20	3	2¾	5	18.00

Extra Sleeves.

For Ratchet	No. 1	No. 2	No. 3
No. 1 or 2 Morse Taper, Each,	$1.75	$1.75	$1.75
No. 3 Morse Taper, Each,	....	....	2.00
No. 1 or 2 Square Taper Each,	....	1.75	1.75

Special—Sleeves for straight shank drills and square and hexagon nuts are SPECIAL —Prices on application.

Note 1.—Takes No. 1 Morse Taper; No. 1 Taper Square Shank; and Straight Shank Drills up to ½ inch inclusive.
Note 2.—Takes No. 1 and 2 Morse Taper; No. 1 and 2 Taper Square Shank; and Straight Shank Drills up to ⅝ inch inclusive.
Note 3.—Takes No. 1, 2 and 3 Morse Taper; No. 1 and 2 Taper Square Shank; and Straight Shank Drills up to ¾ inch inclusive.

OLD MAN OR DRILLING POSTS

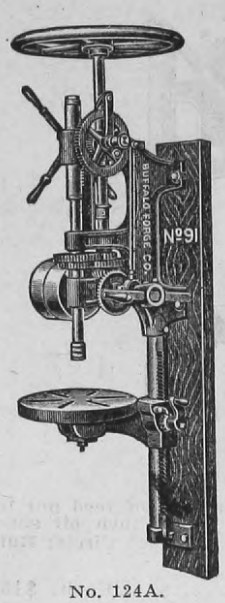
All Steel, for use with Ratchet Drills. Foot and Arm are drop forged. Post is finished and screwed into foot, but can be easily removed for packing in tool kit.

Nos.	Height Inches	Radius of Arm, Inches	Weight, Pounds	Each
0	16	8	9	$6.00
1	20	10	16	8.00
2	26	12	30	10.00

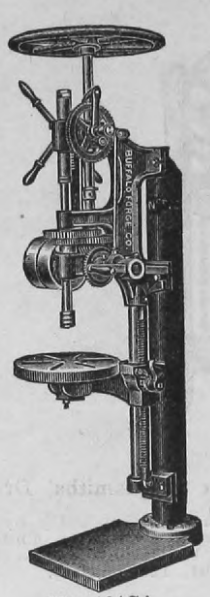
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLACKSMITHS' DRILLS

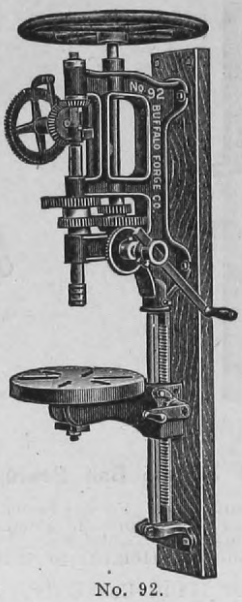
BUFFALO BALL BEARING



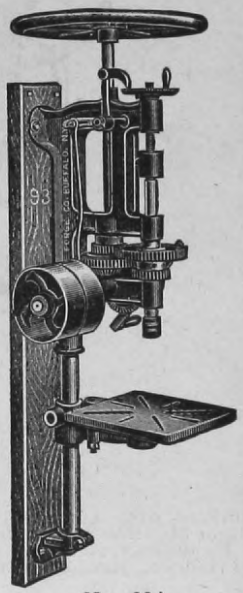
No. 124A.



No. 124CA.



No. 92.

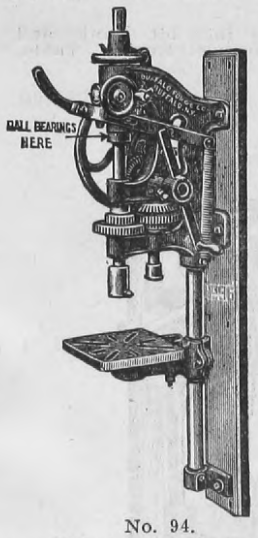


No. 93A.

No. 124 Buffalo Ball Bearing Upright Blacksmiths' Drills

This represents the most advanced type of Post Drill and is adapted to the heaviest class of work. It is equipped with Two Speeds, instantly changed by shifting collar up and down, and has four adjustments for Automatic Feed. The Hand Lever Feed works independent of the Automatic Feed and is invaluable when used for light drilling, countersinking and wood drilling. Fitted with Sure Grip Chuck bored for ½ inch bit shanks, Wheel Holding Attachment and Crank Raising and Lowering Table Device. Capacity, 1½ inch Hole to Center of 24 inch Circle, Run of Feed, 7½ inches, Run of Table, 20 inches. Height, 72 inches.

No. 124 —For Hand Use Only. Weight, 370 pounds.....Each, $47.00
No. 124A—For Hand and Power, with 8x3 inch Tight and Loose Pulleys. Weight, 390 pounds.....Each, 51.00



No. 94.

No. 124C Buffalo Ball Bearing Upright Blacksmiths' Drills

This Drill is the same as the No. 91, except that it is mounted on a Pedestal Stand. Recommended for garage, machine shop, factories, wagon makers' use, and wherever a floor drill is preferred.

No. 124C —For Hand Use Only. Weight, 610 pounds .....Each, $62.00
No. 124CA—For Hand and Power, with 8x3 inch Tight and Loose Pulleys. Wt., 630 pounds .....Each, 66.00

No. 92 Buffalo Ball Bearing Upright Blacksmiths' Drills

This is a popular wagon makers' Post Drill of large capacity. It is equipped with automatic and Side Wheel Hand Feed; can be operated at Two Speeds and has three adjustments on Automatic Feed. Fitted with Sure Grip Chuck bored for ½ inch bit shanks, Wheel Holding Attachment and Crank Raising and Lowering Table Device. Capacity, 1½ inch Hole to Center of 22 inch Circle; Run of Feed, 6¼ inches; Run of Table, 21 inches; Height, 66 inches.

No. 92 —For Hand Use Only. Weight, 385 pounds .....Each, $40.00
No. 92A—For Hand and Power, with 8 inch Tight and Loose Pulleys. Weight, 405 pounds .....Each, 44.00

No. 93 Buffalo Ball Bearing Upright Blacksmiths' Drills

This is a large capacity Post Drill with Machine Cut Gears. Equipped with Hand and Automatic Feed. Speed can be changed instantly by shifting gears up or down. Has three adjustments on Automatic Feed. Fitted with Sure Grip Chuck bored for ½ inch bit shanks, Wheel Holding Attachment and Crank Raising and Lowering Table Device. Capacity, 1½ inch Hole to Center of 22 inch Circle; Run of Feed, 6¼ inches; Run of Table, 21 inches; Height, 66 inches.

No. 93 —For Hand Use Only. Weight, 375 pounds.....Each, $36.00
No. 93A—For Hand and Power, with 8 inch Tight and Loose Pulleys. Weight, 395 pounds.....Each, 40.00

No. 94 Buffalo Ball Bearing Upright Blacksmiths' Drills

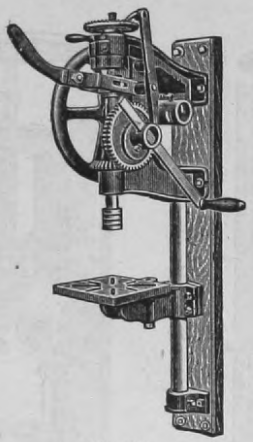
A simple design Post Drill with Machine Cut Gears. Equipped with Automatic and Hand Lever Feed. Speed can be instantly changed by shifting collar up or down. Has three adjustments on Automatic Feed. Fitted with Sure Grip Chuck bored for ½ inch bit shanks, Wheel Holding Attachment and Adjustable Table Rack. Capacity, 1½ inch Hole to Center of 21 inch Circle; Run of Feed, 4½ inches; Run of Table, 21 inches; Height, 62 inches.

No. 94 —For Hand Use Only. Weight, 260 pounds.....Each, $40.00
No. 94A—For Hand and Power, with 8 inch Tight and Loose Pulleys. Weight, 280 pounds.....Each, 44.00

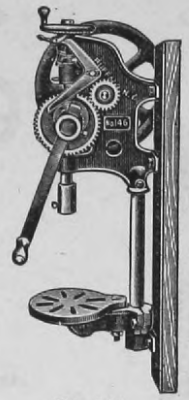
Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

BLACKSMITHS' DRILLS

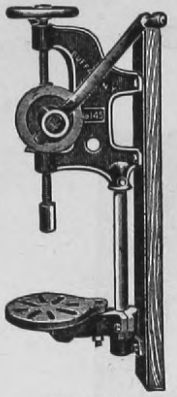
BUFFALO BALL BEARING



No. 99.



No. 146.



No. 145.

No. 99 Buffalo Ball Bearing Upright Blacksmiths' Drills

Equipped with Automatic and Hand Lever Feed, Speed can be changed instantly by a quarter turn of feed nut lever on drill head. Has three adjustments on Automatic Feed. Fitted with Sure Grip Chuck bored for ½ inch bit shanks, Wheel Holding Attachment and Adjustable Table Rack. Capacity, 1¼ inch Hole to Center of 15½ inch Circle; Run of Feed, 3 inches; Run of Table, 12 inches; Height, 40 inches; Weight, 125 pounds.

No. 99 ..... { For Hand Use Only.....Each, $18.00
{ For Hand and Power, with 6 inch Tight and Loose Pulleys.....Each, 21.00

No. 146 Buffalo Ball Bearing Upright Blacksmiths' Drills

A small light Drill with Hand and Automatic Feed, the latter adjustable to three speeds. Fitted with Buffalo Improved Chuck bored for ½ inch bit shanks and Adjustable Table Rack. Capacity, ¾ inch Hole to Center of 12 inch Circle; Run of Feed, 3 inches; Run of Table, 9 inches; Height, 33 inches; Weight, 63 pounds.

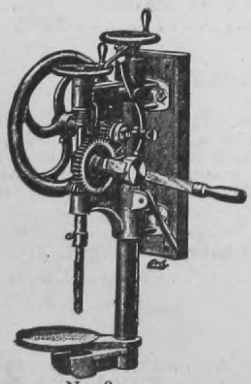
No. 146—Buffalo Small Portable Ball Bearing Drills.....Each, $7.00

No. 145 Buffalo Ball Bearing Upright Blacksmiths' Drills

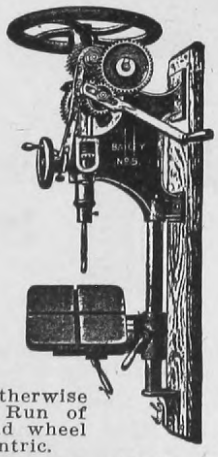
A simple light Drill with Hand Feed only. Fitted with Buffalo Improved Chuck bored for ½ inch bit shanks and Adjustable Table Rack. Capacity, ¾ inch Hole to Center of 12 inch Circle; Run of Feed, 3½ inches; Run of Table, 9 inches; Height, 33 inches; Weight, 58 pounds.

No. 145—Buffalo Small Portable Ball Bearing Drills.....Each, $6.00

BAILEY UPRIGHT BLACKSMITHS' DRILLS



No. 2.



No. 5.

The spindle of this Drill is made to receive ½ inch straight shank drill bits, unless otherwise ordered, and will drill from 0 to ¾ inch hole, and to the center of a 10 inch circle. Run of screw, 3 inches. Has fast and slow feed. Self feed may be used or not. By turning hand wheel at top of drill, the table may be raised or lowered. It is firmly held in place by an eccentric.

No. 2—Bailey Upright Drills, Weight 125 pounds.....Each $16.00

The spindle of the Drill is made to receive 41/64 inch straight shank drill bits, unless otherwise ordered, and will drill from 0 to 1½ inches, and to the center of a 16 inch circle. Run of screw, 4 inches. The table may be fastened at any point on the column, and can be adjusted to any desired angle. The work can be clamped to the table the same as on power Drills. Fast or slow speed may be obtained by sliding the large spur gear backward or forward. The spindle runs in a sleeve bearing 9 inches long, which gives it great steadiness and prevents the spindle from being worn or loose. The spindle is fed up or down by a worm working in a rack upon the spindle sleeve, and is easily operated by the feed wheel.

No. 5—Bailey Upright Drills, Weight 230 pounds.....Each $36.00

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BLACKSMITHS' DRILL PRESS DRILLS

No. 112

Silver & Deming—Shanks ½x2¼ Inches—Carbon Steel.

Diameter Inches	Length Over all, Inches	Length of Twist, Inches	Each	Diameter Inches	Length Over all, Inches	Length of Twist, Inches	Each	Diameter Inches	Length Over all, Inches	Length of Twist, Inches	Each
1/16	3 5/8	1 1/16	$0.45	35/64	6	3	$1.10	1 1/32	6	3	$2.60
5/64	3 7/8	1 1/4	.45	9/16	6	3	1.10	1 3/64	6	3	2.70
3/32	4 1/4	1 5/8	.45	37/64	6	3	1.20	1 1/16	6	3	2.70
7/64	4 1/2	1 7/8	.45	19/32	6	3	1.20	1 5/64	6	3	2.80
1/8	4 7/8	2 3/16	.45	39/64	6	3	1.30	1 3/32	6	3	2.80
9/64	5	2 5/16	.45	5/8	6	3	1.30	1 7/64	6	3	2.90
5/32	5 1/8	2 7/16	.45	41/64	6	3	1.40	1 1/8	6	3	2.90
11/64	5 1/4	2 9/16	.50	21/32	6	3	1.40	1 9/64	6	3	3.00
3/16	5 1/2	2 13/16	.50	43/64	6	3	1.50	1 5/32	6	3	3.00
13/64	5 5/8	2 7/8	.55	11/16	6	3	1.50	1 11/64	6	3	3.10
7/32	5 7/8	3	.55	45/64	6	3	1.60	1 3/16	6	3	3.10
15/64	6	3	.60	23/32	6	3	1.60	1 13/64	6	3	3.20
1/4	6	3	.60	47/64	6	3	1.70	1 7/32	6	3	3.20
17/64	6	3	.65	3/4	6	3	1.70	1 15/64	6	3	3.30
9/32	6	3	.65	49/64	6	3	1.80	1 1/4	6	3	3.30
19/64	6	3	.70	25/32	6	3	1.80	1 17/64	6	3	3.45
5/16	6	3	.70	51/64	6	3	1.90	1 9/32	6	3	3.45
21/64	6	3	.75	13/16	6	3	1.90	1 19/64	6	3	3.60
11/32	6	3	.75	53/64	6	3	2.00	1 5/16	6	3	3.60
23/64	6	3	.80	27/32	6	3	2.00	1 21/64	6	3	3.75
3/8	6	3	.80	55/64	6	3	2.10	1 11/32	6	3	3.75
25/64	6	3	.85	7/8	6	3	2.10	1 23/64	6	3	3.90
13/32	6	3	.85	57/64	6	3	2.20	1 3/8	6	3	3.90
27/64	6	3	.90	29/32	6	3	2.20	1 25/64	6	3	4.05
7/16	6	3	.90	59/64	6	3	2.30	1 13/32	6	3	4.05
29/64	6	3	.95	15/16	6	3	2.30	1 27/64	6	3	4.20
15/32	6	3	.95	61/64	6	3	2.40	1 7/16	6	3	4.20
31/64	6	3	1.00	31/32	6	3	2.40	1 29/64	6	3	4.35
1/2	6	3	1.00	63/64	6	3	2.50	1 15/32	6	3	4.35
33/64	6	3	1.05	1	6	3	2.50	1 31/64	6	3	4.50
17/32	6	3	1.05	1 1/64	6	3	2.60	1 1/2	6	3	4.50

RATCHET DRILLS

No. 104A

Taper Square Shank Drills fitting Ratchet Shanks 5/8x3/8x1½ inches—Carbon Steel.

Diameter Inches	Length Over all, Inches	Length of Twist, Inches	Each	Diameter Inches	Length Over all, Inches	Length of Twist, Inches	Each
1/8	4 1/2	2 3/8	$0.90	27/32	7	4 3/4	$1.90
5/32	4 1/2	2 3/8	.95	7/8	7 1/2	5 1/4	2.05
3/16	4 1/2	2 3/8	.95	29/32	7 1/2	5 1/4	2.20
7/32	5	2 3/4	1.00	15/16	8	5 1/2	2.30
1/4	5	2 3/4	1.00	31/32	8	5 1/2	2.40
9/32	5	2 3/4	1.05	1	8 1/2	6 1/4	2.55
5/16	5	2 3/4	1.10	1 1/32	8 1/2	6 1/4	2.70
11/32	5	2 3/4	1.15	1 1/16	9	6 1/2	2.85
3/8	6	3 3/4	1.20	1 3/32	9	6 1/2	3.00
13/32	6 1/4	4	1.25	1 1/8	9	6 1/2	3.10
7/16	6 1/4	4	1.25	1 5/32	9	6 1/2	3.25
15/32	6 1/4	4	1.30	1 3/16	9	6 1/2	3.35
1/2	6 1/2	4 3/8	1.30	1 7/32	9	6 1/2	3.50
17/32	6 1/2	4 3/8	1.35	1 1/4	9	6 1/2	3.65
9/16	6 1/2	4 3/8	1.35	1 9/32	9	6 1/2	3.75
19/32	6 1/2	4 3/8	1.40	1 5/16	9	6 1/2	3.90
5/8	6 1/2	4 3/8	1.40	1 11/32	9	6 1/2	4.05
21/32	6 1/2	4 3/8	1.45	1 3/8	9	6 1/2	4.20
11/16	6 1/2	4 3/8	1.45	1 13/32	9	6 1/2	4.35
23/32	6 1/2	4 3/8	1.50	1 7/16	9	6 1/2	4.50
3/4	6 1/2	4 3/8	1.55	1 15/32	9	6 1/2	4.65
25/32	6 3/4	4 1/2	1.65	1 1/2	9	6 1/2	4.80
13/16	7	4 3/4	1.75				

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TAPER SHANK DRILLS

CARBON STEEL

No. 104.

"Carbon Steel" Taper Shank Drills

Diameter Inches	Decimal Equivalent	Length Over all, Inches	Length of Twist, Inches	Taper Shank No.	Each	Diameter Inches	Decimal Equivalent	Length Over all, Inches	Length of Twist Inches	Taper Shank No.	Each
1/8	.1250	5 1/8	2 1/8	1	$0.45	15/64	1.0781	11 1/2	7 3/8	3	$4.25
9/64	.1406	5 3/8	2 3/8	1	.45	1 3/32	1.0937	11 1/2	7 3/8	3	4.25
5/32	.1562	5 3/8	2 3/8	1	.45	1 7/64	1.1094	11 3/4	7 5/8	3	4.50
11/64	.1719	5 3/4	2 5/8	1	.50	1 1/8	1.1250	11 3/4	7 5/8	3	4.50
3/16	.1875	5 3/4	2 5/8	1	.50	1 9/64	1.1406	11 7/8	7 3/4	3	4.75
13/64	.2031	6	2 7/8	1	.55	1 5/32	1.1562	11 7/8	7 3/4	3	4.75
7/32	.2187	6	2 7/8	1	.55	1 11/64	1.1719	12	7 7/8	3	5.00
15/64	.2344	6 1/8	3	1	.60	1 3/16	1.1875	12	7 7/8	3	5.00
1/4	.2500	6 1/8	3	1	.60	1 13/64	1.2031	12 1/8	8	3	5.25
17/64	.2656	6 1/4	3 1/8	1	.65	1 7/32	1.2187	12 1/8	8	3	5.25
9/32	.2812	6 1/4	3 1/8	1	.65	1 15/64	1.2344	12 1/2	8 1/4	3	5.50
19/64	.2969	6 3/8	3 1/4	1	.70	1 1/4	1.2500	12 1/2	8 1/4	3	5.50
5/16	.3125	6 3/8	3 1/4	1	.70	1 17/64	1.2656	14 1/8	8 5/8	4	5.75
21/64	.3281	6 1/2	3 3/8	1	.75	1 9/32	1.2812	14 1/8	8 5/8	4	5.75
11/32	.3437	6 1/2	3 3/8	1	.75	1 19/64	1.2969	14 1/4	8 3/4	4	6.00
23/64	.3594	6 3/4	3 1/2	1	.80	1 5/16	1.3125	14 1/4	8 3/4	4	6.00
3/8	.3750	6 3/4	3 1/2	1	.80	1 21/64	1.3281	14 3/8	8 7/8	4	6.25
25/64	.3906	7	3 3/4	1	.90	1 11/32	1.3437	14 3/8	8 7/8	4	6.25
13/32	.4062	7	3 3/4	1	.90	1 23/64	1.3594	14 1/2	9	4	6.50
27/64	.4219	7 1/4	4	1	1.00	1 3/8	1.3750	14 1/2	9	4	6.50
7/16	.4375	7 1/4	4	1	1.00	1 25/64	1.3906	14 5/8	9 1/8	4	7.00
29/64	.4531	7 1/2	4 5/16	1	1.10	1 13/32	1.4062	14 5/8	9 1/8	4	7.00
15/32	.4687	7 1/2	4 5/16	1	1.10	1 27/64	1.4219	14 3/4	9 1/4	4	7.50
31/64	.4844	7 3/4	4 1/2	1	1.20	1 7/16	1.4375	14 3/4	9 1/4	4	7.50
1/2	.5000	7 3/4	4 1/2	1	1.20	1 29/64	1.4531	14 7/8	9 3/8	4	8.00
33/64	.5156	8	4 3/4	1	1.30	1 15/32	1.4687	14 7/8	9 3/8	4	8.00
17/32	.5312	8	4 3/4	1	1.30	1 31/64	1.4844	15	9 1/2	4	8.50
35/64	.5469	8 1/4	5	1	1.40	1 1/2	1.5000	15	9 1/2	4	8.50
9/16	.5625	8 1/4	5	1	1.40	1 33/64	1.5156	15 1/8	9 5/8	4	9.00
37/64	.5781	8 1/2	5	2	1.50	1 17/32	1.5312	15 1/8	9 5/8	4	9.00
19/32	.5937	8 1/2	5	2	1.50	1 35/64	1.5469	15 1/4	9 3/4	4	9.50
39/64	.6094	8 3/4	5 1/8	2	1.60	1 9/16	1.5625	15 1/4	9 3/4	4	9.50
5/8	.6250	8 3/4	5 1/8	2	1.60	1 37/64	1.5781	15 3/8	9 7/8	4	10.00
41/64	.6406	9	5 1/4	2	1.70	1 19/32	1.5937	15 3/8	9 7/8	4	10.00
21/32	.6562	9	5 1/4	2	1.70	1 39/64	1.6094	15 1/2	10	4	10.50
43/64	.6719	9 1/4	5 1/2	2	1.80	1 5/8	1.6250	15 1/2	10	4	10.50
11/16	.6875	9 1/4	5 1/2	2	1.80	1 41/64	1.6406	15 5/8	10 1/8	4	11.00
45/64	.7031	9 1/2	5 7/8	2	1.90	1 21/32	1.6562	15 5/8	10 1/8	4	11.00
23/32	.7187	9 1/2	5 7/8	2	1.90	1 43/64	1.6719	15 3/4	10 1/4	4	11.50
47/64	.7344	9 3/4	6 1/8	2	2.00	1 11/16	1.6875	15 3/4	10 1/4	4	11.50
3/4	.7500	9 3/4	6 1/8	2	2.00	1 45/64	1.7031	15 7/8	10 3/8	4	12.00
49/64	.7656	9 7/8	6 1/4	2	2.10	1 23/32	1.7187	15 7/8	10 3/8	4	12.00
25/32	.7812	9 7/8	6 1/4	2	2.10	1 47/64	1.7344	16	10 1/2	4	12.50
51/64	.7969	10	6 3/8	2	2.20	1 3/4	1.7500	16	10 1/2	4	12.50
13/16	.8125	10	6 3/8	2	2.20	1 49/64	1.7656	16 1/8	10 1/2	4	13.25
53/64	.8281	10 1/4	6 1/2	2	2.40	1 25/32	1.7812	16 1/8	10 1/2	4	13.25
27/32	.8437	10 1/4	6 1/2	2	2.40	1 51/64	1.7969	16 1/4	10 1/2	4	14.00
55/64	.8594	10 1/2	6 7/8	2	2.60	1 13/16	1.8125	16 1/4	10 1/2	4	14.00
7/8	.8750	10 1/2	6 7/8	2	2.60	1 53/64	1.8281	16 3/8	10 1/2	4	14.75
57/64	.8906	10 5/8	7	2	2.80	1 27/32	1.8437	16 3/8	10 1/2	4	14.75
29/32	.9062	10 5/8	7	2	2.80	1 55/64	1.8594	16 1/2	10 5/8	4	15.50
59/64	.9219	10 3/4	6 5/8	3	3.00	1 7/8	1.8750	16 1/2	10 5/8	4	15.50
15/16	.9375	10 3/4	6 5/8	3	3.00	1 57/64	1.8906	16 1/2	10 5/8	4	16.25
61/64	.9531	10 7/8	6 3/4	3	3.25	1 29/32	1.9062	16 1/2	10 5/8	4	16.25
31/32	.9687	10 7/8	6 3/4	3	3.25	1 59/64	1.9219	16 1/2	10 5/8	4	17.00
63/64	.9844	11	6 7/8	3	3.50	1 15/16	1.9375	16 1/2	10 5/8	4	17.00
1	1.0000	11	6 7/8	3	3.50	1 61/64	1.9531	16 1/2	10 5/8	4	17.75
1 1/64	1.0156	11 1/8	7	3	3.75	1 31/32	1.9687	16 1/2	10 5/8	4	17.75
1 1/32	1.0311	11 1/8	7	3	3.75	1 63/64	1.9844	16 1/2	10 5/8	4	18.50
1 3/64	1.0469	11 1/4	7 1/8	3	4.00	2	2.0000	16 1/2	10 5/8	4	18.50
1 1/16	1.0625	11 1/4	7 1/8	3	4.00	....	.....	....	....	..	....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TAPER SHANK DRILLS

HIGH SPEED STEEL

No. 500.

"High Speed" Steel Taper Shank Drills

Diameter Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Taper Shank No.	Each	Diameter Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Taper Shank No.	Each
1/8	.1250	5 1/8	2 1/8	1	$0.90	15/64	1.0781	11 1/2	7 3/8	3	$ 7.75
9/64	.1406	5 3/8	2 3/8	1	.90	1 3/32	1.0937	11 1/2	7 3/8	3	7.75
5/32	.1562	5 3/8	2 3/8	1	.90	17/64	1.1094	11 3/4	7 5/8	3	8.25
11/64	.1719	5 3/4	2 5/8	1	.90	1 1/8	1.1250	11 3/4	7 5/8	3	8.25
3/16	.1875	5 3/4	2 5/8	1	.90	19/64	1.1406	11 7/8	7 3/4	3	8.90
13/64	.2031	6	2 7/8	1	1.00	15/32	1.1562	11 7/8	7 3/4	3	8.90
7/32	.2187	6	2 7/8	1	1.00	1 11/64	1.1719	12	7 7/8	3	9.50
15/64	.2344	6 1/8	3	1	1.10	1 3/16	1.1875	12	7 7/8	3	9.50
1/4	.2500	6 1/8	3	1	1.10	1 13/64	1.2031	12 1/8	8	3	10.15
17/64	.2656	6 1/4	3 1/8	1	1.20	1 7/32	1.2187	12 1/8	8	3	10.15
9/32	.2812	6 1/4	3 1/8	1	1.20	1 15/64	1.2344	12 1/2	8 1/4	3	10.75
19/64	.2969	6 3/8	3 1/4	1	1.30	1 1/4	1.2500	12 1/2	8 1/4	3	10.75
5/16	.3125	6 3/8	3 1/4	1	1.30	1 17/64	1.2656	14 1/8	8 5/8	4	11.50
21/64	.3281	6 1/2	3 3/8	1	1.40	1 9/32	1.2812	14 1/8	8 5/8	4	11.50
11/32	.3437	6 1/2	3 3/8	1	1.40	1 19/64	1.2969	14 1/4	8 3/4	4	12.25
23/64	.3594	6 3/4	3 1/2	1	1.50	1 5/16	1.3125	14 1/4	8 3/4	4	12.25
3/8	.3750	6 3/4	3 1/2	1	1.50	1 21/64	1.3281	14 3/8	8 7/8	4	13.00
25/64	.3906	7	3 3/4	1	1.65	1 11/32	1.3437	14 3/8	8 7/8	4	13.00
13/32	.4062	7	3 3/4	1	1.65	1 23/64	1.3594	14 1/2	9	4	13.75
27/64	.4219	7 1/4	4	1	1.75	1 3/8	1.3750	14 1/2	9	4	13.75
7/16	.4375	7 1/4	4	1	1.75	1 25/64	1.3906	14 5/8	9 1/8	4	14.65
29/64	.4531	7 1/2	4 5/16	1	1.90	1 13/32	1.4062	14 5/8	9 1/8	4	14.65
15/32	.4687	7 1/2	4 5/16	1	1.90	1 27/64	1.4219	14 3/4	9 1/4	4	15.50
31/64	.4844	7 3/4	4 1/2	1	2.00	1 7/16	1.4375	14 3/4	9 1/4	4	15.50
1/2	.5000	7 3/4	4 1/2	1	2.00	1 29/64	1.4531	14 7/8	9 3/8	4	16.40
33/64	.5156	8	4 3/4	1	2.15	1 15/32	1.4687	14 7/8	9 3/8	4	16.40
17/32	.5312	8	4 3/4	1	2.15	1 31/64	1.4844	15	9 1/2	4	17.25
35/64	.5469	8 1/4	5	1	2.25	1 1/2	1.5000	15	9 1/2	4	17.25
9/16	.5625	8 1/4	5	1	2.25	1 33/64	1.5156	15 1/8	9 5/8	4	18.15
37/64	.5781	8 1/2	5	2	2.40	1 17/32	1.5312	15 1/8	9 5/8	4	18.15
19/32	.5937	8 1/2	5	2	2.40	1 35/64	1.5469	15 1/4	9 3/4	4	19.00
39/64	.6094	8 3/4	5 1/8	2	2.50	1 9/16	1.5625	15 1/4	9 3/4	4	19.00
5/8	.6250	8 3/4	5 1/8	2	2.50	1 37/64	1.5781	15 3/8	9 7/8	4	20.00
41/64	.6406	9	5 1/4	2	2.75	1 19/32	1.5937	15 3/8	9 7/8	4	20.00
21/32	.6562	9	5 1/4	2	2.75	1 39/64	1.6094	15 1/2	10	4	21.00
43/64	.6719	9 1/4	5 1/2	2	3.00	1 5/8	1.6250	15 1/2	10	4	21.00
11/16	.6875	9 1/4	5 1/2	2	3.00	1 41/64	1.6406	15 5/8	10 1/8	4	22.00
45/64	.7031	9 1/2	5 7/8	2	3.25	1 21/32	1.6562	15 5/8	10 1/8	4	22.00
23/32	.7187	9 1/2	5 7/8	2	3.25	1 43/64	1.6719	15 3/4	10 1/4	4	23.00
47/64	.7344	9 3/4	6 1/8	2	3.50	1 11/16	1.6875	15 3/4	10 1/4	4	23.00
3/4	.7500	9 3/4	6 1/8	2	3.50	1 45/64	1.7031	15 7/8	10 3/8	4	24.00
49/64	.7656	9 7/8	6 1/4	2	3.75	1 23/32	1.7187	15 7/8	10 3/8	4	24.00
25/32	.7812	9 7/8	6 1/4	2	3.75	1 47/64	1.7344	16	10 1/2	4	25.00
51/64	.7969	10	6 3/8	2	4.00	1 3/4	1.7500	16	10 1/2	4	25 00
13/16	.8125	10	6 3/8	2	4.00	1 49/64	1.7656	16 1/8	10 1/2	4	26.25
53/64	.8281	10 1/4	6 1/2	2	4.40	1 25/32	1.7812	16 1/8	10 1/2	4	26.25
27/32	.8437	10 1/4	6 1/2	2	4.40	1 51/64	1.7969	16 1/4	10 1/2	4	27.50
55/64	.8594	10 1/2	6 7/8	2	4.75	1 13/16	1.8125	16 1/4	10 1/2	4	27.50
7/8	.8750	10 1/2	6 7/8	2	4.75	1 53/64	1.8281	16 3/8	10 1/2	4	28.75
57/64	.8906	10 5/8	7	2	5.15	1 27/32	1.8437	16 3/8	10 1/2	4	28.75
29/32	.9062	10 5/8	7	2	5.15	1 55/64	1.8594	16 1/2	10 5/8	4	30.00
59/64	.9219	10 3/4	6 5/8	3	5.50	1 7/8	1.8750	16 1/2	10 5/8	4	30.00
15/16	.9375	10 3/4	6 5/8	3	5.50	1 57/64	1.8906	16 1/2	10 5/8	4	31.25
61/64	.9531	10 7/8	6 3/4	3	5.90	1 29/32	1.9062	16 1/2	10 5/8	4	31.25
31/32	.9687	10 7/8	6 3/4	3	5.90	1 59/64	1.9219	16 1/2	10 5/8	4	32.50
63/64	.9844	11	6 7/8	3	6.25	1 15/16	1.9375	16 1/2	10 5/8	4	32.50
1	1.0000	11	6 7/8	3	6.25	1 61/64	1.9531	16 1/2	10 5/8	4	33.75
1 1/64	1.0156	11 1/8	7	3	6.75	1 31/32	1.9687	16 1/2	10 5/8	4	33.75
1 1/32	1.0311	11 1/8	7	3	6.75	1 63/64	1.9844	16 1/2	10 5/8	4	35.00
1 3/64	1.0469	11 1/4	7 1/8	3	7.25	2	2.0000	16 1/2	10 5/8	4	35.00
1 1/16	1.0625	11 1/4	7 1/8	3	7.25	....	.....	....	....	..	....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STRAIGHT SHANK DRILLS

CARBON STEEL

No. 106

Letter Size Straight Shank Drills

Size	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Per Dozen	Per Dozen
A	.2340	3 13/16	2 9/16	$3.00	$.....
B	.2380	3 13/16	2 9/16	3.05	.....
C	.2420	3 13/16	2 9/16	3.10	.....
D	.2460	3 13/16	2 9/16	3.15	.....
E	.2500	3 13/16	2 9/16	3.25	.....
F	.2570	4 1/4	3	3.35	.....
G	.2610	4 1/4	3	3.45	.....
H	.2660	4 1/4	3	3.55	.....
I	.2720	4 1/4	3	3.65	.....
J	.2770	4 1/4	3	3.70	.....
K	.2810	4 1/4	3	3.80	.....
L	.2900	4 1/4	3	3.90	.....
M	.2950	4 1/4	3	4.00	.....
N	.3020	4 1/4	3	4.25	.....
O	.3160	4 1/4	3	4.40	.....
P	.3230	4 5/8	3 5/16	4.60	.....
Q	.3320	4 3/4	3 7/16	4.75	.....
R	.3390	4 3/4	3 7/16	5.00	.....
S	.3480	4 7/8	3 1/2	5.15	.....
T	.3580	4 7/8	3 1/2	5.30	.....
U	.3680	5	3 5/8	5.50	.....
V	.3770	5	3 5/8	6.00	.....
W	.3860	5 1/8	3 3/4	6.50	.....
X	.3970	5 1/4	3 27/32	6.75	.....
Y	.4040	5 1/4	3 27/32	7.00	.....
Z	.4130	5 3/8	3 31/32	7.25	.....

Fractions and Decimal Equivalents

Of Eighths, Sixteenths, Thirty-seconds and Sixty-fourths of an Inch.

1/64	.015625	25/64	.390625	45/64	.703125
1/32	.03125	13/32	.40625	23/32	.71875
3/64	.046875	27/64	.421875	47/64	.734375
1-16	**.0625**	**7-16**	**.4375**	**3-4**	**.7500**
5/64	.078125				
3/32	.09375			49/64	.765625
7/64	.109375	29/64	.453125	25/32	.78125
1-8	**.1250**	15/32	.46875	51/64	.796875
		31/64	.484375	**13-16**	**.8125**
9/64	.140625	**1-2**	**.5000**		
5/32	.15625				
11/64	.171875			53/64	.828125
3-16	**.1875**	33/64	.515625	27/32	.84375
		17/32	.53125	55/64	.859375
13/64	.203125	35/64	.546875	**7-8**	**.8750**
7/32	.21875	**9-16**	**.5625**		
15/64	.234375				
1-4	**.2500**			57/64	.890625
		37/64	.578125	29/32	.90625
17/64	.265625	19/32	.59375	59/64	.921875
9/32	.28125	39/64	.609375	**15-16**	**.9375**
19/64	.296875	**5-8**	**.6250**		
5-16	**.3125**				
21/64	.328125	41/64	.640625	61/64	.953125
11/32	.34375	21/32	.65625	31/32	.96875
23/64	.359375	43/64	.671875	63/64	.984375
3-8	**.3750**	**11-16**	**.6875**	**1**	**1.0000**

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STRAIGHT SHANK DRILLS

CARBON STEEL

No. 105

Short Series or Jobbers' Straight Shank Drills

Diameter Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Per Dozen	Per Dozen
1/32	.0312	1 1/2	5/8	$1.50	$.....
3/64	.0469	1 3/4	7/8	1.55	.....
1/16	.0625	2 1/2	1 1/4	1.60	.....
5/64	.0781	2 5/8	1 3/8	1.65	.....
3/32	.0937	2 3/4	1 1/2	1.70	.....
7/64	.1094	2 7/8	1 5/8	1.75	.....
1/8	.1250	3	1 3/4	1.80	.....
9/64	.1406	3 1/8	1 7/8	1.85	.....
5/32	.1562	3 1/4	2	1.90	.....
11/64	.1719	3 3/8	2 1/8	2.00	.....
3/16	.1875	3 1/2	2 1/4	2.25	.....
13/64	.2031	3 5/8	2 3/8	2.50	.....
7/32	.2187	3 3/4	2 1/2	2.75	.....
15/64	.2344	3 7/8	2 5/8	3.00	.....
1/4	.2500	4	2 3/4	3.25	.....
17/64	.2656	4 1/8	2 7/8	3.50	.....
9/32	.2812	4 1/4	2 31/32	3.80	.....
19/64	.2969	4 3/8	3 3/32	4.00	.....
5/16	.3125	4 1/2	3 3/16	4.35	.....
21/64	.3281	4 5/8	3 5/16	4.70	.....
11/32	.3437	4 3/4	3 13/32	5.05	.....
23/64	.3594	4 7/8	3 17/32	5.50	.....
3/8	.3750	5	3 5/8	6.00	.....
25/64	.3906	5 1/8	3 3/4	6.50	.....
13/32	.4062	5 1/4	3 27/32	7.00	.....
27/64	.4219	5 3/8	3 31/32	7.75	.....
7/16	.4375	5 1/2	4 1/16	8.50	.....
29/64	.4531	5 5/8	4 3/16	9.25	.....
15/32	.4687	5 3/4	4 9/32	10.00	.....
31/64	.4844	5 7/8	4 13/32	11.00	.....
1/2	.5000	6	4 1/2	12.00	.....

HIGH SPEED STEEL

No. 504

Short Series or Jobbers' Straight Shank Drills

Diameter Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Per Dozen	**Diameter** Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Per Dozen
1/16	.0625	2 1/2	1 1/4	$5.70	19/64	.2969	4 3/8	3 3/32	$10.50
5/64	.0781	2 5/8	1 3/8	5.70	5/16	.3125	4 1/2	3 3/16	10.50
3/32	.0937	2 3/4	1 1/2	5.70	21/64	.3281	4 5/8	3 5/16	12.00
7/64	.1094	2 7/8	1 5/8	5.90	11/32	.3437	4 3/4	3 13/32	12.00
1/8	.1250	3	1 3/4	5.90	23/64	.3594	4 7/8	3 17/32	13.50
9/64	.1406	3 1/8	1 7/8	6.10	3/8	.3750	5	3 5/8	13.50
5/32	.1562	3 1/4	2	6.10	25/64	.3906	5 1/8	3 3/4	15.00
11/64	.1719	3 3/8	2 1/8	6.30	13/32	.4062	5 1/4	3 27/32	15.00
3/16	.1875	3 1/2	2 1/4	6.30	27/64	.4219	5 3/8	3 31/32	17.00
13/64	.2031	3 5/8	2 3/8	7.00	7/16	.4375	5 1/2	4 1/16	17.00
7/32	.2187	3 3/4	2 1/2	7.00	29/64	.4531	5 5/8	4 3/16	18.75
15/64	.2344	3 7/8	2 5/8	7.35	15/32	.4687	5 3/4	4 9/32	18.75
1/4	.2500	4	2 3/4	7.35	31/64	.4844	5 7/8	4 13/32	20.00
17/64	.2656	4 1/8	2 7/8	9.10	1/2	.5000	6	4 1/2	20.00
9/32	.2812	4 1/4	2 31/32	9.10	...	...	...	...	.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STRAIGHT SHANK DRILLS

CARBON STEEL

No. 104B

Long Series or Taper Shank Length Straight Shank Drills

Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each	Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each	Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each
1/8	.1250	5 1/8	2 1/8	$0.45	33/64	.5156	8	5 1/8	$1.30	29/32	.9062	10 5/8	7	$2.80
9/64	.1406	5 3/8	2 3/8	.45	17/32	.5312	8	5 1/8	1.30	59/64	.9219	10 3/4	6 5/8	3.00
5/32	.1562	5 3/8	2 3/8	.45	35/64	.5469	8 1/4	5 5/16	1.40	15/16	.9375	10 3/4	6 5/8	3.00
11/64	.1719	5 3/4	2 5/8	.50	9/16	.5625	8 1/4	5 5/16	1.40	61/64	.9531	10 7/8	6 3/4	3.25
3/16	.1875	5 3/4	2 5/8	.50	37/64	.5781	8 1/2	5 1/2	1.50	31/32	.9687	10 7/8	6 3/4	3.25
13/64	.2031	5 7/8	2 7/8	.55	19/32	.5937	8 1/2	5 1/2	1.50	63/64	.9844	11	6 7/8	3.50
7/32	.2187	6	2 7/8	.55	39/64	.6094	8 3/4	5 1/8	1.60	1	1.0000	11	6 7/8	3.50
15/64	.2344	6 1/8	3	.60	5/8	.6250	8 3/4	5 1/8	1.60	1 1/64	1.0156	11 1/8	7	3.75
1/4	.2500	6 1/8	3	.60	41/64	.6406	9	5 1/4	1.70	1 1/32	1.0311	11 1/8	7	3.75
17/64	.2656	6 1/4	3 1/8	.65	21/32	.6562	9	5 1/4	1.70	1 3/64	1.0469	11 1/4	7 1/8	4.00
9/32	.2812	6 1/4	3 1/8	.65	43/64	.6719	9 1/4	5 1/2	1.80	1 1/16	1.0625	11 1/4	7 1/8	4.00
19/64	.2969	6 3/8	3 1/4	.70	11/16	.6875	9 1/4	5 1/2	1.80	1 5/64	1.0781	11 1/2	7 3/8	4.25
5/16	.3125	6 3/8	3 1/4	.70	45/64	.7031	9 1/2	5 7/8	1.90	1 3/32	1.0937	11 1/2	7 3/8	4.25
21/64	.3281	6 1/2	3 3/8	.75	23/32	.7187	9 1/2	5 7/8	1.90	1 7/64	1.1094	11 3/4	7 5/8	4.50
11/32	.3437	6 1/2	3 3/8	.75	47/64	.7344	9 3/4	6 1/8	2.00	1 1/8	1.1250	11 3/4	7 5/8	4.50
23/64	.3594	6 3/4	3 1/2	.80	3/4	.7500	9 3/4	6 1/8	2.00	1 9/64	1.1406	11 7/8	7 3/4	4.75
3/8	.3750	6 3/4	3 1/2	.80	49/64	.7656	9 7/8	6 1/4	2.10	1 5/32	1.1562	11 7/8	7 3/4	4.75
25/64	.3906	7	3 3/4	.90	25/32	.7812	9 7/8	6 1/4	2.10	1 11/64	1.1719	12	7 7/8	5.00
13/32	.4062	7	3 3/4	.90	51/64	.7969	10	6 3/8	2.20	1 3/16	1.1875	12	7 7/8	5.00
27/64	.4219	7 1/4	4	1.00	13/16	.8125	10	6 3/8	2.20	1 13/64	1.2031	12 1/8	8	5.25
7/16	.4375	7 1/4	4	1.00	53/64	.8281	10 1/4	6 1/2	2.40	1 7/32	1.2187	12 1/8	8	5.25
29/64	.4531	7 1/2	4 5/16	1.10	27/32	.8437	10 1/4	6 1/2	2.40	1 15/64	1.2344	12 1/2	8 1/4	5.50
15/32	.4687	7 1/2	4 5/16	1.10	55/64	.8594	10 1/2	6 7/8	2.60	1 1/4	1.2500	12 1/2	8 1/4	5.50
31/64	.4844	7 3/4	4 1/2	1.20	7/8	.8750	10 1/2	6 7/8	2.60	.....	.....	.....	.....	.....
1/2	.5000	7 3/4	4 1/2	1.20	57/64	.8906	10 5/8	7	2.80	.....	.....	.....	.....	.....

HIGH SPEED STEEL

No. 501

Long Series or Taper Shank Length Straight Shank Drills

Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each	Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each	Diam. Inches	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Each
1/4	.2500	6 1/8	3	$1.10	43/64	.6719	9 1/4	5 1/2	$3.00	1 3/32	1.0937	11 1/2	7 3/8	$7.75
17/64	.2656	6 1/4	3 1/8	1.20	11/16	.6875	9 1/4	5 1/2	3.00	1 7/64	1.1094	11 3/4	7 5/8	8.25
9/32	.2812	6 1/4	3 1/8	1.20	45/64	.7031	9 1/2	5 7/8	3.25	1 1/8	1.1250	11 3/4	7 5/8	8.25
19/64	.2969	6 3/8	3 1/4	1.30	23/32	.7187	9 1/2	5 7/8	3.25	1 9/64	1.1406	11 7/8	7 3/4	8.90
5/16	.3125	6 3/8	3 1/4	1.30	47/64	.7344	9 3/4	6 1/8	3.50	1 5/32	1.1562	11 7/8	7 3/4	8.90
21/64	.3281	6 1/2	3 3/8	1.40	3/4	.7500	9 3/4	6 1/8	3.50	1 11/64	1.1719	12	7 7/8	9.50
11/32	.3437	6 1/2	3 3/8	1.40	49/64	.7656	9 7/8	6 1/4	3.75	1 3/16	1.1875	12	7 7/8	9.50
23/64	.3594	6 3/4	3 1/2	1.50	25/32	.7812	9 7/8	6 1/4	3.75	1 13/64	1.2031	12 1/8	8	10.15
3/8	.3750	6 3/4	3 1/2	1.50	51/64	.7969	10	6 3/8	4.00	1 7/32	1.2187	12 1/8	8	10.15
25/64	.3906	7	3 3/4	1.65	13/16	.8125	10	6 3/8	4.00	1 15/64	1.2344	12 1/2	8 1/4	10.75
13/32	.4052	7	3 3/4	1.65	53/64	.8281	10 1/4	6 1/2	4.40	1 1/4	1.2500	12 1/2	8 1/4	10.75
27/64	.4219	7 1/4	4	1.75	27/32	.8437	10 1/4	6 1/2	4.40	1 17/64	1.2656	14 1/8	8 5/8	11.50
7/16	.4375	7 1/4	4	1.75	55/64	.8594	10 1/2	6 7/8	4.75	1 9/32	1.2812	14 1/8	8 5/8	11.50
29/64	.4531	7 1/2	4 5/16	1.90	7/8	.8750	10 1/2	6 7/8	4.75	1 19/64	1.2969	14 1/4	8 3/4	12.25
15/32	.4687	7 1/2	4 5/16	1.90	57/64	.8906	10 5/8	7	5.15	1 5/16	1.3125	14 1/4	8 3/4	12.25
31/64	.4844	7 3/4	4 1/2	2.00	29/32	.9062	10 5/8	7	5.15	1 21/64	1.3281	14 3/8	8 7/8	13.00
1/2	.5000	7 3/4	4 1/2	2.00	59/64	.9219	10 3/4	6 5/8	5.50	1 11/32	1.3437	14 3/8	8 7/8	13.00
33/64	.5156	8	5 1/8	2.15	15/16	.9375	10 3/4	6 5/8	5.50	1 23/64	1.3594	14 1/2	9	13.75
17/32	.5312	8	5 1/8	2.15	61/64	.9531	10 7/8	6 3/4	5.90	1 3/8	1.3750	14 1/2	9	13.75
35/64	.5469	8 1/4	5 5/16	2.25	31/32	.9687	10 7/8	6 3/4	5.90	1 25/64	1.3906	14 5/8	9 1/8	14.65
9/16	.5625	8 1/4	5 5/16	2.25	63/64	.9844	11	6 7/8	6.25	1 13/32	1.4062	14 5/8	9 1/8	14.65
37/64	.5781	8 1/2	5 1/2	2.40	1	1.0000	11	6 7/8	6.25	1 27/64	1.4219	14 3/4	9 1/4	15.50
19/32	.5937	8 1/2	5 1/2	2.40	1 1/64	1.0156	11 1/8	7	6.75	1 7/16	1.4375	14 3/4	9 1/4	15.50
39/64	.6094	8 3/4	5 1/8	2.50	1 1/32	1.0311	11 1/8	7	6.75	1 29/64	1.4531	14 7/8	9 3/8	16.40
5/8	.6250	8 3/4	5 1/8	2.50	1 3/64	1.0469	11 1/4	7 1/8	7.25	1 15/32	1.4687	14 7/8	9 3/8	16.40
41/64	.6406	9	5 1/4	2.75	1 1/16	1.0625	11 1/4	7 1/8	7.25	1 31/64	1.4844	15	9 1/2	17.25
21/32	.6562	9	5 1/4	2.75	1 5/64	1.0781	11 1/2	7 3/8	7.75	1 1/2	1.5000	15	9 1/2	17.25

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STRAIGHT SHANK WIRE GAUGE DRILLS

No. 107 Series, "Carbon" Steel—No. 506 Series, "High Speed" Steel.

Gauge Nos.	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Price Per Dozen		Gauge Nos.	Decimal Equivalent	Length over all Inches	Length of Twist Inches	Price Per Dozen	
				No. 107 Carbon	No. 506 High Speed					No. 107 Carbon	No. 506 High Speed
1	.2280	4	2 21/32	$2.75	$7.00	45	.0820	2 3/16	1 1/8	$1.70	$5.70
2	.2210	3 15/16	2 5/8	2.75	7.00	46	.0810	2 1/8	1 1/8	1.65	5.70
3	.2130	3 15/16	2 5/8	2.75	7.00	47	.0785	2 1/16	1 3/32	1.65	5.70
4	.2090	3 7/8	2 19/32	2.75	7.00	48	.0760	2 1/16	1 1/16	1.65	5.70
5	.2055	3 13/16	2 9/16	2.75	7.00	49	.0730	2	1	1.65	5.70
6	.2040	3 13/16	2 17/32	2.50	7.00	50	.0700	1 15/16	31/32	1.65	5.70
7	.2010	3 3/4	2 1/2	2.50	7.00	51	.0670	1 15/16	15/16	1.60	5.70
8	.1990	3 11/16	2 15/32	2.50	7.00	52	.0635	1 7/8	7/8	1.60	5.70
9	.1960	3 11/16	2 7/16	2.50	7.00	53	.0595	1 13/16	27/32	1.60	....
10	.1935	3 5/8	2 3/8	2.50	7.00	54	.0550	1 13/16	27/32	1.60	....
11	.1910	3 9/16	2 11/32	2.25	6.30	55	.0520	1 3/4	13/16	1.60	....
12	.1890	3 9/16	2 5/16	2.25	6.30	56	.0465	1 11/16	25/32	1.55	....
13	.1850	3 1/2	2 9/32	2.25	6.30	57	.0430	1 11/16	23/32	1.55	....
14	.1820	3 7/16	2 1/4	2.25	6.30	58	.0420	1 5/8	23/32	1.55	....
15	.1800	3 7/16	2 7/32	2.25	6.30	59	.0410	1 9/16	11/16	1.55	....
16	.1770	3 3/8	2 3/16	2.00	6.30	60	.0400	1 9/16	11/16	1.55	....
17	.1730	3 5/16	2 5/32	2.00	6.30	60 1/2	.0390	1 1/2	5/8	1.50	....
18	.1695	3 5/16	2 1/8	2.00	6.30	61	.0380	1 1/2	5/8	1.50	....
19	.1660	3 1/4	2 3/32	2.00	6.30	62	.0370	1 15/32	5/8	1.50	....
20	.1610	3 3/16	2 1/16	2.00	6.30	63	.0360	1 7/16	5/8	1.50	....
21	.1590	3 3/16	2 1/16	1.90	6.10	64	.0350	1 13/32	5/8	1.50	....
22	.1570	3 1/8	2	1.90	6.10	65	.0330	1 3/8	5/8	1.50	....
23	.1540	3 1/16	1 31/32	1.90	6.10	66	.0320	1 5/16	9/16	1.50	....
24	.1520	3 1/16	1 15/16	1.90	6.10	67	.0310	1 1/4	9/16	1.50	....
25	.1495	3	1 29/32	1.90	6.10	68	.0300	1 7/32	9/16	1.50	....
26	.1470	2 15/16	1 7/8	1.80	6.10	68 1/2	.0292	1 7/32	9/16	1.50	....
27	.1440	2 15/16	1 27/32	1.80	6.10	69	.0290	1 3/16	9/16	1.50	....
28	.1405	2 7/8	1 13/16	1.80	6.10	69 1/2	.0280	1 3/16	9/16	1.50	....
29	.1360	2 13/16	1 3/4	1.80	6.10	70	.0270	1 5/32	9/16	1.50	....
30	.1285	2 13/16	1 23/32	1.80	6.10	71	.0260	1 1/8	1/2	1.50	....
31	.1200	2 3/4	1 11/16	1.75	5.90	71 1/2	.0250	1 1/8	7/16	1.50	....
32	.1160	2 11/16	1 5/8	1.75	5.90	72	.0240	1 1/32	7/16	1.50	....
33	.1130	2 11/16	1 5/8	1.75	5.90	73	.0230	1	3/8	1.50	....
34	.1110	2 5/8	1 9/16	1.75	5.90	73 1/2	.0225	1	5/16	1.50	....
35	.1100	2 9/16	1 1/2	1.75	5.90	74	.0220	31/32	5/16	1.50	....
36	.1065	2 9/16	1 1/2	1.75	5.90	74 1/2	.0210	31/32	1/4	1.50	....
37	.1040	2 1/2	1 7/16	1.75	5.90	75	.0200	15/16	1/4	1.50	....
38	.1015	2 7/16	1 3/8	1.75	5.90	76	.0180	27/32	1/4	1.50	....
39	.0995	2 7/16	1 11/32	1.75	5.90	77	.0160	13/16	7/32	1.50	....
40	.0980	2 3/8	1 11/32	1.75	5.90	78	.0150	23/32	7/32	1.50	....
41	.0960	2 5/16	1 5/16	1.70	5.70	78 1/2	.0145	23/32	3/16	1.50	....
42	.0935	2 5/16	1 1/4	1.70	5.70	79	.0140	23/32	3/16	1.50	....
43	.0890	2 1/4	1 7/32	1.70	5.70	79 1/2	.0135	3/4	3/16	1.50	....
44	.0860	2 3/16	1 3/16	1.70	5.70	80	.0130	3/4	3/16	1.50	....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BIT STOCK DRILLS

For Metal or Wood

No. 108—Shanks 3/16 x 3/8 x 1 1/4 inches long—Carbon Steel.

These Drills will fit any Brace or Breast Drill on the market and are intended to drill steel and iron or other metals and for wood boring. They are not injured by contact with screws or nails, and will bore straight any kind of wood without splitting it. Sizes larger than 3/32 are made with solid shank.

Diameter Inches	Length Over all Inches	Length of Twist Inches	Per Dozen	Per Dozen	Diameter Inches	Length Over all Inches	Length of Twist Inches	Per Dozen	Per Dozen
1/32	2 7/8	13/16	.....	$.....	7/16	6 1/2	4 3/16	$10.50	$.....
3/64	3	15/16	.....	.....	15/32	6 13/16	4 7/16	11.75	.....
1/16	3 1/8	1 1/16	$2.50	.....	1/2	7	4 5/8	13.00	.....
5/64	3 1/4	1 1/8	2.60	.....	17/32	7 3/8	5	14.25	.....
3/32	3 1/2	1 5/16	2.70	.....	9/16	7 5/8	5 5/16	15.50	.....
7/64	3 11/16	1 3/4	2.85	.....	19/32	7 7/8	5 5/8	16.75	.....
1/8	3 7/8	1 7/8	3.00	.....	5/8	8	5 5/8	18.00	.....
9/64	4 1/16	2 1/16	3.25	.....	21/32	8	5 5/8	19.50	.....
5/32	4 1/4	2 1/4	3.50	.....	11/16	8	5 5/8	21.00	.....
11/64	4 3/8	2 3/8	3.75	.....	23/32	8	5 5/8	22.50	.....
3/16	4 9/16	2 9/16	4.00	.....	3/4	8	5 5/8	24.00	.....
13/64	4 11/16	2 5/8	4.25	.....	25/32	8	5 5/8	25.50	.....
7/32	4 7/8	2 13/16	4.50	.....	13/16	8	5 5/8	27.00	.....
15/64	5	2 15/16	4.75	.....	27/32	8	5 5/8	28.50	.....
1/4	5 3/16	3 1/16	5.00	.....	7/8	8	5 5/8	30.00	.....
17/64	5 3/8	3 1/4	5.50	.....	29/32	8	5 5/8	31.50	.....
9/32	5 1/2	3 3/8	6.00	.....	15/16	8	5 5/8	33.00	.....
19/64	5 5/8	3 1/2	6.50	.....	31/32	8	5 5/8	34.50	.....
5/16	5 3/4	3 5/8	7.00	.....	1	8	5 5/8	36.00	.....
21/64	5 7/8	3 11/16	7.50	.....	1 1/16	8	5 5/8	39.00	.....
11/32	5 7/8	3 11/16	8.00	.....	1 1/8	8	5 5/8	42.00	.....
3/8	6	3 3/4	8.50	.....	1 3/16	8	5 5/8	45.00	.....
13/32	6 1/4	4	9.25	.....	1 1/4	8	5 5/8	48.00	.....

WOOD BORING BRACE DRILLS

No. 109A—Shanks 3/16 x 3/8 x 1 1/4 inches long—Carbon Steel.

These Drills are especially tempered and pointed for wood, but are not injured by contact with nails, plaster, etc. The numbers indicate the sizes in 32nds of an inch.

Size Nos.	Length Over all Inches	Length of Twist Inches	Per Dozen	Per Dozen	Size Nos.	Length Over all Inches	Length of Twist Inches	Per Dozen	Per Dozen
2	3 1/2	1 1/4	$3.25	$.....	18	9 1/2	4 3/4	$11.00	$.....
3	4	1 1/2	3.25	.....	19	9 3/4	4 7/8	11.75	.....
4	4 1/2	2 1/4	3.25	.....	20	10	5	12.50	.....
5	5	2 1/2	3.50	.....	22	10 1/2	5 1/4	14.50	.....
6	5 1/2	2 3/4	4.00	.....	24	11	5 1/2	16.50	.....
7	6	3	4.50	.....	26	11 1/4	5 5/8	18.50	.....
8	6 1/2	3 1/4	5.00	.....	28	11 1/2	5 3/4	21.00	.....
9	7	3 1/2	5.50	.....	30	11 3/4	5 7/8	24.00	.....
10	7 1/2	3 3/4	6.00	.....	32	12	6	27.00	.....
11	7 3/4	3 7/8	6.50	.....	34	12 1/4	6 1/8	30.00	.....
12	8	4	7.00	.....	36	12 1/2	6 1/4	33.00	.....
13	8 1/4	4 1/8	7.50	.....	38	12 3/4	6 3/8	37.00	.....
14	8 1/2	4 1/4	8.00	.....	40	12 3/4	6 3/8	41.00	.....
15	8 3/4	4 3/8	8.75	.....	42	13	6 1/2	45.00	.....
16	9	4 1/2	9.50	.....	44	13	6 1/2	50.00	.....
17	9 1/4	4 5/8	10.25	.....	.....	.....	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BELL HANGERS' AND ELECTRICIANS' BITS

No. 109B—Shanks 3/16 x 3/8 x 1 1/4 inches long—Carbon Steel.

Bell Hangers' and Electricians' Bits or Extra Length Wood Boring Brace Drills. Numbers indicate sizes in 32nds of an inch.

Size Nos.	Sizes in Inches	12 Inch		18 Inch		24 Inch		30 Inch		36 Inch	
		Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen	Per Dozen
6	3/16	$7.50	$.....	$10.00	$.....	$12.50	$.....	$15.00	$.....	$17.50	$.....
8	1/4	8.00	.....	10.50	.....	13.00	.....	15.50	.....	18.00	.....
10	5/16	8.75	.....	11.00	.....	13.50	.....	16.00	.....	18.50	.....
12	3/8	9.50	.....	12.00	.....	14.50	.....	17.00	.....	19.50	.....
14	7/16	10.50	.....	13.00	.....	15.50	.....	18.00	.....	20.50	.....
16	1/2	12.00	.....	14.50	.....	17.00	.....	19.50	.....	22.00	.....
18	9/16	13.50	.....	16.00	.....	18.50	.....	21.00	.....	23.50	.....
20	5/8	15.25	.....	17.75	.....	20.25	.....	22.75	.....	25.25	.....
22	11/16	17.00	.....	19.50	.....	22.00	.....	24.50	.....	27.00	.....
24	3/4	19.00	.....	21.50	.....	24.00	.....	26.50	.....	29.00	.....
26	13/32	21.00	.....	23.50	.....	26.00	.....	28.50	.....	31.00	.....
28	7/8	23.00	.....	25.50	.....	28.00	.....	30.50	.....	33.00	.....
30	15/16	25.00	.....	27.50	.....	30.00	.....	32.50	.....	35.00	.....
32	1	27.50	.....	30.00	.....	32.50	.....	35.50	.....	38.00	.....
34	1 1/16	30.50	.....	33.00	.....	35.50	.....	39.00	.....	42.00	.....
36	1 1/8	33.00	.....	36.00	.....	39.00	.....	42.50	.....	47.00	.....

COMBINATION COUNTERSINKS AND CENTER DRILLS

No. 107D.

Angle of Countersink 60°—Carbon Steel.

No. 107D—Size	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Diameter of Body, inch..	3/10	3/10	3/10	15/64	13/64	7/16	7/16	7/16
Diameter of Drill, inch..	3/32-1/8	1/8-1/8	3/32-3/32	No. 49-45	1/16-No. 45	5/32-5/32	3/16-3/16	3/16-5/32
Per Dozen	$2.75	$2.75	$2.75	$2.50	$2.25	$3.50	$3.50	$3.50

Packed.—One Dozen in a Box.

No. 107D—In Sets of 8, one each A, B, C, D, E, F, G, and H ..... Per Set, $1.96

Packed—Each Set in a Round Wooden Box.

STANDARD COUNTERSINKS

No. 135.
Bit Brace Shank.

DRIFTS OR CENTER KEYS.

No. 118A.

Standard Countersinks

No. 135—For use in Bit Braces or Breast Drills; Diameter, 5/8 inch; Angle of point 82° tapered for screws. ..... Per Dozen, $9.35

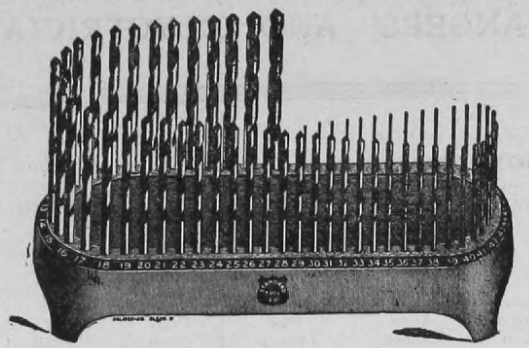
Note—Angle of Point for Tire Bolts 60°. Furnished on special orders only.

Drifts or Center Keys, for Sockets and Sleeves

No. 118A—Size Nos.	1	2	3	4
Fit Sockets and Sleeves, Nos.	1	2	3	4, 5 and 6
Each	$0.30	.35	.45	.50

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STRAIGHT SHANK DRILLS IN SETS



No. 8.

Wire Gauge Carbon Steel Drills

No. 8—Set of Straight Shank Wire Gauge Drills, Nos. 1 to 60; mounted on a Metal Block.....Per Set, $13.25

Jobbers' or Short Length Carbon Steel Drills

No. 5—Set of Jobbers' or Short Length Straight Shank Drills, 1/16 to 1/2 inch, by 64ths; mounted on a Metal Block ..... Per Set, $15.00

BREAST DRILL SETS

No. 18.

Set of 9 Straight Shank Drills to be used in small "Breast" or "Hand" Drills. Their special temper make them suitable for drilling in both metal and wood. Put up in a handsome case with separate compartments for each drill.

No. 18—Drill Set, including sizes 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64 and 3/16 inch...Per Set, $.....

BIT STOCK DRILL SETS

No. 14A.

Set of 7 Square Shank Bit Stock Drills No. 108, to be used for boring either wood or iron. Put up in a flat leatherette case with the size of each drill marked on the case in gold.

No. 14A—Drill Set, including sizes 1/8, 5/32, 3/16, 7/32, 1/4, 5/16 and 3/8 inch.....Per Set, $4.35

"USE-'EM-UP" DRILL SOCKETS

SLEEVE TYPE

By grinding a flat on one side of the shank of your broken drills and inserting them in the "Use-'Em-Up" Drill Sockets they are made as good as ever.

Size, Nos.	1 to 2	1 to 3	1 to 4	1 to 5	2 to 3	2 to 4
Has Hole No.	1	1	1	1	2	2
Outside Fitting, Socket No.	2	3	4	5	3	4
"Use-'Em-Up" .....Each,	$1.80	2.40	3.00	4.40	2.40	3.00
Size, Nos.	2 to 5	3 to 4	3 to 5	4 to 5	4 to 6	5 to 6
Has Hole No.	2	3	3	4	4	5
Outside Fitting, Socket No.	5	4	5	5	6	6
"Use-'Em-Up" .....Each,	$4.40	3.00	4.40	4.40	10.00	10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL SLEEVES

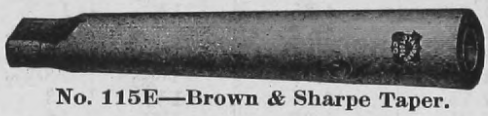
No. 118.

Steel Sleeves for holding Taper Shank Drills.

Size, Nos.	1 to 2	1 to 3	1 to 4	1 to 5	2 to 3	2 to 4
Hole No.	1	1	1	1	2	2
Outside Fitting, Socket No.	2	3	4	5	3	4
No. 118 ..... Each,	$1.80	2.40	3.00	4.40	2.40	3.00

Size, Nos.	2 to 5	3 to 4	3 to 5	4 to 5	4 to 6	5 to 6
Hole No.	2	3	3	4	4	5
Outside Fitting, Socket No.	5	4	5	5	6	6
No. 118 ..... Each,	$4.40	3.00	4.40	4.40	10.00	10.00

STANDARD COLLETS

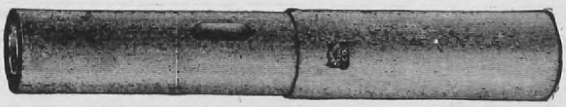


No. 115E—Brown & Sharpe Taper.

Nos.	Inside Taper Number	Outside Taper Number	Each	Nos.	Inside Taper Number	Outside Taper Number	Each
4X 7	4	7	$2.00	**9X10**	9	10	$4.00
5X 7	5	7	2.00	**9X11**	9	11	5.00
5X 9	5	9	3.00	**9X12**	9	12	6.00
7X 9	7	9	3.25	**10X11**	10	11	5.50
7X10	7	10	3.50	**10X12**	10	12	6.50
7X11	7	11	4.50	.....	.....	.....	.....

STEEL SOCKETS

UNFINISHED

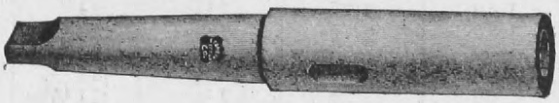


No. 116.

Steel Sockets, with **Unfinished Shanks,** for holding Taper Shank Drills.

Size, Nos.	1	2	3	4	5	6
Holds Drills, inches.	1/16 to 9/16	37/64 to 29/32	59/64 to 1 1/4	1 17/64 to 2	2 1/64 to 3	3 1/64 to 6
Length over all, inches.	6 1/4	7 1/2	9 1/4	11 7/8	15	18
Diameter of Shank, inches.	13/16	1 1/8	1 3/8	1 13/16	2 1/2	3
No. 116 ..... Each,	$1.20	1.80	2.50	4.00	7.50	14.00

FINISHED



No. 117.

Steel Sockets, with **Finished Shanks,** for holding Taper Shank Drills.

Size, Nos.	1 to 2	1 to 3	1 to 4	1 to 5	2 to 3	2 to 4	2 to 5	3 to 2	3 to 3
Hole No.	1	1	1	1	2	2	2	3	3
Shank No.	2	3	4	5	3	4	5	2	3
No. 117 ..... Each,	$2.00	2.50	3.20	4.80	2.50	3.20	4.80	3.20	3.20

Size, Nos.	3 to 4	3 to 5	4 to 3	4 to 4	4 to 5	4 to 6	5 to 4	5 to 5	5 to 6
Hole No.	3	3	4	4	4	4	5	5	5
Shank No.	4	5	3	4	5	6	4	5	6
No. 117 ..... Each,	$3.20	4.80	4.80	4.80	4.80	12.00	12.00	12.00	12.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

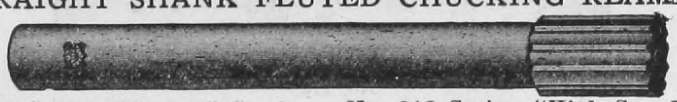
STANDARD HAND REAMERS

No. 122 Series, "Carbon" Steel.——No. 600 Series, "High Speed" Steel.

Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each No. 122 Carbon	Price Each No. 600 High Speed	Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each No. 122 Carbon	Price Each No. 600 High Speed
1/8	3	1 1/2	$1.00	$3.00	7/8	9 11/16	4 27/32	$3.10	$8.50
9/64	3 1/4	1 5/8	1.10	3.25	29/32	10 3/32	5 3/64	3.25	9.50
5/32	3 1/4	1 5/8	1.10	3.25	15/16	10 1/4	5 1/8	3.40	9.50
11/64	3 1/2	1 3/4	1.20	3.25	31/32	10 11/16	5 11/32	3.55	10.50
3/16	3 1/2	1 3/4	1.20	3.25	1	10 7/8	5 7/16	3.70	10.50
13/64	3 3/4	1 7/8	1.30	3.50	1 1/32	11 1/16	5 17/32	3.85	11.50
7/32	3 3/4	1 7/8	1.30	3.50	1 1/16	11 1/4	5 5/8	4.00	11.50
15/64	4	2	1.40	3.50	1 3/32	11 7/16	5 23/32	4.15	12.75
1/4	4	2	1.40	3.50	1 1/8	11 5/8	5 13/16	4.30	12.75
17/64	4 1/4	2 1/8	1.45	3.75	1 5/32	11 13/16	5 29/32	4.45	14.25
9/32	4 1/4	2 1/8	1.45	3.75	1 3/16	12	6	4.60	14.25
19/64	4 1/2	2 1/4	1.50	3.75	1 7/32	12 1/8	6 1/16	4.75	15.75
5/16	4 1/2	2 1/4	1.50	3.75	1 1/4	12 1/4	6 1/8	4.90	15.75
21/64	4 3/4	2 3/8	1.55	4.25	1 9/32	12 11/32	6 11/64	5.05	17.25
11/32	4 3/4	2 3/8	1.55	4.25	1 5/16	12 7/16	6 7/32	5.20	17.25
23/64	5	2 1/2	1.60	4.25	1 11/32	12 17/32	6 17/64	5.40	18.75
3/8	5	2 1/2	1.60	4.25	1 3/8	12 5/8	6 5/16	5.60	18.75
25/64	5 1/4	2 5/8	1.70	4.75	1 13/32	12 23/32	6 23/64	5.80	20.50
13/32	5 1/4	2 5/8	1.70	4.75	1 7/16	12 13/16	6 13/32	6.00	20.50
27/64	5 1/2	2 3/4	1.75	4.75	1 15/32	12 29/32	6 29/64	6.20	22.25
7/16	5 1/2	2 3/4	1.75	4.75	1 1/2	13	6 1/2	6.40	22.25
29/64	5 3/4	2 7/8	1.85	5.25	1 17/32	13	6 1/2	6.60	24.00
15/32	5 3/4	2 7/8	1.85	5.25	1 9/16	13	6 1/2	6.80	24.00
31/64	6	3	1.90	5.25	1 19/32	13	6 1/2	7.00	25.75
1/2	6	3	1.90	5.25	1 5/8	13	6 1/2	7.20	25.75
17/32	6 1/4	3 1/8	1.95	5.75	1 21/32	13 1/2	6 3/4	7.40	27.50
9/16	6 1/2	3 1/4	2.00	5.75	1 11/16	13 1/2	6 3/4	7.60	27.50
19/32	6 3/4	3 3/8	2.10	6.25	1 23/32	13 1/2	6 3/4	7.80	29.50
5/8	7	3 1/2	2.20	6.25	1 3/4	13 1/2	6 3/4	8.00	29.50
21/32	7 11/32	3 43/64	2.30	6.75	1 25/32	13 1/2	6 3/4	8.20	31.50
11/16	7 11/16	3 27/32	2.40	6.75	1 13/16	13 1/2	6 3/4	8.40	31.50
23/32	8 1/8	4 1/16	2.50	7.25	1 27/32	13 1/2	6 3/4	8.60	33.50
3/4	8 3/8	4 3/16	2.60	7.25	1 7/8	14	7	8.80	33.50
25/32	8 23/32	4 23/64	2.70	7.75	1 29/32	14	7	9.00	35.75
13/16	9 1/16	4 17/32	2.80	7.75	1 15/16	14	7	9.20	35.75
27/32	9 3/8	4 11/16	2.95	8.50	1 31/32	14	7	9.40	38.00
					2	14	7	9.60	38.00

Our Reamers are made with Eccentric Flutes and are slightly tapered on end to facilitate entering work.

STRAIGHT SHANK FLUTED CHUCKING REAMERS



No. 124 Series, "Carbon" Steel.——No. 618 Series, "High Speed" Steel.

Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each No. 124 Carbon	Price Each No. 618 High Speed	Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each No. 124 Carbon	Price Each No. 618 High Speed
1/4	6	1 1/2	$1.20	$3.00	15/16	10	2 5/8	$3.25	$ 9.00
9/32	6	1 1/2	1.30	3.25	31/32	10	2 5/8	3.45	10.00
5/16	6	1 1/2	1.30	3.25	1	10 1/2	2 3/4	3.45	10.00
11/32	6	1 1/2	1.45	3.75	1 1/32	10 1/2	2 3/4	3.70	11.25
3/8	7	1 3/4	1.45	3.75	1 1/16	10 1/2	2 3/4	3.70	11.25
13/32	7	1 3/4	1.60	4.25	1 3/32	10 1/2	2 3/4	3.90	12.50
7/16	7	1 3/4	1.60	4.25	1 1/8	11	2 7/8	3.90	12.50
15/32	7	1 3/4	1.80	4.75	1 5/32	11	2 7/8	4.15	13.75
1/2	8	2	1.80	4.75	1 3/16	11	2 7/8	4.15	13.75
17/32	8	2	2.00	5.25	1 7/32	11	2 7/8	4.35	15.25
9/16	8	2	2.00	5.25	1 1/4	11 1/2	3	4.35	15.25
19/32	9	2 1/4	2.25	5.75	1 5/16	11 1/2	3	4.60	17.00
5/8	9	2 1/4	2.25	5.75	1 3/8	12	3 1/4	4.80	18.75
21/32	9	2 1/4	2.40	6.25	1 7/16	12	3 1/4	5.05	20.50
11/16	9	2 1/4	2.40	6.25	1 1/2	12 1/2	3 1/2	5.25	22.25
23/32	9	2 1/4	2.55	6.75	1 9/16	12 1/2	3 1/2	5.50	24.00
3/4	9 1/2	2 1/2	2.55	6.75	1 5/8	13	3 3/4	5.75	25.75
25/32	9 1/2	2 1/2	2.80	7.25	1 11/16	13	3 3/4	6.00	27.50
13/16	9 1/2	2 1/2	2.80	7.25	1 3/4	13 1/2	4	6.30	29.50
27/32	9 1/2	2 1/2	3.00	8.00	1 13/16	13 1/2	4	6.60	31.50
7/8	10	2 5/8	3.00	8.00	1 7/8	14	4 1/4	6.90	33.50
29/32	10	2 5/8	3.25	9.00	1 15/16	14	4 1/4	7.20	35.75
					2	14	4 1/4	7.50	38.00

Note.—We will furnish the above Reamers to order .004 to .010 undersize at regular prices.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STRAIGHT SHANK ROSE CHUCKING REAMERS

No. 124A Series, "Carbon" Steel.——No. 620 Series, "High Speed" Steel.

These Reamers have a flute for each cutting edge, which relieves the reamer and prevents the chips crowding in on the surface and binding.

Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each		Diam. Inches	Length over all Inches	Length of Flute Inches	Price Each	
			No. 124A Carbon Steel	No. 620 High Speed				No. 124A Carbon Steel	No. 620 High Speed
1/4	6	1 1/2	$1.20	$ 3.00	31/32	10	2 5/8	$3.45	$10.00
9/32	6	1 1/2	1.30	3.25	1	10 1/2	2 3/4	3.45	10.00
5/16	6	1 1/2	1.30	3.25	1 1/32	10 1/2	2 3/4	3.70	11.25
11/32	6	1 1/2	1.45	3.75	1 1/16	10 1/2	2 3/4	3.70	11.25
3/8	7	1 3/4	1.45	3.75	1 3/32	10 1/2	2 3/4	3.90	12.50
13/32	7	1 3/4	1.60	4.25	1 1/8	11	2 7/8	3.90	12.50
7/16	7	1 3/4	1.60	4.25	1 5/32	11	2 7/8	4.15	13.75
15/32	7	1 3/4	1.80	4.75	1 3/16	11	2 7/8	4.15	13.75
1/2	8	2	1.80	4.75	1 7/32	11	2 7/8	4.35	15.25
17/32	8	2	2.00	5.25	1 1/4	11 1/2	3	4.35	15.25
9/16	8	2	2.00	5.25	1 5/16	11 1/2	3	4.60	17.00
19/32	8	2	2.25	5.75	1 3/8	12	3 1/4	4.80	18.75
5/8	9	2 1/4	2.25	5.75	1 7/16	12	3 1/4	5.05	20.50
21/32	9	2 1/4	2.40	6.25	1 1/2	12 1/2	3 1/2	5.25	22.25
11/16	9	2 1/4	2.40	6.25	1 9/16	12 1/2	3 1/2	5.50	24.00
23/32	9	2 1/4	2.55	6.75	1 5/8	13	3 3/4	5.75	25.75
3/4	9 1/2	2 1/2	2.55	6.75	1 11/16	13	3 3/4	6.00	27.50
25/32	9 1/2	2 1/2	2.80	7.25	1 3/4	13 1/2	4	6.30	29.50
13/16	9 1/2	2 1/2	2.80	7.25	1 13/16	13 1/2	4	6.60	31.50
27/32	9 1/2	2 1/2	3.00	8.00	1 7/8	14	4 1/4	6.90	33.50
7/8	10	2 5/8	3.00	8.00	1 15/16	14	4 1/4	7.20	35.75
29/32	10	2 5/8	3.25	9.00	2	14	4 1/4	7.50	38.00
15/16	10	2 5/8	3.25	9.00					

TAPER SHANK FLUTED CHUCKING REAMERS

No. 124B Series, "Carbon" Steel.——No. 619 Series, "High Speed" Steel.

Diam. Inches	Length over all Inches	Length of Flute Inches	Taper Shank No.	Price Each		Diam. Inches	Length over all Inches	Length of Flute Inches	Taper Shank No.	Price Each	
				No. 124B Carbon Steel	No. 619 High Speed					No. 124B Carbon Steel	No. 619 High Speed
1/4	6	1 1/2	1	$1.45	$3.50	15/16	10	2 5/8	3	$3.90	$10.00
9/32	6	1 1/2	1	1.55	3.75	31/32	10	2 5/8	3	4.15	11.00
5/16	6	1 1/2	1	1.55	3.75	1	10 1/2	2 3/4	3	4.15	11.00
11/32	6	1 1/2	1	1.75	4.25	1 1/32	10 1/2	2 3/4	3	4.45	12.25
3/8	7	1 3/4	1	1.75	4.25	1 1/16	10 1/2	2 3/4	3	4.45	12.25
13/32	7	1 3/4	1	1.90	4.75	1 3/32	10 1/2	2 3/4	3	4.70	13.50
7/16	7	1 3/4	1	1.90	4.75	1 1/8	11	2 7/8	3	4.70	13.50
15/32	7	1 3/4	1	2.15	5.25	1 5/32	11	2 7/8	3	5.00	14.75
1/2	8	2	1	2.15	5.25	1 3/16	11	2 7/8	3	5.00	14.75
17/32	8	2	1	2.40	5.75	1 7/32	11	2 7/8	3	5.20	16.25
9/16	8	2	1	2.40	5.75	1 1/4	11 1/2	3	4	5.20	16.25
19/32	8	2 1/4	2	2.70	6.25	1 5/16	11 1/2	3	4	5.50	18.00
5/8	9	2 1/4	2	2.70	6.25	1 3/8	12	3 1/4	4	5.75	19.75
21/32	9	2 1/4	2	2.90	6.75	1 7/16	12	3 1/4	4	6.05	21.50
11/16	9	2 1/4	2	2.90	6.75	1 1/2	12 1/2	3 1/2	4	6.30	23.25
23/32	9	2 1/4	2	3.05	7.25	1 9/16	12 1/2	3 1/2	4	6.60	25.00
3/4	9 1/2	2 1/2	2	3.05	7.25	1 5/8	13	3 3/4	4	6.90	26.75
25/32	9 1/2	2 1/2	2	3.35	8.00	1 11/16	13	3 3/4	4	7.20	28.50
13/16	9 1/2	2 1/2	2	3.35	8.00	1 3/4	13 1/2	4	5	7.55	30.50
27/32	9 1/2	2 1/2	2	3.60	9.00	1 13/16	13 1/2	4	5	7.90	32.50
7/8	10	2 5/8	2	3.60	9.00	1 7/8	14	4 1/4	5	8.30	34.50
29/32	10	2 5/8	2	3.90	10.00	1 15/16	14	4 1/4	5	8.65	36.75
						2	14	4 1/4	5	9.00	39.00

Note.—We will furnish the above Reamers to order .004 to .010 undersize at regular prices.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

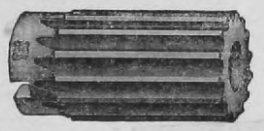
TAPER SHANK ROSE CHUCKING REAMERS

No. 124C Series, "Carbon" Steel.——No. 621 Series, "High Speed" Steel.

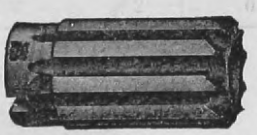
These Reamers have a flute for each cutting edge which relieves the reamers and prevents the chips crowding in on the surface and binding.

Diam. Inches	L'gth over all In.	L'gth of Flute In.	Taper Shank No.	Price Each No. 124C C'rb'n Steel	Price Each No. 621 High Speed
1/4	6	1 1/2	1	$1.45	$3.50
9/32	6	1 1/2	1	1.55	3.75
5/16	6	1 1/2	1	1.55	3.75
11/32	6	1 1/2	1	1.75	4.25
3/8	7	1 3/4	1	1.75	4.25
13/32	7	1 3/4	1	1.90	4.75
7/16	7	1 3/4	1	1.90	4.75
15/32	7	1 3/4	1	2.15	5.25
1/2	8	2	1	2.15	5.25
17/32	8	2	1	2.40	5.75
9/16	8	2	1	2.40	5.75
19/32	8	2	2	2.70	6.25
5/8	9	2 1/4	2	2.70	6.25
21/32	9	2 1/4	2	2.90	6.75
11/16	9	2 1/4	2	2.90	6.75
23/32	9	2 1/4	2	3.05	7.25
3/4	9 1/2	2 1/2	2	3.05	7.25
25/32	9 1/2	2 1/2	2	3.35	8.00
13/16	9 1/2	2 1/2	2	3.35	8.00
27/32	9 1/2	2 1/2	2	3.60	9.00
7/8	10	2 5/8	2	3.60	9.00
29/32	10	2 5/8	2	3.60	10.00
15/16	10	2 5/8	3	3.90	10.00
31/32	10	2 5/8	3	4.15	11.00
1	10 1/2	2 3/4	3	4.15	11.00
1 1/32	10 1/2	2 3/4	3	4.45	12.25
1 1/16	10 1/2	2 3/4	3	4.45	12.25
1 3/32	10 1/2	2 3/4	3	4.70	13.50
1 1/8	11	2 7/8	3	4.70	13.50
1 5/32	11	2 7/8	3	5.00	14.75
1 3/16	11	2 7/8	3	5.00	14.75
1 7/32	11	2 7/8	3	5.20	16.25
1 1/4	11 1/2	3	4	5.20	16.25
1 5/16	11 1/2	3	4	5.50	18.00
1 3/8	12	3 1/4	4	5.75	19.75
1 7/16	12	3 1/4	4	6.05	21.50
1 1/2	12 1/2	3 1/2	4	6.30	23.25
1 9/16	12 1/2	3 1/2	4	6.60	25.00
1 5/8	13	3 3/4	4	6.90	26.75
1 11/16	13	3 3/4	4	7.20	28.50
1 3/4	13 1/2	4	5	7.55	30.50
1 13/16	13 1/2	4	5	7.90	32.50
1 7/8	14	4 1/4	5	8.30	34.50
1 15/16	14	4 1/4	5	8.65	36.75
2	14	4 1/4	5	9.00	39.00

STANDARD SHELL REAMERS



Nos. 123 and 615, Fluted Shell.



Nos. 123½ and 616, Rose Shell.

Nos. 123 and 123½ Series, "Carbon" Steel.—Nos. 615 and 616 Series, "High Speed" Steel.

Diam. Inches	L'gth over all In.	Size of Hole In.	Fits Arb'r No.	Price Each 123-123½ C'rb'n Steel	Price Each 615-616 High Speed
1/2	2	1/4	3	$1.70	$3.25
17/32	2	1/4	3	1.80	3.40
9/16	2	1/4	3	1.80	3.40
19/32	2 1/4	3/8	4	1.90	3.55
5/8	2 1/4	3/8	4	1.90	3.55
21/32	2 1/4	3/8	4	2.00	3.70
11/16	2 1/4	3/8	4	2.00	3.70
23/32	2 1/2	1/2	5	2.10	3.85
3/4	2 1/2	1/2	5	2.10	3.85
25/32	2 1/2	1/2	5	2.20	4.00
13/16	2 1/2	1/2	5	2.20	4.00
27/32	2 1/2	1/2	5	2.30	4.25
7/8	2 1/2	1/2	5	2.30	4.25
29/32	2 1/2	1/2	5	2.40	4.50
15/16	2 1/2	1/2	5	2.40	4.50
31/32	2 3/4	5/8	6	2.50	4.75
1	2 3/4	5/8	6	2.50	4.75
1 1/32	2 3/4	5/8	6	2.70	5.00
1 1/16	2 3/4	5/8	6	2.70	5.00
1 3/32	2 3/4	5/8	6	2.90	5.25
1 1/8	2 3/4	5/8	6	2.90	5.25
1 5/32	2 3/4	5/8	6	3.10	5.50
1 3/16	2 3/4	5/8	6	3.10	5.50
1 7/32	2 3/4	5/8	6	3.30	5.75
1 1/4	2 3/4	5/8	6	3.30	5.75
1 9/32	3	3/4	7	3.55	6.00
1 5/16	3	3/4	7	3.55	6.00
1 11/32	3	3/4	7	3.80	6.50
1 3/8	3	3/4	7	3.80	6.50
1 13/32	3	3/4	7	4.05	7.00
1 7/16	3	3/4	7	4.05	7.00
1 15/32	3	3/4	7	4.30	7.50
1 1/2	3	3/4	7	4.30	7.50
1 17/32	3	3/4	7	4.55	8.25
1 9/16	3	3/4	7	4.55	8.25
1 19/32	3	3/4	7	4.80	9.00
1 5/8	3	3/4	7	4.80	9.00
1 21/32	3 1/2	1	8	5.10	9.75
1 11/16	3 1/2	1	8	5.10	9.75
1 23/32	3 1/2	1	8	5.40	10.50
1 3/4	3 1/2	1	8	5.40	10.50
1 25/32	3 1/2	1	8	5.70	11.25
1 13/16	3 1/2	1	8	5.70	11.25
1 27/32	3 1/2	1	8	6.00	12.00
1 7/8	3 1/2	1	8	6.00	12.00
1 29/32	3 1/2	1	8	6.30	12.75
1 15/16	3 1/2	1	8	6.30	12.75
1 31/32	3 1/2	1	8	6.60	13.50
2	3 1/2	1	8	6.60	13.50
2 1/16	3 3/4	1 1/4	9	6.95	14.25
2 1/8	3 3/4	1 1/4	9	7.30	15.00
2 3/16	3 3/4	1 1/4	9	7.65	15.75
2 1/4	3 3/4	1 1/4	9	8.00	16.50
2 5/16	3 3/4	1 1/4	9	8.35	17.25
2 3/8	3 3/4	1 1/4	9	8.70	18.00
2 7/16	3 3/4	1 1/4	9	9.05	18.75
2 1/2	3 3/4	1 1/4	9	9.40	19.50
2 9/16	4	1 1/2	10	9.80	20.50
2 5/8	4	1 1/2	10	10.20	21.75
2 11/16	4	1 1/2	10	10.60	23.00
2 3/4	4	1 1/2	10	11.00	24.25
2 13/16	4	1 1/2	10	11.40	25.50
2 7/8	4	1 1/2	10	11.80	27.00
2 15/16	4	1 1/2	10	12.20	28.50
3	4	1 1/2	10	12.60	30.00
3 1/16	4 1/2	1 3/4	11	13.10	31.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD TAPER REAMERS

No. 125—Finishing Reamer.

No. 125A—Roughing Reamer.

For Reaming Drill Sockets, Spindles, Etc. Carbon Steel.

Size Nos.	Length over all Inches	Length of Flute Inches	Diameter Small End Inches	Diameter Large End Inches	Taper Per Inch Inches	Taper Per Foot Inches	Finishing Each	Roughing Each
0	3 3/4	2 1/4	.250	.367	.05208	.625	$1.60	$1.90
1	5 1/2	3	.367	.517	.05000	.600	2.00	2.40
2	6 3/4	3 1/2	.569	.745	.05016	.602	2.60	3.10
3	7 3/4	4 1/4	.775	.988	.05016	.602	3.40	4.10
4	8 7/8	5 1/4	1.017	1.289	.05191	.623	4.20	5.05
5	10 3/8	6 1/8	1.471	1.799	.05250	.630	6.60	7.90
6	12	8 1/2	2.112	2.555	.05216	.626	12.00	14.40
7	16	12	2.746	3.371	.05208	.625	35.00	42.00

Note. Standard and Morse Tapers are the same.

STANDARD TAPER PIN REAMERS

No. 126—Taper ¼ inch per foot—Carbon Steel.

These Reamers have the same taper, and each will overlay in convenient measure the size next smaller. The diameter is taken at extreme end.

Size, Nos.	Length over all Inches	Length of Flute Inches	Diameter Small End Inches	Each
0	2 1/4	1 1/2	.135	$1.00
1	2 1/2	1 3/4	.146	1.00
2	3	2	.162	1.25
3	3 1/2	2 1/4	.183	1.50
4	4	2 1/2	.208	1.75
5	4 1/2	3	.240	2.00
6	5	3 5/8	.279	2.25
7	6	4 1/2	.331	2.50
8	6 3/4	5 1/4	.398	3.00
9	8	6 1/8	.482	3.50
10	9	7	.581	4.50
11	11 1/4	8 1/4	.706	6.00
12	13 3/8	10	.842	7.50
13	16	12	1.009	9.00
14	18 1/4	14	1.250	11.00

CENTER REAMERS

Style A.

Style B.

No. 128B

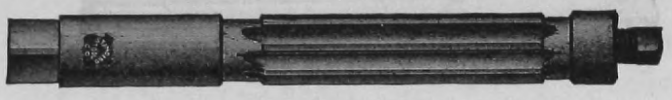
Included Angle 60°—Carbon Steel.

Size of Cut Inches	Diameter of Shank Inches	Style A		Style B	
		Price Each	Price Per Dozen	Price Each	Price Per Dozen
1/4	3/16	$0.25	$3.00	$0.30	$3.60
3/8	1/4	.30	3.60	.35	4.20
1/2	3/8	.35	4.20	.40	4.80
5/8	3/8	.60	7.20	.65	7.80
3/4	1/2	.80	9.60	.85	10.20

Note. We will furnish Center Reamers when desired with included angle of 72° or 82° at regular list prices. Other sizes and angles made to order. Orders for less than ½ dozen of a size will be charged at price each.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD EXPANSION REAMERS



No. 128D—Carbon Steel.

Diameter Inches	Length over all Inches	Length of Flute Inches	Each	Diameter Inches	Length over all Inches	Length of Flute Inches	Each
1/4	3 7/8	1 11/16	$3.00	31/32	8 3/8	3 3/4	6.50
9/32	4	1 3/4	3.05	1	8 3/8	3 3/4	6.75
5/16	4	1 3/4	3.10	1 1/16	8 11/16	4	7.25
11/32	4 1/4	1 3/4	3.15	1 1/8	9	4 1/8	7.75
3/8	4 1/4	1 3/4	3.20	1 3/16	9 3/8	4 1/4	8.30
13/32	4 1/2	1 3/4	3.25	1 1/4	9 3/4	4 3/8	8.90
7/16	4 1/2	1 3/4	3.30	1 5/16	10 1/8	4 1/2	9.50
15/32	5	1 13/16	3.35	1 3/8	10 1/2	4 9/16	10.50
1/2	5	1 13/16	3.40	1 7/16	10 7/8	4 3/4	11.50
17/32	5 1/2	2 1/8	3.50	1 1/2	11 1/8	4 13/16	12.50
9/16	5 1/2	2 1/8	3.65	1 9/16	11 1/4	4 13/16	13.00
19/32	6	2 1/2	3.80	1 5/8	11 1/2	4 7/8	13.50
5/8	6	2 1/2	4.00	1 11/16	11 5/8	4 7/8	14.00
21/32	6 1/4	2 1/2	4.20	1 3/4	11 7/8	5	14.50
11/16	6 1/4	2 1/2	4.40	1 13/16	12 1/16	5	15.00
23/32	6 9/16	2 11/16	4.60	1 7/8	12 1/4	5	15.50
3/4	6 9/16	2 11/16	4.80	1 15/16	12 3/8	5	16.00
25/32	7 1/16	3 1/16	5.00	2	12 9/16	5	16.50
13/16	7 1/16	3 1/16	5.25	2 1/8	12 3/4	5 1/8	17.50
27/32	7 1/2	3 5/16	5.50	2 1/4	13	5 1/8	18.50
7/8	7 1/2	3 5/16	5.75	2 3/8	13 1/2	5 1/4	19.50
29/32	7 7/8	3 9/16	6.00	2 1/2	14	5 3/8	20.50
15/16	7 7/8	3 9/16	6.25	.....	.....	.....	.....

Note.—The maximum expansion for the above reamers is as follows: 1/4 to 5/8 inch, .005; 11/16 to 1 inch, .008; 1 1/16 to 1 1/2 inch, .010; 1 9/16 to 2 inch, .012; 2 1/8 to 2 1/2 inch .015.

BIT STOCK TAPER REAMERS

No. 128—Taper 1 inch per foot—Carbon Steel.

Diameter Inches	Diameter of Small End Inches	Diameter of Large End Inches	Length Over all Inches	Length of Flute Inches	Price Each
1/4	.1563	.3125	4	1 7/8	$0.60
5/16	.2084	.3750	4 1/8	2	.60
3/8	.2605	.4375	4 1/4	2 1/8	.65
7/16	.3125	.5000	4 3/8	2 1/4	.70
1/2	.3647	.5625	4 1/2	2 3/8	.75
9/16	.4168	.6250	4 5/8	2 1/2	.80
5/8	.4689	.6875	4 3/4	2 5/8	.95
11/16	.5210	.7500	4 7/8	2 3/4	1.10
3/4	.5729	.8125	5	2 7/8	1.25
13/16	.6250	.8750	5 1/8	3	1.50
7/8	.6772	.9375	5 1/4	3 1/8	1.75
15/16	.7293	1.0000	5 3/8	3 1/4	2.00
1	.7814	1.0625	5 1/2	3 3/8	2.25
1 1/16	.8335	1.1250	5 5/8	3 1/2	2.50
1 1/8	.8856	1.1875	5 3/4	3 5/8	2.85
1 3/16	.9376	1.2500	5 7/8	3 3/4	3.20
1 1/4	.9896	1.3125	6	3 7/8	3.55
1 5/16	1.0420	1.3750	6 1/8	4	3.90
1 3/8	1.0940	1.4375	6 1/4	4 1/8	4.25
1 7/16	1.1460	1.5000	6 3/8	4 1/4	4.60
1 1/2	1.1980	1.5625	6 1/2	4 3/8	5.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD ARBORS FOR SHELL REAMERS

STRAIGHT SHANK

No. 130

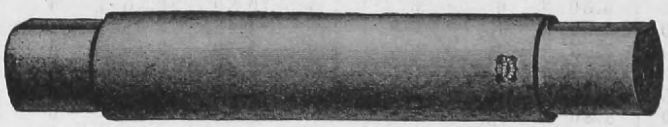
Size Nos.	Length over all Inches	Fitting Sizes Inches	Each	Size Nos.	Length over all Inches	Fitting Sizes Inches	Each	Size Nos.	Length over all Inches	Fitting Sizes Inches	Each
3	8	½ to 9/16	$2.40	8	12	1 11/16 to 2	$4.00	12	16	3 9/16 to 4	$10.50
4	9	5/8 to 11/16	2.70	9	13	2 1/16 to 2 ½	4.50	13	17	4 1/16 to 4 ½	13.50
5	9 ½	¾ to 15/16	3.00	10	14	2 9/16 to 3	5.25	14	18	4 9/16 to 5 ½	18.00
6	10	1 to 1 ¼	3.30	11	15	3 1/16 to 3 ½	7.50	15	19	5 9/16 to 6 ½	22.00
7	11	15/16 to 1 5/8	3.60								

TAPER SHANK

No. 130½

Size Nos.	Length over all Inches	Fitting Sizes Inches	Taper Shank	Each	Size Nos.	Length over all Inches	Fitting Sizes Inches	Taper Shank	Each	Size Nos.	Length over all Inches	Fitting Sizes Inches	Taper Shank	Each
3	8	½ to 9/16	No. 1	$2.90	8	12	1 11/16 to 2	No. 4	$4.80	12	16	3 9/16 to 4	No. 5	$12.60
4	9	5/8 to 11/16	No. 2	3.25	9	13	2 1/16 to 2 ½	No. 4	5.40	13	17	4 1/16 to 4 ½	No. 5	16.20
5	9 ½	¾ to 15/16	No. 2	3.60	10	14	2 9/16 to 3	No. 5	6.30	14	18	4 9/16 to 5 ½	No. 5	21.60
6	10	1 to 1 ¼	No. 3	3.95	11	15	3 1/16 to 3 ½	No. 5	9.00	15	19	5 9/16 to 6 ½	No. 6	26.40
7	11	15/16 to 1 5/8	No. 3	4.30										

STEEL MANDRELS



No. 121—Hardened and Ground

These Mandrels are slightly tapered and as they correspond in size to our Reamers, will fit holes reamed by them. The size is stamped on the large end and the diameter is taken at a point distant from the small end an amount equal to the diameter.

Diameter Inches	Length over all Inches	Each	Diameter Inches	Length over all Inches	Each	Diameter Inches	Length over all Inches	Each	Diameter Inches	Length over all Inches	Each
¼	3 ¾	$0.80	1 1/8	7 ½	$2.45	2	11	$6.50	2 7/8	13	$15.00
5/16	4	.90	1 3/16	7 ¾	2.60	2 1/16	11 ½	7.00	2 15/16	13	15.75
3/8	4 ¼	1.00	1 ¼	8	2.80	2 1/8	11 ½	7.50	3	13	16.50
7/16	4 ½	1.10	1 5/16	8 ¼	3.00	2 3/16	12	8.00	3 1/8	14	18.00
½	5	1.20	1 3/8	8 ½	3.25	2 ¼	12	8.50	3 ¼	14	19.50
9/16	5 ¼	1.30	1 7/16	8 ¾	3.50	2 5/16	12	9.00	3 3/8	15	21.00
5/8	5 ½	1.40	1 ½	9	3.75	2 3/8	12	9.50	3 ½	15	23.00
11/16	5 ¾	1.50	1 9/16	9 ¼	4.00	2 7/16	12 ½	10.00	3 5/8	16	25.00
¾	6	1.60	1 5/8	9 ½	4.25	2 ½	12 ½	10.50	3 ¾	16	27.00
13/16	6 ¼	1.70	1 11/16	9 ¾	4.50	2 9/16	12 ½	11.25	3 7/8	17	29.00
7/8	6 ½	1.85	1 ¾	10	4.75	2 5/8	12 ½	12.00	4	17	31.00
15/16	6 ¾	2.00	1 13/16	10 ¼	5.00	2 11/16	13	12.75			
1	7	2.15	1 7/8	10 ½	5.50	2 ¾	13	13.50			
1 1/16	7 ¼	2.30	1 15/16	10 ¾	6.00	2 13/16	13	14.25			

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STANDARD MILLING CUTTERS

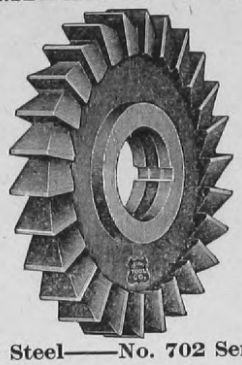
No. 139 Series, "Carbon" Steel.——No. 700 Series, "High Speed" Steel.

Cutters of ¾ inch Face and over are made with Spiral Teeth.

Width of Face Inches	Diam. Inches	Hole Inches	Price Each		Width of Face Inches	Diam. Inches	Hole Inches	Price Each		Width of Face Inches	Diam. Inches	Hole Inches	Price Each	
			No. 139 Carbon Steel	No. 700 High Speed				No. 139 Carbon Steel	No. 700 High Speed				No. 139 Carbon Steel	No. 700 High Speed
3/16	2 1/4	7/8	$1.30	$2.05	1/4	3	1	$1.60	$2.75	9/16	4	1 1/4	$4.10	$ 7.25
1/2	2 1/4	7/8	1.75	2.85	5/16	3	1	1.85	3.20	5/8	4	1 1/4	4.30	7.65
1	2 1/4	7/8	2.50	4.55	3/8	3	1 1/4	2.10	3.55	11/16	4	1 1/4	4.50	8.05
1 3/4	2 1/4	7/8	3.30	5.80	7/16	3	1 1/4	2.25	3.85	3/4	4	1 1/4	4.70	8.45
3/16	2 1/2	1	1.30	2.10	1/2	3	1 1/4	2.40	4.10	3/4	4	1 1/2	4.70	8.45
1/4	2 1/2	1	1.40	2.30	9/16	3	1 1/4	2.55	4.40	7/8	4	1 1/4	5.15	9.30
5/16	2 1/2	1	1.50	2.55	5/8	3	1 1/4	2.70	4.70	1	4	1 1/4	5.65	10.25
3/8	2 1/2	1	1.60	2.65	11/16	3	1 1/4	2.85	4.95	1	4	1 1/2	5.65	10.25
7/16	2 1/2	1	1.70	2.80	3/4	3	1 1/4	3.00	5.20	1 1/4	4	1 1/4	6.25	11.60
1/2	2 1/2	1	1.80	3.00	7/8	3	1 1/4	3.30	5.75	1 1/4	4	1 1/2	6.25	11.60
9/16	2 1/2	1	1.90	3.20	1	3	1 1/4	3.60	6.35	1 1/2	4	1 1/4	6.65	12.70
5/8	2 1/2	1	2.00	3.45	1 1/4	3	1 1/4	4.00	7.20	1 1/2	4	1 1/2	6.65	12.70
11/16	2 1/2	1	2.10	3.55	1 1/2	3	1 1/4	4.30	7.85	1 3/4	4	1 1/4	7.05	13.70
3/4	2 1/2	1	2.20	3.80	1 3/4	3	1 1/4	4.50	8.45	1 3/4	4	1 1/2	7.05	13.70
13/16	2 1/2	1	2.30	4.00	2	3	1 1/4	4.70	9.00	2	4	1 1/4	7.45	14.85
7/8	2 1/2	1	2.40	4.15	2 1/2	3	1 1/4	5.20	10.35	2	4	1 1/2	7.45	14.85
1	2 1/2	1	2.60	4.55	3	3	1 1/4	5.40	11.20	2 1/2	4	1 1/4	8.40	17.20
1 1/8	2 1/2	1	2.75	4.85	3 1/2	3	1 1/4	5.90	12.50	3	4	1 1/4	9.00	19.10
1 1/4	2 1/2	1	2.90	5.15	4	3	1 1/4	6.40	13.80	3	4	1 1/2	9.00	19.10
1 1/2	2 1/2	1	3.10	5.65	5	3	1 1/4	7.80	16.90	3 1/2	4	1 1/4	10.00	21.55
1 3/4	2 1/2	1	3.40	6.30	6	3	1 1/4	10.80	22.15	4	4	1 1/4	11.00	23.95
2	2 1/2	1	3.70	6.90	3/16	3 1/2	1	1.45	2.65	4	4	1 1/2	11.00	23.95
2 1/4	2 1/2	1	3.90	7.35	1/4	3 1/2	1	1.70	3.10	5	4	1 1/4	13.50	28.95
2 1/2	2 1/2	1	4.10	7.85	5/16	3 1/2	1	2.05	3.65	5	4	1 1/2	13.50	28.95
2 3/4	2 1/2	1	4.25	8.20	3/8	3 1/2	1	2.40	4.25	6	4	1 1/4	15.50	34.45
3	2 1/2	1	4.50	8.80	7/16	3 1/2	1	2.75	4.40	6	4	1 1/2	15.50	34.45
3 1/2	2 1/2	1	5.00	9.90	1/2	3 1/2	1 1/4	3.15	5.45	3/8	4 1/2	1 3/4	3.35	6.20
4	2 1/2	1	5.50	11.00	9/16	3 1/2	1 1/4	3.30	5.75	3/8	4 1/2	2	3.35	6.20
3/16	2 3/4	1	1.30	2.20	5/8	3 1/2	1 1/4	3.45	6.05	7/16	4 1/2	1 3/4	3.75	6.90
1/4	2 3/4	1	1.50	2.50	11/16	3 1/2	1 1/4	3.65	6.45	7/16	4 1/2	2	3.75	6.90
5/16	2 3/4	1	1.60	2.70	3/4	3 1/2	1 1/4	3.85	6.80	1/2	4 1/2	1 3/4	4.10	7.50
3/8	2 3/4	1	1.80	2.90	7/8	3 1/2	1 1/4	4.35	7.70	1/2	4 1/2	2	4.10	7.50
7/16	2 3/4	1	1.85	3.20	1	3 1/2	1 1/4	4.75	8.25	9/16	4 1/2	1 3/4	4.40	8.15
1/2	2 3/4	1	1.90	3.30	1 1/4	3 1/2	1 1/4	5.15	9.10	9/16	4 1/2	2	4.40	8.15
9/16	2 3/4	1	2.00	3.55	1 1/2	3 1/2	1 1/4	5.60	10.00	5/8	4 1/2	1 3/4	4.60	8.60
5/8	2 3/4	1	2.10	3.90	1 3/4	3 1/2	1 1/4	6.00	11.30	5/8	4 1/2	2	4.60	8.60
11/16	2 3/4	1	2.30	4.05	2	3 1/2	1 1/4	6.40	12.30	11/16	4 1/2	1 3/4	4.85	9.10
3/4	2 3/4	1	2.50	4.35	2 1/2	3 1/2	1 1/4	6.90	13.80	11/16	4 1/2	2	4.85	9.10
7/8	2 3/4	1	2.85	4.95	3	3 1/2	1 1/4	7.40	15.35	3/4	4 1/2	1 3/4	5.10	9.60
1	2 3/4	1	3.10	5.35	3 1/2	3 1/2	1 1/4	8.15	16.70	3/4	4 1/2	2	5.10	9.60
1 1/8	2 3/4	1	3.25	5.50	4	3 1/2	1 1/4	9.15	19.30	7/8	4 1/2	1 3/4	5.50	10.50
1 1/4	2 3/4	1	3.40	6.10	5	3 1/2	1 1/4	10.40	22.20	7/8	4 1/2	2	5.50	10.50
1 1/2	2 3/4	1	3.75	6.80	6	3 1/2	1 1/4	11.90	26.30	1	4 1/2	1 3/4	6.00	11.55
1 3/4	2 3/4	1	4.00	7.40	1/4	4	1	2.00	3.80	1	4 1/2	2	6.00	11.55
2	2 3/4	1	4.20	7.95	1/4	4	1 1/4	2.00	3.80	1 1/4	4 1/2	1 3/4	6.60	13.00
2 1/2	2 3/4	1	4.60	9.00	5/16	4	1	2.50	4.55	1 1/4	4 1/2	2	6.60	13.00
3	2 3/4	1	5.00	10.00	5/16	4	1 1/4	2.50	4.55	1 1/2	4 1/2	1 3/4	7.25	14.60
3 1/2	2 3/4	1	5.50	11.20	3/8	4	1	3.00	5.35	1 1/2	4 1/2	2	7.25	14.60
4	2 3/4	1 1/4	6.00	12.65	3/8	4	1 1/4	3.00	5.35	1 3/4	4 1/2	1 3/4	8.00	16.30
5	2 3/4	1 1/4	7.40	15.30	7/16	4	1 1/4	3.50	6.15	1 3/4	4 1/2	2	8.00	16.30
6	2 3/4	1 1/4	10.00	19.80	1/2	4	1 1/4	3.90	6.85	2	4 1/2	1 3/4	8.75	18.00
3/16	3	1	1.35	2.35	1/2	4	1 1/2	3.90	6.85	2	4 1/2	2	8.75	18.00

Digitized by Google UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SIDE MILLING CUTTERS



No. 141 Series, "Carbon" Steel——No. 702 Series, "High Speed" Steel.

These Cutters having teeth on both sides and face, are suitable for milling the sides of Nuts, Bolt Heads and similar work. **In ordering** always specify size of hole wanted.

Width of Face Inches	Diameter Inches	Hole Inches	Price Each No. 141 Carbon	Price Each No. 702 High Speed	Width of Face Inches	Diameter Inches	Hole Inches	Price Each No. 141 Carbon	Price Each No. 702 High Speed
3/16	2	1/2	$1.85	$3.05	9/16	3 1/2	1	$4.55	$7.65
3/16	2	5/8	1.85	3.05	5/8	3 1/2	1	4.55	7.65
1/4	2	1/2	2.00	3.25	1/2	4	1	5.10	8.55
1/4	2	5/8	2.00	3.25	5/8	4	7/8	5.55	9.45
3/8	2	1/2	2.20	3.55	5/8	4	1	5.55	9.45
3/8	2	5/8	2.20	3.55	5/8	4	1 1/4	5.55	9.45
1/4	2 1/2	7/8	2.20	3.30	3/4	4	1	6.00	10.40
5/16	2 1/2	7/8	2.30	3.60	7/8	4	1	6.50	11.35
3/8	2 1/2	7/8	2.45	3.70	3/4	5	1	6.35	12.45
7/16	2 1/2	7/8	2.55	3.85	3/4	5	1 1/4	6.35	12.45
1/2	2 1/2	7/8	2.65	4.10	7/8	5	1	6.90	13.65
1/4	2 3/4	7/8	2.30	3.55	1	5	1	7.80	15.05
5/16	2 3/4	7/8	2.50	3.80	3/4	6	1, 1 1/4	7.60	15.35
3/8	2 3/4	7/8	2.65	4.00	15/16	6	1 1/4	8.65	18.55
7/16	2 3/4	7/8	2.75	4.35	15/16	6	1 1/2	8.65	18.55
1/2	2 3/4	7/8	2.80	4.45	1	6	1	8.65	18.55
1/4	3	1	2.45	3.85	1	7	1 1/4	16.10	28.95
5/16	3	1	2.75	4.35	1 1/8	7	1 1/4	17.25	31.55
3/8	3	1	3.00	4.75	1	8	1 1/4	19.55	37.30
7/16	3	1	3.20	5.10	1 3/8	8	1 1/4	23.00	46.65
1/2	3	1	3.35	5.40	1 3/8	8	1 1/2	23.00	46.65
7/16	3 1/2	1	3.75	5.75	1 3/8	8	1 3/4	23.00	46.65
1/2	3 1/2	1	4.20	6.95	1 3/8	8	2	23.00	46.65

ANGULAR CUTTERS

Cut of Right Hand.

No. 138M Series, "Carbon" Steel.
No. 712 Series, "High Speed" Steel.

Angular Cutters, with 45°, 50°, 60°, 70° or 80° angle, for cutting the teeth of cutters and mills, but not adapted for spiral milling. **Specify** Right or Left Hand as wanted.

Diam. Inches	Thickness Inch	Hole Inches	Price Each No. 138M Carbon	Price Each No. 712 High Speed
2 1/2	1/2	7/8	$2.65	$4.10
2 3/4	1/2	1	2.80	4.45
3	1/2	1 1/4	3.35	5.40
3 1/4	1/2	1 1/2	3.75	6.15

Cut of Left Hand.

No. 138K Series, "Carbon" Steel.
No. 715 Series, "High Speed" Steel.

Angular Cutters, with One Side ground Concave and 45°, 50°, 60°, 70° or 80° angles. **Specify** Right or Left Hand as wanted.

Diam. Inches	Thickness Inch	Hole Inches	Price Each No. 138K Carbon	Price Each No. 715 High Speed
2 1/2	1/2	7/8	$2.65	$4.10
2 3/4	1/2	1	2.80	4.45
3	1/2	1 1/4	3.35	5.40
3 1/4	1/2	1 1/2	3.75	6.15

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DOUBLE ANGLE CUTTERS

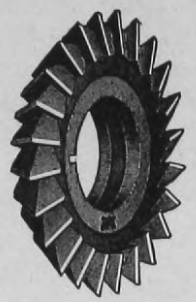
No. 138N Series, "Carbon" Steel.

No. 716 Series, "High Speed" Steel.

Double Angle Cutters, with 45°, 60° or 90° included angle, for cutting Reamers, Angles and V Grooves.

Diam. Inches	Thickness Inch	Hole Inches	Price Each	
			No. 138N Carbon	No. 716 High Speed
2 ½	½	⅞	$2.65	$4.10
2 ¾	½	1	2.80	4.45
3	½	1 ¼	3.35	5.40

SPIRAL MILL CUTTERS



No. 138J Series, "Carbon" Steel.

No. 717 Series, "High Speed" Steel.

Spiral Mill Cutters, with 40°, 48° or 53° angle on one side, 12° on the other. **Specify** Right or Left Hand.

Diam. Inches	Thickness Inch	Hole Inches	Price Each	
			No. 138J Carbon	No. 717 High Speed
2 ½	½	⅞	$2.65	$4.10
2 ¾	½	1	2.80	4.45
3	½	1 ¼	3.35	5.40
3 ¼	½	1 ½	3.75	6.15

CONVEX AND CONCAVE CUTTERS

CONVEX

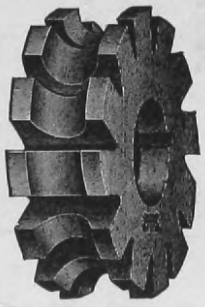
No. 142 Series, "Carbon" Steel.

No. 720 Series, "High Speed" Steel.

"Convex" Cutters for Milling Half Circles

Diam. of Circle Inches	Diameter of Cutter Inches	Hole Inch	Price Each	
			No. 142 Carbon	No. 720 High Speed
⅛	2	⅞	$2.00	$2.85
3/16	2	⅞	2.25	2.90
¼	2	⅞	2.50	3.20
5/16	2 ¼	⅞	2.80	4.10
⅜	2 ¼	⅞	3.10	4.55
7/16	2 ¼	⅞	3.35	4.95
½	2 ¼	⅞	3.60	5.35
⅝	2 ¾	1	4.00	5.95
¾	3	1	4.40	7.10
⅞	3 ¼	1	4.80	8.00
1	3 ¼	1	5.25	8.80
1 ⅛	3 ½	1	5.75	9.90
1 ¼	3 ½	1	6.25	10.80
1 ⅜	3 ¾	1	7.00	12.20
1 ½	3 ¾	1	7.75	13.90

CONCAVE



No. 142A Series, "Carbon" Steel.

No. 721 Series, "High Speed" Steel.

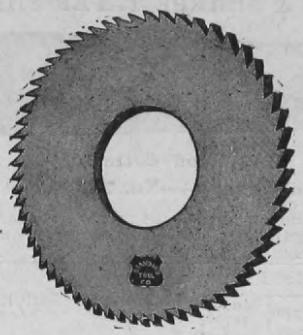
"Concave" Cutters for Milling Half Circles

Diam. of Circle Inches	Diameter of Cutter Inches	Hole Inch	Price Each	
			No. 142A Carbon	No. 721 High Speed
⅛	2	⅞	$2.40	$3.50
3/16	2	⅞	2.70	3.95
¼	2	⅞	3.00	4.40
5/16	2 ¼	⅞	3.35	5.00
⅜	2 ¼	⅞	3.70	5.55
7/16	2 ¼	⅞	4.00	6.00
½	2 ¼	⅞	4.30	6.50
⅝	2 ¾	1	4.80	7.85
¾	3	1	5.25	8.75
⅞	3 ¼	1	5.75	10.00
1	3 ¼	1	6.30	11.00
1 ⅛	3 ½	1	6.90	12.50
1 ¼	3 ½	1	7.50	13.60
1 ⅜	3 ¾	1	8.40	15.70
1 ½	3 ¾	1	9.30	17.25

Note. Convex and Concave Cutters can be sharpened without changing their outline.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SCREW SLOTTING CUTTERS

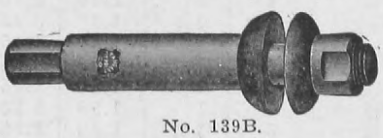


No. 139A—Carbon Steel.

These Cutters have a fine pitch of teeth especially adapted for the slotting of Screw Heads and similar work.

Thickness by American Standard Wire Gauge	Thickness in Decimals of Inch	Diameter Inches	Hole, Inches	No. 139A Carbon Each	Thickness by American Standard Wire Gauge	Thickness in Decimals of Inch	Diameter Each	Hole, Inches	No. 139A Carbon Each
5	.182	2¾	1	$0.70	17	.045	2¼	⅝	$0.15
6	.162	2¾	1	.60	18	.040	2¼	⅝	.15
7	.144	2¾	1	.50	19	.035	2¼	⅝	.15
8	.128	2¾	¾ and 1	.45	20	.032	2¼	½, ⅝ and ¾	.15
9	.114	2¾	¾ and 1	.40	21	.028	2¼	½, ⅝ and ¾	.15
10	.102	2¾	¾ and 1	.35	22	.025	2¼	½, ⅝ and ¾	.15
11	.091	2¾	¾ and 1	.30	23	.023	2¼	½, ⅝ and ¾	.15
12	.081	2¾	¾ and 1	.25	24	.020	2¼	½, ⅝ and ¾	.15
13	.072	2¾	¾ and 1	.20	25	.018	2¼	½, ⅝ and ¾	.15
14	.064	2¾	½, ⅝, ¾ and 1	.20	26	.016	2¼	½, ⅝ and ¾	.15
15	.057	2¾	½, ⅝, ¾ and 1	.15	27	.014	2¼	½, ⅝ and ¾	.15
16	.051	2¾	½, ⅝, ¾ and 1	.15	28	.012	2¼	½, ⅝ and ¾	.15
17	.045	2¾	½, ⅝, ¾ and 1	.15	30	.010	2¼	½, ⅝ and ¾	.15
18	.040	2¾	½, ⅝, ¾ and 1	.15	32	.008	2¼	½, ⅝ and ¾	.15
19	.035	2¾	½, ⅝, ¾ and 1	.15	34	.006	2¼	½, ⅝ and ¾	.15
20	.032	2¾	½, ⅝, ¾ and 1	.15	14	.064	1¾	⅝	.15
21	.028	2¾	½, ⅝, ¾ and 1	.15	15	.057	1¾	⅝	.15
22	.025	2¾	½, ⅝, ¾ and 1	.15	16	.051	1¾	⅝	.15
23	.023	2¾	½, ⅝, ¾ and 1	.15	17	.045	1¾	⅝	.15
24	.020	2¾	½, ⅝, ¾ and 1	.15	18	.040	1¾	⅝	.15
25	.018	2¾	½, ⅝, ¾ and 1	.15	19	.035	1¾	⅝	.15
26	.016	2¾	½, ⅝, ¾ and 1	.15	20	.032	1¾	⅝	.15
27	.014	2¾	½, ⅝, ¾ and 1	.15	21	.028	1¾	⅝	.15
28	.012	2¾	½, ⅝, ¾ and 1	.15	22	.025	1¾	⅝	.15
30	.010	2¾	½, ⅝, ¾ and 1	.15	23	.023	1¾	⅝	.15
32	.008	2¾	⅛, ⅝, ¾ and 1	.15	24	.020	1¾	⅜, ½ and ⅝	.12
34	.006	2¾	½, ⅝, ¾ and 1	.15	25	.018	1¾	⅜, ½ and ⅝	.12
10	.102	2¼	⅝	.30	26	.016	1¾	⅜, ½ and ⅝	.12
11	.091	2¼	⅝	.25	27	.014	1¾	⅜, ½ and ⅝	.12
12	.081	2¼	⅝	.20	28	.012	1¾	⅜, ½ and ⅝	.12
13	.072	2¼	⅝	.15	30	.010	1¾	⅜, ½ and ⅝	.12
14	.064	2¼	⅝	.15	32	.008	1¾	⅜, ½ and ⅝	.12
15	.057	2¼	⅝	.15	34	.006	1¾	⅜, ½ and ⅝	.12
16	.051	2¼	⅝	.15	....	....	....	.....	....

ARBORS FOR SCREW SLOTTING CUTTERS



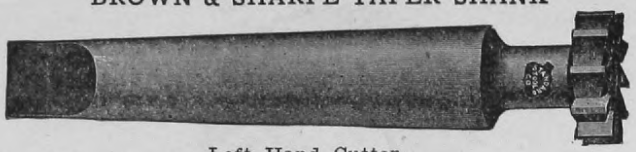
No. 139B.

No. 139B—Arbors for Screw Slotting Cutters..... Each, $2.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD T SLOT CUTTERS

BROWN & SHARPE TAPER SHANK



Left Hand Cutter.

No. 137F Series, "Carbon" Steel——No. 766 Series, "High Speed" Steel.

The Cutters are made 1/32 inch larger in diameter and 1/64 inch greater in thickness than the sizes given below to allow for sharpening. **In ordering** specify if Right or Left Hand Cutters are wanted.

Diam. Inches	Thickness Inch	Diam. of Neck Inch	Length of Neck Inches	Taper Shank No.	Price Each No. 137F Carbon	Price Each No. 766 High Speed	Diam. Inches	Thickness Inch	Diam. of Neck Inch	Length of Neck Inches	Taper Shank No.	Price Each No. 137F Carbon	Price Each No. 766 High Speed
1/2	5/32	7/32	1/4	4	$1.50	$2.10	13/16	7/32	3/8	7/16	9	$2.50	$4.25
1/2	5/32	7/32	1/4	5	1.60	2.25	15/16	9/32	7/16	1/2	7	2.60	4.15
5/8	5/32	9/32	5/16	5	1.80	2.60	15/16	9/32	7/16	1/2	9	2.80	4.80
5/8	5/32	9/32	5/16	7	2.10	3.25	1 3/16	13/32	17/32	5/8	9	3.10	5.55
11/16	7/32	11/32	3/8	5	2.00	2.90	1 5/16	17/32	21/32	15/16	9	3.45	6.35
11/16	7/32	11/32	3/8	7	2.20	3.35	1 5/8	11/16	25/32	1 1/16	9	3.75	7.75
13/16	7/32	3/8	7/16	7	2.35	3.65	1 7/8	13/16	29/32	1 3/16	9	4.00	8.95

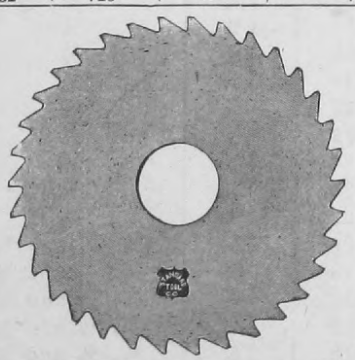
STANDARD TAPER SHANK

Left Hand Cutter.

No. 137E Series, "Carbon" Steel——No. 767 Series, "High Speed" Steel.

These Cutters are made 1/32 inch larger in diameter and 1/64 inch greater in thickness than sizes given below to allow for sharpening. **In ordering** always specify if Right or Left Hand Cutters are wanted.

Diam. Inches	Thickness Inch	Diam. of Neck Inch	Length of Neck Inches	Taper Shank No.	Price Each No. 137E Carbon	Price Each No. 767 High Speed	Diam. Inches	Thickness Inch	Diam. of Neck Inch	Length of Neck Inches	Taper Shank No.	Price Each No. 137E Carbon	Price Each No. 767 High Speed
1/2	5/32	7/32	1/4	1	$1.65	$2.30	13/16	13/32	17/32	5/8	3	$3.25	$5.75
5/8	5/32	9/32	5/16	1	1.95	2.80	15/16	17/32	21/32	15/16	3	3.60	6.60
11/16	7/32	11/32	3/8	2	2.15	3.10	1 5/8	11/16	25/32	1 1/16	4	3.90	8.00
13/16	7/32	3/8	7/16	2	2.50	3.85	1 7/8	13/16	29/32	1 3/16	4	4.15	9.25
15/16	9/32	7/16	1/2	2	2.75	4.50	.....	.....	.....	.....	.....	.....	.....



METAL SLITTING SAWS

No. 139C Series, "Carbon" Steel.

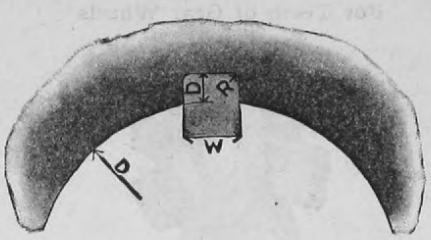
No. 724 Series, "High Speed" Steel.

These are thin Milling Cutters with sides ground slightly concave for clearance. When ordering Special Saws, mention the kind of work for which they are intended.

Thickness Inch	Diam. Inches	Hole Inches	Price Each No. 139C Carbon	Price Each No. 724 High Speed	Thickness Inch	Diam. Inches	Hole Inches	Price Each No. 139C Carbon	Price Each No. 724 High Speed	Thickness Inch	Diam. Inches	Hole Inches	Price Each No. 139C Carbon	Price Each No. 724 High Speed
1/32	2 1/2	7/8	$1.00	$2.50	1/32	4	1	$2.25	$4.60	5/32	5	1	$1.90	$4.30
3/64	2 1/2	7/8	.95	2.40	3/64	4	1	1.45	3.15	3/16	5	1	2.30	4.30
1/16	2 1/2	7/8	.90	2.35	1/16	4	1	1.25	2.95	1/16	6	1	4.00	7.50
3/32	2 1/2	7/8	.90	2.35	3/32	4	1	1.20	2.85	3/32	6	1	3.00	5.85
1/8	2 1/2	7/8	.90	2.35	1/8	4	1	1.20	2.85	1/8	6	1	2.70	5.35
5/32	2 1/2	7/8	1.10	2.60	5/32	4	1	1.40	3.45	3/16	6	1 1/2	3.50	6.45
1/32	3	1	1.25	2.95	3/16	4	1	1.60	3.45	3/16	6	1 3/4	3.50	6.45
3/64	3	1	1.10	2.60	1/16	5	1	1.80	3.85	3/16	6	1	3.50	6.45
1/16	3	1	1.00	2.50	3/32	5	1	1.50	3.35	1/16	7	1	7.50	11.00
3/32	3	1	1.00	2.50	1/8	5	1	1.50	3.35	3/32	7	1	4.50	8.35
1/8	3	1	1.00	2.50	1/8	5	1 1/4	1.50	3.35	1/8	7	1	3.80	7.20
5/32	3	1	1.15	2.85	1/8	5	1 1/2	1.50	3.35	1/8	8	1	5.75	12.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

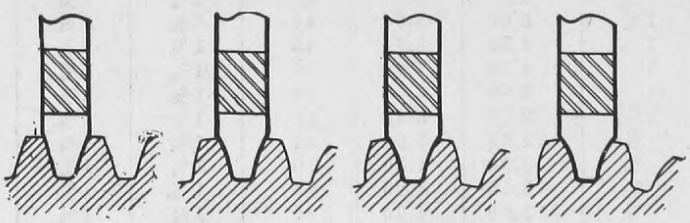
STANDARD KEYWAYS FOR CUTTERS



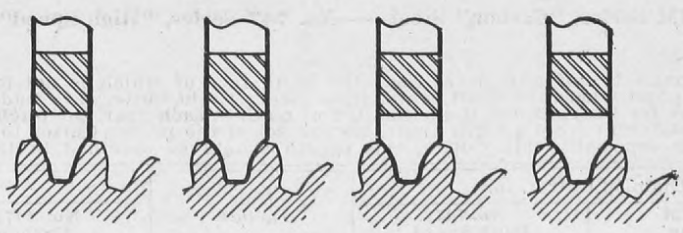
Diameter (D) of Hole—Inches	Width (W) of Keyway—Inches	Depth (D) of Keyway—Inches	Radius (R) Inches
3/8 to 9/16	3/32	3/64	.020
5/8 to 7/8	1/8	1/16	.030
15/16 to 1 1/8	5/32	5/64	.035
1 3/16 to 1 3/8	3/16	3/32	.040
1 7/16 to 1 3/4	1/4	1/8	.050
1 13/16 to 2	5/16	5/32	.060
2 1/16 to 2 1/2	3/8	3/16	.060
2 9/16 to 3	7/16	3/16	.060

COMPARATIVE CURVES OF INVOLUTE CUTTERS

For Teeth of Gear Wheels



No. 1 To Cut from **135** to a rack.
No. 2 To Cut from **55** to **134** Teeth
No. 3 To Cut from **35** to **54** Teeth
No. 4 To Cut from **26** to **34** Teeth



No. 5 To Cut from **21** to **25** Teeth
No. 6 To Cut from **17** to **20** Teeth
No. 7 To Cut from **14** to **16** Teeth
No. 8 To Cut from **12** to **13** Teeth

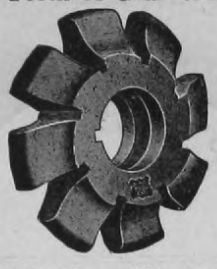
When extreme accuracy is required, an individual cutter should be used for each size of gear wheel. However, careful experiment has shown that a set of eight properly selected cutters will cut all gears ranging in size from twelve teeth to a rack, and give good results.

The diagram above shows how the curves vary in the eight different cutters that are required to make a complete set for any one pitch. All gears, of the same pitch, cut with these cutters will be interchangeable but a cutter should never be used for any gear other than those included in the range which it is designed to cut.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVOLUTE GEAR CUTTERS

For Teeth of Gear Wheels



No. 147 Series, "Carbon" Steel——No. 735 Series, "High Speed" Steel.

These Cutters can be sharpened by grinding the faces of the teeth, without changing their form. All gears of same pitch cut with these Cutters will interchange. Each Cutter is marked with Number, Diametral Pitch and Number of Teeth for which it is adapted. **In ordering** always state number of Cutter and Diametral Pitch required.

Diametral Pitch	Diam. of Cutter, In.		Hole Inches	Price Each		Diametral Pitch	Diam. of Cutter, In.		Hole Inches	Price, Each	
	No. 147 Carbon Steel	No. 735 High Speed		No. 147 Carbon Steel	No. 735 High Speed		No. 147 Carbon Steel	No. 735 High Speed		No. 147 Carbon Steel	No. 735 High Speed
1	8 1/2	8 1/2	2	$45.00	$85.00	14	2	2 1/8	7/8	$2.70	$3.75
1 1/4	7 3/4	7 3/4	2	38.00	70.00	15	2	2 1/8	7/8	2.60	3.60
1 1/2	7	7	1 3/4	32.00	55.00	16	2	2 1/8	7/8	2.50	3.50
1 3/4	6 1/2	6 1/2	1 3/4	24.00	45.00	18	1 7/8	2	7/8	2.40	3.40
2	5 3/4	5 3/4	1 1/2	16.00	35.00	20	1 7/8	2	7/8	2.30	3.30
2 1/4	5 3/4	5 3/4	1 1/2	13.00	28.00	22	1 7/8	2	7/8	2.20	3.20
2 1/2	5 1/2	5 3/4	1 1/2	11.00	23.00	24	1 3/4	1 3/4	7/8	2.10	3.10
2 3/4	5 1/8	5 1/2	1 1/2	10.00	20.00	26	1 3/4	1 3/4	7/8	2.00	3.00
3	4 3/8	4 3/4	1 1/4	8.00	18.00	28	1 3/4	1 3/4	7/8	1.80	3.00
3 1/4	4 1/4	4 5/8	1 1/4	7.00	16.00	30	1 3/4	1 3/4	7/8	1.80	3.00
3 1/2	4 1/8	4 1/2	1 1/4	6.75	14.00	32	1 3/4	1 3/4	7/8	1.80	3.00
3 3/4	4	4 3/8	1 1/4	6.50	13.00	34	1 3/4	1 3/4	7/8	1.80	3.00
4	3 7/8	4 1/4	1 1/4	6.00	12.00	36	1 3/4	1 3/4	7/8	1.80	3.00
4 1/2	3 3/4	4	1 1/4	5.50	11.00	38	1 3/4	1 3/4	7/8	1.80	3.00
5	3 5/8	3 3/4	1 1/4	5.00	10.00	40	1 3/4	1 3/4	7/8	1.80	3.00
5 1/2	3 5/8	3 3/4	1 1/4	5.00	9.00	44	1 3/4	1 3/4	7/8	1.80	3.00
6	3	3 1/8	1	4.30	8.00	48	1 3/4	1 3/4	7/8	1.80	3.00
7	2 7/8	2 7/8	1	4.10	7.00	50	1 3/4	1 3/4	7/8	1.80	3.00
8	2 7/8	2 7/8	1	3.90	6.00	56	1 3/4	1 3/4	7/8	1.80	3.00
9	2 3/4	2 3/4	1	3.70	5.50	60	1 3/4	1 3/4	7/8	1.80	3.00
10	2 1/4	2 3/8	7/8	3.50	5.00	64	1 3/4	1 3/4	7/8	1.80	3.00
11	2 1/4	2 3/8	7/8	3.30	4.50	70	1 3/4	1 3/4	7/8	1.80	3.00
12	2 1/8	2 1/4	7/8	3.10	4.25	80	1 3/4	1 3/4	7/8	1.80	3.00
13	2 1/8	2 1/4	7/8	2.90	4.00	120	1 3/4	1 3/4	7/8	1.80	3.00

CUTTERS FOR MITRE AND BEVEL GEARS

No. 147M Series, "Carbon" Steel——No. 747 Series, "High Speed" Steel.

These Cutters are thin enough to cut any Bevel Gear the tooth face of which is not longer than one-third the distance from its outer end to the point where the shaft center lines meet. Eight Cutters are made for each pitch and numbered from 1 to 8. In ordering Cutters for Bevel Gears, if the number of teeth in each gear, the pitch and length of face are given, also the angle of the shafts, if different from a right angle, we can select the proper Cutter to send. When an extra length of face is wanted, requiring an especially thin Cutter, this length should be specified in the order.

Diametral Pitch	Diam. of Cutter, In.		Hole Inches	Price Each	
	No. 147M Carbon	No. 747 High Speed		No. 147M Carbon	No. 747 High Speed
3	4	4	1 1/4	$7.50	$15.00
4	3 1/2	3 5/8	1 1/4	5.50	12.00
5	3 1/4	3 3/8	1 1/4	4.75	10.00
6	3	3 1/8	1	4.30	8.00
7	2 7/8	2 7/8	1	4.10	7.00
8	2 7/8	2 7/8	1	3.90	6.00
10	2 1/4	2 3/8	7/8	3.50	5.00
12	2 1/8	2 1/4	7/8	3.10	4.25
14	2	2 1/8	7/8	2.70	3.75
16	2	2 1/8	7/8	2.50	3.50
20	1 7/8	2	7/8	2.30	3.30
24	1 3/4	1 3/4	7/8	2.10	3.10

Note.—Cutters for pitches not given in the above list will be made to order.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STRAIGHT FLUTED END MILLS

BROWN & SHARPE TAPER SHANK

Left Hand.

No. 138A Series, "Carbon" Steel——No. 760 Series, "High Speed" Steel.

Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each		Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each	
				No. 138A Carbon Steel	No. 760 High Speed					No. 138A Carbon Steel	No. 760 High Speed
1/4	4	13/16	2 7/16	$1.00	$1.40	7/8	9	1 3/4	7 1/16	$2.25	$4.25
1/4	5	13/16	3	1.15	1.70	15/16	7	1 3/4	5 7/8	2.10	3.70
5/16	4	7/8	2 7/16	1.00	1.40	15/16	9	1 3/4	7 1/16	2.25	4.25
5/16	5	7/8	3 1/16	1.15	1.70	1	7	1 7/8	6	2.15	3.80
3/8	4	7/8	2 7/16	1.10	1.55	1	9	1 7/8	7 3/16	2.30	4.35
3/8	5	7/8	3 1/16	1.20	1.75	1 1/16	7	1 7/8	6	2.15	3.95
7/16	4	15/16	2 1/2	1.10	1.55	1 1/16	9	1 7/8	7 3/16	2.35	4.40
7/16	5	15/16	3 1/8	1.25	1.80	1 1/8	7	2	6 1/4	2.25	4.20
1/2	5	1	3 1/8	1.30	1.90	1 1/8	9	2	7 1/4	2.40	4.60
1/2	7	1 1/8	5 1/8	1.45	2.40	1 3/16	7	2	6 1/4	2.25	4.30
9/16	5	1 1/16	3 1/8	1.35	2.00	1 3/16	9	2	7 1/4	2.50	4.90
9/16	7	1 1/4	5 1/4	1.50	2.50	1 1/4	7	2	6 1/4	2.25	4.45
5/8	5	1 1/4	3 5/16	1.45	2.20	1 1/4	9	2	7 1/4	2.55	5.10
5/8	7	1 1/2	5 1/2	1.70	2.80	1 5/16	9	2 1/8	7 3/8	2.75	5.75
11/16	7	1 1/2	5 1/2	1.75	2.85	1 3/8	9	2 1/8	7 3/8	2.75	6.25
11/16	9	1 1/2	6 13/16	1.90	3.75	1 7/16	9	2 1/4	7 1/2	3.00	6.50
3/4	7	1 5/8	5 5/8	1.80	2.95	1 1/2	9	2 1/4	7 1/2	3.00	6.85
3/4	9	1 5/8	6 15/16	1.95	3.85	1 5/8	9	2 3/8	7 5/8	3.25	7.45
13/16	7	1 5/8	5 3/4	1.90	3.35	1 3/4	9	2 1/2	7 3/4	3.50	8.30
13/16	9	1 5/8	6 15/16	2.00	4.05	1 7/8	9	2 1/2	7 3/4	3.75	9.15
7/8	7	1 3/4	5 7/8	2.10	3.55	2	9	2 1/2	7 3/4	4.00	9.95

Note.—In ordering always state whether Right or Left Hand is wanted.

STANDARD TAPER SHANK

Left Hand.

No. 138B Series, "Carbon" Steel——No. 761 Series, "High Speed" Steel.

Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each		Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each	
				No. 138B Carbon Steel	No. 761 High Speed					No. 138B Carbon Steel	No. 761 High Speed
1/4	1	13/16	3 5/8	$1.15	$1.70	1	3	1 7/8	6 3/16	$2.30	$4.00
5/16	1	7/8	3 11/16	1.15	1.70	1 1/16	2	1 7/8	5 3/8	2.15	3.75
3/8	1	7/8	3 11/16	1.20	1.75	1 1/16	3	1 7/8	6 3/16	2.30	4.05
7/16	1	15/16	3 3/4	1.25	1.85	1 1/8	3	2	6 5/16	2.35	4.25
7/16	2	15/16	4 1/2	1.40	2.25	1 3/16	3	2	6 5/16	2.40	4.45
1/2	1	1	3 13/16	1.30	1.90	1 1/4	3	2	6 5/16	2.45	4.65
1/2	2	1 1/8	4 5/8	1.45	2.30	1 1/4	4	2	7 3/8	2.55	5.00
9/16	1	1 1/16	3 7/8	1.35	2.00	1 5/16	3	2 1/8	6 7/16	2.65	5.10
9/16	2	1 1/4	4 3/4	1.50	2.40	1 5/16	4	2 1/8	7 1/2	2.75	5.40
5/8	2	1 1/4	5	1.55	2.50	1 3/8	3	2 1/8	6 7/16	2.65	5.20
11/16	2	1 1/2	5	1.75	2.75	1 3/8	4	2 1/8	7 1/2	2.75	5.60
3/4	2	1 5/8	5 1/8	1.80	2.85	1 7/16	3	2 1/4	6 9/16	2.75	5.50
3/4	3	1 5/8	5 15/16	1.95	3.45	1 7/16	4	2 1/4	7 5/8	3.00	6.10
13/16	2	1 5/8	5 1/8	1.90	3.05	1 1/2	3	2 1/4	6 9/16	2.75	5.65
13/16	3	1 5/8	5 15/16	2.00	3.50	1 1/2	4	2 1/4	7 5/8	3.00	6.25
7/8	2	1 3/4	5 1/4	2.10	3.40	1 5/8	4	2 1/4	7 3/4	3.25	7.05
7/8	3	1 3/4	6 1/16	2.25	3.85	1 3/4	4	2 1/4	7 3/4	3.50	7.80
15/16	2	1 3/4	5 1/4	2.10	3.45	1 7/8	4	2 3/8	7 7/8	3.75	8.55
15/16	3	1 3/4	6 1/16	2.25	3.85	2	4	2 3/8	7 7/8	4.00	9.35
1	2	1 7/8	5 3/8	2.15	3.40	.....	.....	.....	.....	.....	.....

Note.—In ordering always state whether Right or Left Hand is wanted.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SPIRAL FLUTED END MILLS

BROWN & SHARPE TAPER SHANK

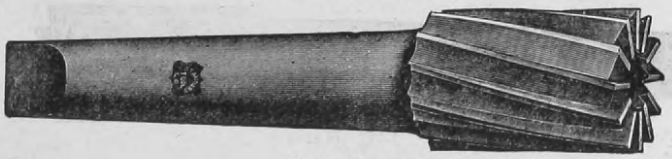
Right Hand.

No. 138 Series, "Carbon" Steel——No. 762 Series, "High Speed" Steel.

Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each		Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each	
				No. 138 Carbon Steel	No. 762 High Speed					No. 138 Carbon Steel	No. 762 High Speed
1/4	4	13/16	2 7/16	$1.00	$1.40	7/8	9	1 3/4	7	2.25	$4.25
1/4	5	13/16	3	1.15	1.70	15/16	7	1 3/4	5 3/4	2.10	3.70
5/16	4	7/8	2 1/2	1.00	1.40	15/16	9	1 3/4	7	2.25	4.25
5/16	5	7/8	3 1/16	1.15	1.70	1	7	1 7/8	5 7/8	2.15	3.80
3/8	4	7/8	2 1/2	1.10	1.55	1	9	1 7/8	7 1/8	2.30	4.35
3/8	5	7/8	3 1/16	1.20	1.75	1 1/16	7	1 7/8	5 7/8	2.15	3.95
7/16	4	15/16	2 9/16	1.10	1.55	1 1/16	9	1 7/8	7 1/8	2.35	4.40
7/16	5	15/16	3 1/8	1.25	1.80	1 1/8	7	2	6	2.25	4.20
1/2	5	1	3 3/16	1.30	1.90	1 1/8	9	2	7 1/4	2.40	4.60
1/2	7	1 1/8	5 1/8	1.45	2.40	1 3/16	7	2	6	2.25	4.30
9/16	5	1 1/16	3 1/4	1.35	2.00	1 3/16	9	2	7 1/4	2.50	4.90
9/16	7	1 1/4	5 1/4	1.50	2.50	1 1/4	7	2	6	2.25	4.45
5/8	5	1 1/4	3 7/16	1.45	2.20	1 1/4	9	2	7 1/4	2.55	5.10
5/8	7	1 1/2	5 1/2	1.70	2.80	1 5/16	9	2 1/8	7 3/8	2.75	5.75
11/16	7	1 1/2	5 1/2	1.75	2.85	1 3/8	9	2 1/8	7 3/8	2.75	6.25
11/16	9	1 1/2	6 3/4	1.90	3.75	1 7/16	9	2 1/4	7 1/2	3.00	6.50
3/4	7	1 5/8	5 5/8	1.80	2.95	1 1/2	9	2 1/4	7 1/2	3.00	6.85
3/4	9	1 5/8	6 7/8	1.95	3.85	1 5/8	9	2 3/8	7 5/8	3.25	7.45
13/16	7	1 5/8	5 5/8	1.90	3.35	1 3/4	9	2 1/2	7 3/4	3.50	8.30
13/16	9	1 5/8	6 7/8	2.00	4.05	1 7/8	9	2 1/2	7 3/4	3.75	9.15
7/8	7	1 3/4	5 3/4	2.10	3.55	2	9	2 1/2	7 3/4	4.00	9.95

Note.—In ordering always state whether Right or Left Hand is wanted.

STANDARD TAPER SHANK



Left Hand

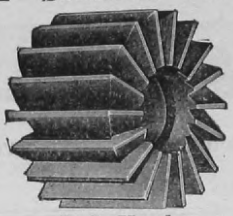
No. 138½ Series, "Carbon" Steel——No. 763 Series, "High Speed" Steel.

Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each		Diam. Inches	Taper Shank No.	Length of Cut Inches	Length Over all Inches	Price Each	
				No. 138½ Carbon Steel	No. 763 High Speed					No. 138½ Carbon Steel	No. 763 High Speed
1/4	1	13/16	3 3/4	$1.15	$1.70	1	3	1 7/8	6 3/16	$2.30	$4.00
5/16	1	7/8	3 13/16	1.15	1.70	1 1/16	2	1 7/8	5 3/8	2.15	3.75
3/8	1	7/8	3 13/16	1.20	1.75	1 1/16	3	1 7/8	6 3/16	2.30	4.05
7/16	1	15/16	3 7/8	1.25	1.85	1 1/8	3	2	6 5/16	2.35	4.25
7/16	2	15/16	4 7/16	1.40	2.25	1 3/16	3	2	6 5/16	2.40	4.45
1/2	1	1	3 13/16	1.30	1.90	1 1/4	3	2	6 5/16	2.45	4.65
1/2	2	1 1/8	4 5/8	1.45	2.30	1 1/4	4	2	7 3/8	2.55	5.00
9/16	1	1 1/16	3 7/8	1.35	2.00	1 5/16	3	2 1/8	6 7/16	2.65	5.10
9/16	2	1 1/4	4 3/4	1.50	2.40	1 5/16	4	2 1/8	7 1/2	2.75	5.40
5/8	2	1 1/4	5	1.55	2.50	1 3/8	3	2 1/8	6 7/16	2.65	5.20
11/16	2	1 1/2	5	1.75	2.75	1 3/8	4	2 1/8	7 1/2	2.75	5.60
3/4	2	1 5/8	5 1/8	1.80	2.85	1 7/16	3	2 1/4	6 9/16	2.75	5.50
3/4	3	1 5/8	5 15/16	1.95	3.45	1 7/16	4	2 1/4	7 5/8	3.00	6.10
13/16	2	1 5/8	5 1/8	1.90	3.05	1 1/2	3	2 1/4	6 9/16	2.75	5.65
13/16	3	1 5/8	5 15/16	2.00	3.50	1 1/2	4	2 1/4	7 5/8	3.00	6.25
7/8	2	1 3/4	5 1/4	2.10	3.40	1 5/8	4	2 1/4	7 3/4	3.25	7.05
7/8	3	1 3/4	6 1/16	2.25	3.85	1 3/4	4	2 1/4	7 3/4	3.50	7.80
15/16	2	1 3/4	5 1/4	2.10	3.45	1 7/8	4	2 3/8	7 7/8	3.75	8.55
15/16	3	1 3/4	6 1/16	2.25	3.85	2	4	2 3/8	7 7/8	4.00	9.35
1	2	1 7/8	5 3/8	2.15	3.40						

Note.—In ordering always state whether Right or Left Hand is wanted.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STRAIGHT SHELL END MILLS

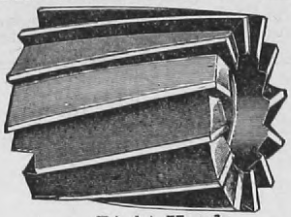


Left Hand.

No. 138F Series, "Carbon" Steel——No. 768 Series, "High Speed" Steel.

Diam. Inches	Length of Cutter Inches	Hole Inches	Price Each	
			No. 138F Carbon	No. 768 High Speed
1 1/4	1 1/4	1/2	$2.80	$4.50
15/16	1 1/4	1/2	2.90	4.65
1 3/8	1 1/4	1/2	3.00	4.80
17/16	1 1/4	1/2	3.10	4.95
1 1/2	1 1/4	1/2	3.20	5.10
19/16	1 3/4	3/4	3.90	5.50
1 5/8	1 3/4	3/4	3.95	5.70
111/16	1 3/4	3/4	4.00	5.90
1 3/4	1 3/4	3/4	4.05	6.10
113/16	1 3/4	3/4	4.10	6.30
1 7/8	1 3/4	3/4	4.15	6.50
115/16	1 3/4	3/4	4.20	6.70
2	1 3/4	3/4	4.30	6.90
21/16	1 3/4	3/4	4.35	7.10
2 1/8	1 3/4	3/4	4.40	7.30
23/16	1 3/4	3/4	4.50	7.50
2 1/4	2 1/4	1	4.90	8.00
25/16	2 1/4	1	4.95	8.25
2 3/8	2 1/4	1	5.00	8.55
27/16	2 1/4	1	5.05	8.85
2 1/2	2 1/4	1	5.10	9.15
29/16	2 1/4	1	5.20	9.45
2 5/8	2 1/4	1	5.35	9.75
211/16	2 1/4	1	5.50	10.05
2 3/4	2 1/4	1	5.65	10.40
213/16	2 1/4	1	5.80	10.70
2 7/8	2 1/4	1	5.95	11.05
215/16	2 1/4	1	6.10	11.40
3	2 1/4	1	6.30	11.75

SPIRAL SHELL END MILLS



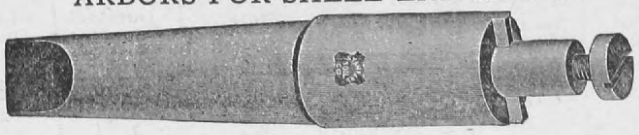
Right Hand.

No. 138E Series, "Carbon" Steel——No. 769 Series, "High Speed" Steel.

Diam. Inches	Length of Cutter Inches	Hole Inches	Price Each	
			No. 138E Carbon	No. 769 High Speed
1 1/4	1 1/4	1/2	$2.80	$4.50
15/16	1 1/4	1/2	2.90	4.65
1 3/8	1 1/4	1/2	3.00	4.80
17/16	1 1/4	1/2	3.10	4.95
1 1/2	1 1/4	1/2	3.20	5.10
19/16	1 3/4	3/4	3.90	5.50
1 5/8	1 3/4	3/4	3.95	5.70
111/16	1 3/4	3/4	4.00	5.90
1 3/4	1 3/4	3/4	4.05	6.10
113/16	1 3/4	3/4	4.10	6.30
1 7/8	1 3/4	3/4	4.15	6.50
115/16	1 3/4	3/4	4.20	6.70
2	1 3/4	3/4	4.30	6.90
21/16	1 3/4	3/4	4.35	7.10
2 1/8	1 3/4	3/4	4.40	7.30
23/16	1 3/4	3/4	4.50	7.50
2 1/4	2 1/4	1	4.90	8.00
25/16	2 1/4	1	4.95	8.25
2 3/8	2 1/4	1	5.00	8.55
27/16	2 1/4	1	5.05	8.85
2 1/2	2 1/4	1	5.10	9.15
29/16	2 1/4	1	5.20	9.45
2 5/8	2 1/4	1	5.35	9.75
211/16	2 1/4	1	5.50	10.05
2 3/4	2 1/4	1	5.65	10.40
213/16	2 1/4	1	5.80	10.70
2 7/8	2 1/4	1	5.95	11.05
215/16	2 1/4	1	6.10	11.40
3	2 1/4	1	6.30	11.75

Note.—The above Mills can be furnished with threaded holes if desired; prices on application.
In ordering always state whether Right or Left Hand is wanted.

ARBORS FOR SHELL END MILLS



No. 138G.

Fitting Sizes Inches	Size Nos.	Standard Taper Shank		Size Nos.	Brown & Sharpe Taper Shank	
		No.	Each		No.	Each
1 1/4 to 1 1/2	1	3	$3.75	1	7	$4.50
19/16 to 23/16	2	4	4.00	4	9	4.50
2 1/4 to 3	3	4	4.00	11	9	4.75

Note.—In ordering state whether Arbors are desired for Right or Left Hand Mills.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

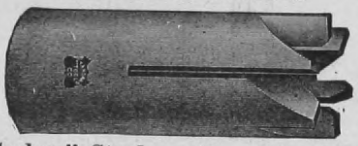
STRAIGHT SHANK END MILLS

Right Hand.

No. 138½D Series, "Carbon" Steel——No. 770 Series, "High Speed" Steel.

Diam. Inches	Length of Cut Inches	Length Over all Inches	Price Each No. 138½D Carbon	Price Each No. 770 High Speed	Diam. Inches	Length of Cut Inches	Length Over all Inches	Price Each No. 138½D Carbon	Price Each No. 770 High Speed
1/8	3/8	1 1/4	$0.35	$1.00	5/8	1 1/4	3	$1.50	$2.25
3/16	5/8	1 1/2	.45	1.10	11/16	1 1/2	3 1/2	1.60	2.50
1/4	13/16	1 7/8	.55	1.20	3/4	1 5/8	3 5/8	1.70	2.75
5/16	7/8	1 15/16	.70	1.30	13/16	1 5/8	3 3/4	1.80	3.00
3/8	7/8	2	.80	1.45	7/8	1 3/4	4	1.90	3.25
7/16	15/16	2 1/8	1.00	1.60	15/16	1 3/4	4	2.00	3.50
1/2	1	2 1/4	1.25	1.80	1	1 7/8	4 1/4	2.05	3.75
9/16	1 1/16	2 1/2	1.35	2.00	.....	.....	.....	.....	.....

HOLLOW MILLS

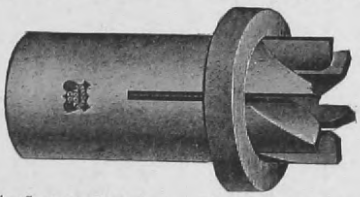


No. 138H Series, "Carbon" Steel——No. 771 Series, "High Speed" Steel.

These Mills are often used on short cuts, immediately preceding threading dies, but on long, straight cuts, and especially on square stock, and in cutting large headed screws from a bar, they should be followed by a box tool.

Hole Inches	Outside Diameter Inches	Length Over all Inches	Price Each No. 138H Carbon	Price Each No. 771 High Speed	Hole Inches	Outside Diameter Inches	Length Over all Inches	Price Each No. 138H Carbon	Price Each No. 771 High Speed
3/32	5/8	1 1/2	$1.00	$1.50	7/16	1	2	$2.00	$2.50
1/8	5/8	1 1/2	1.00	1.50	1/2	1	2	2.00	2.50
5/32	5/8	1 1/2	1.00	1.50	9/16	1 1/4	2 1/4	2.00	3.00
3/16	5/8	1 1/2	1.00	1.50	5/8	1 1/4	2 1/4	2.00	3.00
7/32	5/8	1 1/2	1.00	1.50	11/16	1 1/2	2 1/2	2.50	3.75
1/4	5/8	1 1/2	1.00	1.50	3/4	1 1/2	2 1/2	2.50	3.75
9/32	3/4	2	1.50	2.00	13/16	1 1/2	2 1/2	2.50	3.75
5/16	3/4	2	1.50	2.00	7/8	1 3/4	2 3/4	2.50	4.75
11/32	3/4	2	1.50	2.00	15/16	1 3/4	2 3/4	2.50	4.75
3/8	1	2	2.00	2.50	1	1 3/4	2 3/4	2.50	4.75

ADJUSTABLE HOLLOW MILLS



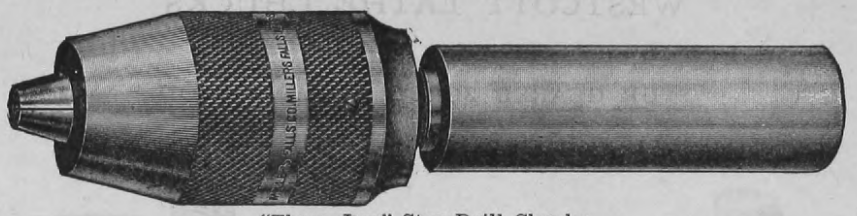
No. 138-I Series, "Carbon" Steel——No. 772 Series, "High Speed" Steel.

These Mills are often used on short cuts, immediately preceding threading dies, but on long, straight cuts, and especially on square stock, and in cutting large headed screws from a bar, they should be followed by a box tool.

Hole Inches	Outside Diameter Inches	Length Over all Inches	Price Each No. 138-I Carbon Steel	Price Each No. 772 High Speed	Hole Inches	Outside Diameter Inches	Length Over all Inches	Price Each No. 138-I Carbon Steel	Price Each No. 772 High Speed
3/32	5/8	1 1/2	$1.60	$2.00	7/16	3/4	2	$2.00	$3.25
1/8	5/8	1 1/2	1.60	2.00	1/2	1	2 1/4	2.20	3.25
5/32	5/8	1 1/2	1.60	2.00	9/16	1	2 1/4	2.40	3.75
3/16	5/8	1 1/2	1.60	2.00	5/8	1	2 1/4	2.60	3.75
7/32	5/8	1 1/2	1.60	2.00	11/16	1 1/4	2 1/2	2.80	4.75
1/4	5/8	1 1/2	1.60	2.00	3/4	1 1/4	2 1/2	3.00	4.75
9/32	3/4	2	1.80	2.50	13/16	1 1/4	2 1/2	3.20	4.75
5/16	3/4	2	1.80	2.50	7/8	1 1/2	2 3/4	3.40	5.75
11/32	3/4	2	1.80	2.50	15/16	1 1/2	2 3/4	3.60	5.75
3/8	3/4	2	2.00	3.25	1	1 1/2	2 3/4	3.80	5.75

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STAR DRILL CHUCKS



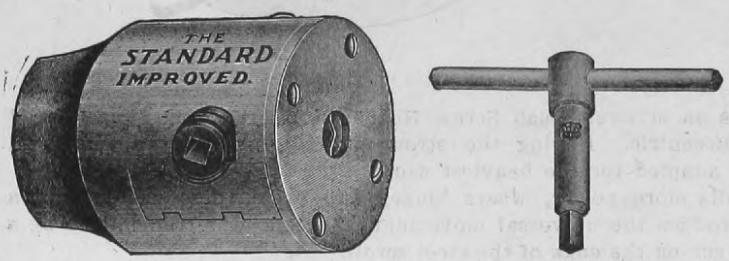
"Three Jaw" Star Drill Chucks.

Substantial Chucks, handsomely polished and with machinist's finish. Three jaws carefully adjusted in a socket, opening with a spring and closing with a pressure from spindle. Springs are protected from injury and will not get out of order Grips tenaciously and centers accurately Round Shanks.

Nos.	4	5	6	7
Capacity	0–3/16 in.	0–1/4 in.	0–3/8 in.	0–1/2 in.
Outside diameter of chuck	13/16 in.	1 in.	1 1/4 in.	1 1/2 in.
Dimensions of shank	1 1/2 x 1/2 in.	1 1/2 x 1/2 in.	1 1/2 x 1/2 in.	1 1/2 x 1/2 in.
Weight	6 oz.	7 oz.	10 oz.	17 oz.
Star Drill Chucks, Each,	$1.15	1.25	2.00	2.50

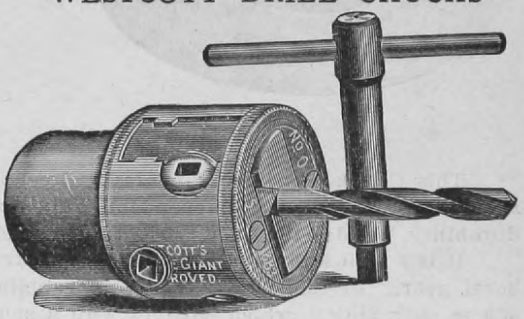
Packed—One in a Box.

STANDARD IMPROVED DRILL CHUCKS



No. 137.

WESTCOTT DRILL CHUCKS



Little Giant Improved No. 00 to 2½.

Standard Improved Drill Chucks

This Chuck has no projecting jaws and the plate prevents the use of larger work than the chuck is designed for. It will hold round or square work, is very substantial and is guaranteed to hold true and not injure the shank of the drill. The jaws are guided by three strong gibs, and the screws are larger than in any chuck of similar size and type. The jaws and screws are of tool steel, carefully tempered. The hole in the hub is made to fit a taper arbor, but can be bored out and threaded to a special templet at a small cost. **No. 137.**

Size Nos.	Diameter, Inches	Length over all, Inches	Holds Drills, Inch	Size of Tapered Hole In Hub, Inches	Each
00	1 3/8	2 3/32	0 to 1/4	.533x.587x 7/8" deep	$ 6.00
0	1 11/16	2 15/32	0 to 3/8	.533x.596x1" deep	6.50
1	2 3/16	2 13/16	0 to 1/2	.533x.596x1" deep	7.00
2	2 7/8	3 3/8	0 to 3/4	.750x.810x1 1/8" deep	8.00
3	3 7/16	4 1/4	0 to 1	.876x.967x1 11/16" deep	10.00

Extra Parts for Standard "Improved" Drill Chucks

For Chucks, Nos	00	0	1	2	3
No. 137A—Keys, Each,	$0.50	.50	.60	.75	1.00
No. 137B—Jaws, Each,	1.75	2.00	2.25	2.50	2.75
No. 137C—Screws, Each,	1.00	1.00	1.00	1.10	1.25

Packed—One in a Box.

WESTCOTT DRILL CHUCKS

The Jaws and Screws are made of the best Tool Steel, carefully hardened, and are all within the body of the chuck. A guard ring prevents the jaws from being opened so as to take in larger work than the chuck is designed for. The hole in the hub is made to fit the Morse taper, but can be bored out and threaded to suit the customer's templet at a small cost. **When Chuck for holding square shank tools is desired it should be so stated in the order.** Straight Body Chucks adapted for Hollow Spindle Lathes, for holding round or square rods, which are turned or cut off, can be furnished if desired. The large size chucks are made with chamber for face plate, but when a small size chuck is required to be fitted for a face plate it is made with a projection to fit chamber in face plate.

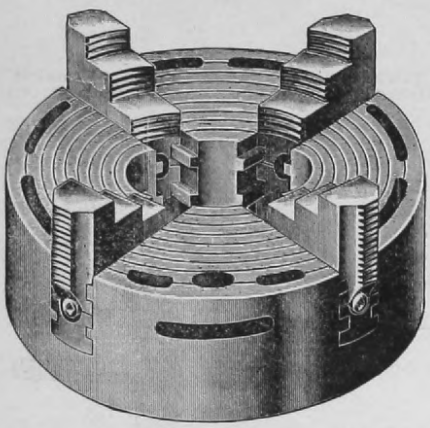
Wescott	Size	Approx. Diameter, Inches	Holds Drills Inch	Each
Little Giant Improved	**No. 00**	1 7/16	0 to 1/4	$ 8.00
Little Giant Improved	**No. 0**	2 1/2	0 to 1/2	9.00
Little Giant Improved	**No. 1**	3	0 to 3/4	10.00
Little Giant Improved	**No. 2**	3 1/2	0 to 1	11.00
Little Giant Improved	**No. 2½**	4	0 to 1 Ex. Strong	12.00

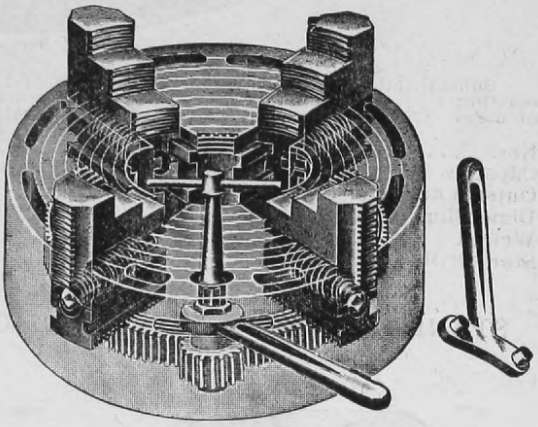
Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WESTCOTT LATHE CHUCKS

SPUR GEARED SCROLL COMBINATION





This Chuck has Reversible Jaws, Steel Bearings on screws, Flush Screw Heads and is the only Spur Geared Chuck on the market. Independent, Universal and Eccentric. Having the strongest grip, greatest capacity and durability, besides the most perfect adjustment it is adapted for the heaviest work.

It is a well known fact that a Spur Gear transmits more power, wears longer and breaks less easily than a bevel gear. In this chuck the power applied to produce the universal movement of the jaws is transmitted by a strong spur pinion, which engages with a spur gear cut on the edge of the steel scroll.

The spur pinion is operated by a drop forged open end wrench, which enters through an opening in the edge of the chuck, and engages with the hexagon pinion shaft and may also be operated from the face of the chuck by a socket wrench, which fits the square end of the pinion shaft. In all other respects this chuck is the same as the long famous Scroll Combination Chuck. The scroll may be rapidly manipulated by a lever engaging directly with it at the back as in the old chuck, and increased gripping power then gained by applying the open-end wrench to the spur pinion. An exceedingly powerful grip is thus attained: a grip much stronger than that possessed by any bevel geared chuck. The increased grip is due not only to the fact that a spur gear is used, but also to the use of an open-end wrench, to which a person may apply as much power as he pleases without danger of breakage. It is worthy of note that the mechanism by which the universal movement of the jaws is produced may be operated from the face and edge of chuck, as well as from the rear. Anyone having had experience in the use of chucks will recognize at once the importance of points mentioned. Machinists are only too familiar with the evils of the bevel gear, the excessive end thrust, the cramping, binding, flattening and breaking, and will welcome anything which promises immunity from these vexations.

This Chuck does not require any shifting in or out of gear, but is always ready to be operated either independently or universally at will, for general use it has no equal.

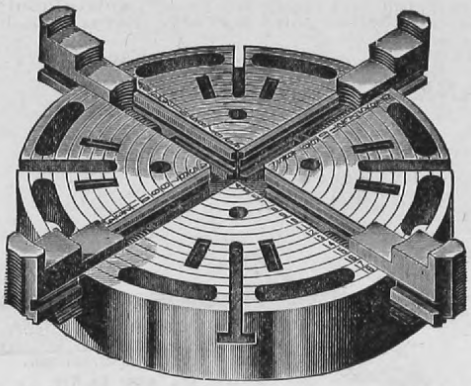
Diameter Over all Inches	Will Hold Inside of Jaws Inches	Diameter of Recess for Face Plate Inches	With **Three Jaws** Each	With **Four Jaws** Each	Unfinished Face Plates Each
6	6 ½	.....	$ 33.00	$ 39.00	$1.00
8	8 ½	3 9/16	44.00	52.00	1.25
10 ⅛	12	5	52.00	60.00	1.50
13 ¼	15	6	70.00	80.00	1.75
16	18	7 ⅝	90.00	105.00	2.00
18 ½	21 ½	9 ⅜	108.00	130.00	3.00
21 ¼	26	9 ⅜	136.00	155.00	3.50
24	30	10	170.00	190.00	4.50
27	33	12 ⅞	220.00	240.00	5.00
30	36	12 ⅞	240.00	300.00	5.50
36	43	15	350.00	400.00	7.00

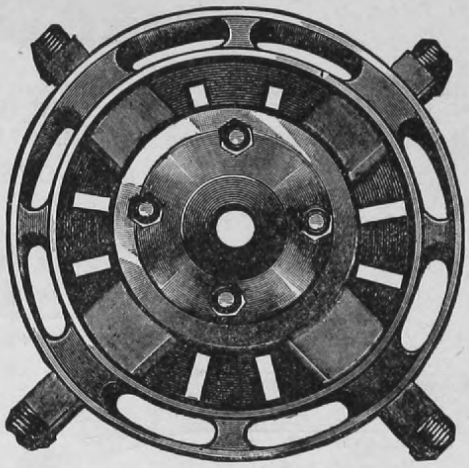
Note.—When ordering Unfinished Face Plates always give diameter of Lathe Spindle.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WESTCOTT LATHE CHUCKS

I X L INDEPENDENT





The I X L Independent Chuck is stronger than any other independent Chuck, because the end-thrust and strain come upon the Chuck body at its strongest point. This result has been accomplished by providing each jaw screw with a steel carrier, which is threaded on one side and fastened by two set-screws, one set-screw following the other, and each acting as a lock to the other. One half of each set-screw engages with screw carrier, the other half with body of chuck, said set-screws being long enough to secure great resistance. Thus the thrust does not come at one **weak point as in all other Independent Chucks—but is distributed so as not to spring or break chuck body.**

The Jaws are made of Case Hardened Steel, Reversible, with deep shoulders and are turned so as to get a firm bite on the work. Screws are made of Steel best suited to the purpose, squared and tempered on both ends and do not project to catch the operator's clothing.

When the I X L Chuck is required to hold work larger than its diameter, remove the set-screws (two set-screws in each hole), and drive the screw carriers outward, together with the jaws and their adjusting screws, **thereby retaining the full thread bearing between screw and jaw, the screw-carrier still supporting jaw; thus we get the desired capacity without injury to Chuck.** Another, and perhaps easier method of manipulation, is to screw the jaws against something (a block of wood or a piece of iron) thus forcing the screw-carriers together with the screws outward to the desired point, and then drawing jaws out by turning screws the other way. This is a feature of the utmost importance, and cannot be given too great emphasis. As a result, the I X L Chuck has a much greater capacity than any other Independent Chuck of the same size. In case of wear, the screw-carriers, which furnish steel bearings for the screws, can be renewed at small cost, the chuck thus having a long life.

Should screw heads break off, jaw screws cut from need of oil, or become clogged with chips and dirt, the set-screws should be removed and screw-carrier driven out, together with jaw screw and jaw, which can be done without injury to any of the parts. The screw-carrier, which makes the above possible, is a feature possessed by no other independent chuck.

Westcott's Chuck-body possesses many advantages that are appreciated by machinists; holes extend through same for convenience in bolting light work to Chuck, such as pulleys, jaws being likely to crush their rims. All sizes of the I X L Independent Chucks are made to be attached by means of a face-plate (a recess of large diameter being provided to receive same), but can be threaded when it would be more desirable.

This style Chuck has an unusually large center hole, the object being to fit face-plate reversed, that is, with hub inside the Chuck, thus bringing Chuck nearer the spindle-bearing.

The I X L Chuck is made especially strong in proportion to its size. It possesses all the points of value found in the old Independents, together with the above mentioned new ones, also many others which will appear when Chuck is used. Jaws can be removed and chuck-body used as a face-plate. All parts are interchangeable. This Chuck is always suitable to be used as a cutting-off chuck.

Diameter Inches	Capacity Inches	Approximate Weight Pounds	Diameter of Center Hole Inches	Diameter of Recess for Face Plate Inches	With 3 or 4 Jaws Each	Unfinished Face Plate Castings Each
4 9/16	5 ½	14	1	3 9/16	$ 21.00	$0.75
6	6 ¾	22	1 ¾	5 9/16	22.00	1.25
8	9	39	2 ¼	5	26.00	1.25
10 ⅛	12	51	2 ¼	6	30.00	1.50
12	15	72	2 ½	6 ½	35.00	1.75
13 ¼	17	88	3	6 ½	38.00	1.75
14	18	92	3	7 ⅝	40.00	2.00
16	20	139	3 ¼	7 ⅝	46.00	2.25
18 ½	23	180	4	9 ⅜	56.00	3.00
21 ¼	26	228	4	9 ⅜	68.00	3.50
24	30	241	4 ¾	10	80.00	4.50
27	33	400	5	12 ⅞	105.00	5.00
30	36	447	5	12 ⅞	130.00	5.50
36	43	650	6	15	210.00	7.00

Note.—Three Jawed I X L Independent Chuck larger than 18½ inches in diameter are made to order only. When ordering Unfinished Face Plates always give the diameter of Lathe Spindle.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

LATHE TOOLS

Jacques.

Drop Forged from the best grade of High Speed Tool Steel, tempered and ready for use. Twelve Points in one tool. No redressing or tempering required, simply grind down one point and another point is ready. Saves time, labor and material.

Jacques Patent Diamond Point Lathe Tools, Size 7½x1⅛x½ inch .....Each,.....

STRAIGHT AND OFF-SET SHANK TOOL HOLDERS

Nos. 00S to 5S Straight Tool.

Nos. 00L to 5L.

No. 00R to 5R.

Armstrong's, each Tool is equipped with Two Self-Hardening Steel Cutters, ground to shape, and a Drop Forged Wrench.

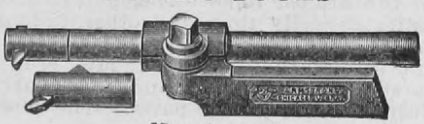
Nos. Left Hand	Nos. Straight	Nos. Right Hand	Size of Holder Inches	Size of Cutter Inches Square	Price Complete	Extra Cutters Each
00L	00S	00R	5/16 x ¾ x 4½	3/16	$1.80	$0.25
0L	0S	0R	⅜ x ⅞ x 5	¼	1.90	.30
1L	1S	1R	½x1⅛x 6	5/16	2.15	.45
2L	2S	2R	⅝x1⅜x 7	⅜	2.70	.65
3L	3S	3R	¾x1⅝x 8	7/16	3.60	1.00
4L	4S	4R	⅞x1¾x 9	½	4.60	1.45
5L	5S	5R	1x2 x11	⅝	5.85	2.50

Packed—One in a Box.

PLANER TOOLS

Nos. 40 to 45.

BORING TOOLS



Nos. 8 to 13.

Planer Tools

Armstrong's, each Tool is equipped with Two Self- Hardening Steel Cutters, ground to shape, and a Drop Forged Wrench.

Nos.	Size of Shank Inches	Length Inches	Size of Cutter Inches	Price Complete	Extra Cutters Each
40	½x1 x 7	7	¼ x ⅜	$ 3.10	$0.45
401	⅝x1¼x 8½	8½	5/16x 7/16	4.00	.65
41	¾x1½x10	10	⅜ x ½	5.25	.95
42	1⅛x1¾x13	13	½ x ¾	8.25	2.15
43	1⅜x2 x16	16	⅝ x ⅞	12.75	3.60
44	1⅞x2¼x19	19	¾x1	19.50	5.30
45	2⅛x2¾x22	22	⅞x1⅛	30.00	8.50

Packed—One in a Box.

Boring Tools

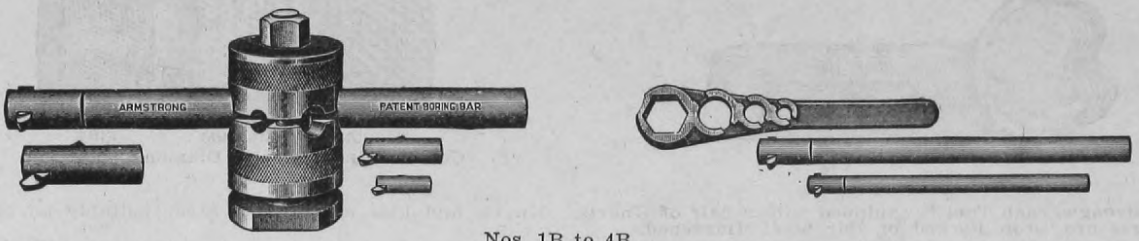
Armstrong's, each Set consists of Holder and Bar with Straight and 45 degree End Caps, Two Cutters (ground for boring) and a Double End Wrench.

Nos.	Size of Shank Inches	Diameter of Bar Inches	Size of Cutter Inches	Price Complete	Extra Cutters Each
8	⅜ x ⅞	9/16	3/16	$ 3.25	$0.25
9	½x1⅛	¾	¼	3.85	.30
10	⅝x1⅜	15/16	5/16	5.10	.45
11	¾x1⅝	1⅛	⅜	7.25	.65
12	⅞x1¾	1 5/16	7/16	10.75	.90
13	1x2	1½	½	15.00	1.20

Packed—One Set in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THREE BAR BORING TOOLS



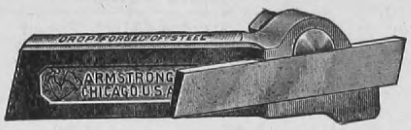
Nos. 1B to 4B.

Armstrong's, each Set consists of the Holder and Three Patent Boring Bars, with Straight and 45 degree End Caps and Cutters, a piece of each size steel for extra Cutters and an Armstrong Combination Wrench.

Nos.	Diameter of Bars Inches	Length of Bars Inches	Size of Cutters Inches Square	For Lathes	Per Set, Complete
1B	½, ¾ and 1⅛	8, 11 and 16	3/16, ¼ and ⅜	14 to 16 inch Swing	$13.00
2B	9/16, 15/16 and 1 5/16	9, 13 and 18	3/16, 5/16 and 7/16	16 to 18 inch Swing	17.25
3B	¾, 1⅛ and 1½	11, 16 and 21	¼, ⅜ and ½	20 to 22 inch Swing	22.75
4B	15/16, 1 5/16 and 1 13/16	13, 18 and 24	5/16, 7/16 and ⅝	24 to 32 inch Swing	30.00

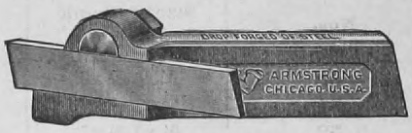
Packed—One Set in a Box.

CUTTING-OFF TOOLS



Nos. 29L to 34L. Left Hand.

Nos. 19 to 24. Straight.



Nos. 29R to 34R. Right Hand.

Armstrong's, each Tool is equipped with One Self-Hardening Steel Blade and a Drop Forged Wrench.

Nos. Left Hand	Nos. Straight	Nos. Right Hand	Size of Shank Inches	Size of Blades Inches	Price Complete	Extra Blades Each
29L	19	29R	5/16 x ¾	5/64 x ½	$1.90	$0.60
30L	20	30R	⅜ x ⅞	3/32 x ⅝	1.90	.60
31L	21	31R	½ x 1⅛	⅛ x ¾	2.15	.85
32L	22	32R	⅝ x 1⅜	⅛ x ⅞	2.75	1.30
33L	23	33R	¾ x 1⅝	3/16 x 1	3.60	2.15
34L	24	34R	⅞ x 1¾	3/16 x 1⅛	4.50	2.75

Packed—One in a Box.

STRAIGHT SHANK SIDE TOOLS

Nos. 81L to 83L. Left Hand.

Nos. 81R to 83R. Right Hand.

Armstrong's, each Tool is equipped with One Self-Hardening Steel Cutter, ground to shape, and a Drop Forged Wrench.

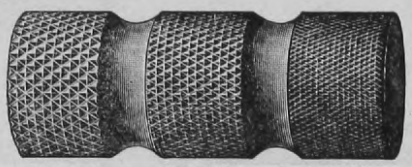
Nos. Left Hand	Nos. Right Hand	Size of Shank Inches	Price Complete	Extra Cutters Each
81L	81R	½ x 1⅛ x 6	$3.00	$0.95
82L	82R	⅝ x 1⅜ x 7	3.75	1.60
83L	83R	¾ x 1⅝ x 8	5.00	2.40

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KNURLING TOOLS

No. 1K.



Cut showing full size Diamond Knurling.

Armstrong's, each Tool is equipped with a pair of Knurls. Knurls and Pins are of Tool Steel, suitably tempered; all other parts are Drop Forged or Bar Steel, Hardened.

No. 1K—Size of Shank, ½x1⅛ inches; complete with One pair of Knurls.....Each, $4.50

Extra Knurls for above..... Per Pair, .75

Packed—One in a Box.

Note.—Knurls can be furnished in Coarse, Medium and Fine in either Straight Line or Diamond Pattern. Medium Diamond Knurls will be sent unless otherwise specified.

THREADING TOOLS

Nos. 50 to 52.

Armstrong's, each Tool is equipped with One Single Point V Cutter and a Drop Forged Wrench.

Nos.	Size of Shank Inches	Price Complete with Carbon Steel Cutter	Price Complete with High Speed Cutter	Extra Cutters	
				Carbon Steel Each	High Speed Steel. Each
50	⅜x ⅞x5	$2.25	$2.75	$0.75	$1.50
51	½x1⅛x6	2.75	3.35	.90	1.80
52	⅝x1⅜x7	3.50	4.25	1.15	2.30

Note.—In ordering tools equipped with U. S. or Whitworth cutters, be careful to specify number of threads per inch wanted. Tools equipped with single point V cutter will always be shipped unless otherwise specified. One in a Box.

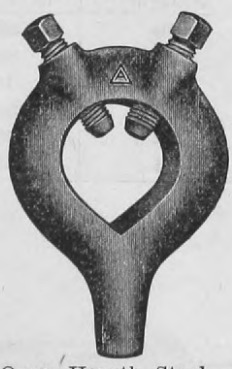
Packed—One in a Box.

LATHE DOGS

STRAIGHT TAIL

BENT TAIL

HEAVY DUTY



Armstrong's Drop Forged Steel Lathe Dogs, forged from a special grade of Open Hearth Steel. Hubs are large enough to permit of retapping. Screws are of Tool Steel with U. S. Standard Thread and hardened on point. Their improved shape renders them less liable to flange or upset.

Straight Tail Lathe Dogs, Single Screw

Size, inches	⅜	½	¾	1	1¼	1½	1¾	2	2½	3	3½	4	5	6
Diameter of Screw, inch	5/16	⅜	7/16	½	½	9/16	⅝	11/16	¾	¾	⅞	⅞	1	1
Each	$0.50	.55	.60	.70	.85	1.00	1.20	1.40	1.80	2.30	3.00	4.50	8.00	12.00

Bent Tail Lathe Dogs, Single Screw

Size, inches	⅜	½	¾	1	1¼	1½	1¾	2	2½	3	3½	4	5	6
Diameter of Screw, inch	5/16	⅜	7/16	½	½	9/16	⅝	11/16	¾	¾	⅞	⅞	1	1
Each	$0.50	.55	.60	.70	.85	1.00	1.20	1.40	1.80	2.30	3.00	4.50	8.00	12.00

Heavy Duty Lathe Dogs, Straight Tail, Double Screw

Size, inches	2	2½	3	3½	4	5	6	7	8
Diameter of Screws, inches	11/16	¾	¾	⅞	⅞	1	1	1⅛	1⅛
Each	$2.75	3.50	4.50	6.00	8.00	12.00	17.00	23.00	28.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTER MACHINISTS' HAND TAPS

Taper.

Plug.

Bottoming.

U. S. Standard threads furnished, unless otherwise specified. All sizes and threads not listed will be subject to special prices. Left-hand taps are special.

Hand Taps from ¼ to 1½ inches, inclusive, 1/32 inch over size in standard pitches will be furnished in V-form only, at regular prices.

Sizes and Prices

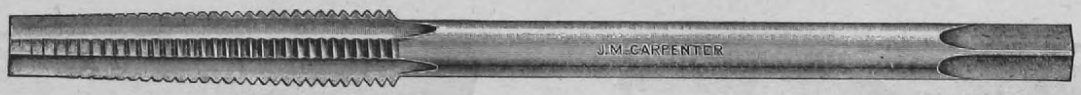
Diam. of Tap. Inches.	Price.		Number of Threads to the Inch.				Length Over All. Inches.
			Standard Pitches.			U. S. Form Threads also Furnished.	
	Each.	Per Set of 3.	U. S.	Whitworth.	V Form.		
1/16	$0.70	$2.10	64	60	..	72	1 7/8
5/64	.60	1.80	60	..	..	72	1 7/8
3/32	.50	1.50	50	48	..	48-56	1 7/8
7/64	.40	1.20	48	..	..	56	1 7/8
1/8	.35	1.05	40	40	..	32	2
9/64	.35	1.05	40	..	..	..	2
5/32	.35	1.05	36	32	..	32	2 1/8
11/64	.35	1.05	32	..	..	..	2 1/4
3/16	.35	1.05	24	24	24	30, 32	2 1/4
13/64	.35	1.05	24	..	..	..	2 3/8
7/32	.35	1.05	24	24	24	32	2 3/8
15/64	.35	1.05	24	..	..	..	2 1/2

Diam. of Tap, Inches.	Price.		Number of Threads to the Inch.						Length Over All, Inches.
			Standard Pitches.				Other Pitches also Furnished.		
	Each.	Per Set of 3.	U. S. Std.	S. A. E. Std.	Whitworth	V Form.	U. S. Form.	V Form.	
1/4	$0.45	$1.35	20	28	20	20	24-32	24-27, 32	2 1/2
5/16	.50	1.50	18	24	18	18	20-32	20-24, 27	2 23/32
3/8	.55	1.65	16	24	16	16	20	20-24, 27	2 15/16
7/16	.60	1.80	14	20	14	14	24	20-24, 27	3 5/32
1/2	.70	2.10	13	20	12	12	12-24	20-24, 27	3 3/8
9/16	.80	2.40	12	18	12	12	.....	27	3 19/32
5/8	.90	2.70	11	18	11	11	12	12-27	3 13/16
11/16	1.05	3.15	11	16	11	11	.....	.....	4 1/32
3/4	1.20	3.60	10	16	10	10	12	12-27	4 1/4
13/16	1.40	4.20	10	.....	10	10	.....	.....	4 15/32
7/8	1.60	4.80	9	14, 18	9	9	12	12-27	4 11/16
15/16	1.80	5.40	9	.....	9	9	.....	.....	4 29/32
1	2.00	6.00	8	14	8	8	12	12-27	5 1/8
1 1/8	2.25	6.75	7	12	7	7	.....	.....	5 7/16
1 1/4	2.60	7.80	7	12	7	7	.....	.....	5 3/4
1 3/8	3.00	9.00	6	12	6	6	.....	.....	6 1/16
1 1/2	3.50	10.50	6	12	6	6	.....	.....	6 3/8
1 5/8	4.20	12.60	5 1/2	.....	5	.....	.....	.....	6 11/16
1 3/4	5.00	15.00	5	.....	5	.....	.....	.....	7
1 7/8	5.80	17.40	5	.....	4 1/2	.....	.....	.....	7 5/16
2	6.70	20.10	4 1/2	.....	4 1/2	.....	.....	.....	7 5/8
2 1/8	8.00	24.00	4 1/2	.....	4 1/2	.....	.....	.....	8
2 1/4	9.20	27.60	4 1/2	.....	4	.....	.....	.....	8 1/4
2 3/8	10.50	31.50	4	.....	4	.....	.....	.....	8 1/2
2 1/2	11.50	34.50	4	.....	4	.....	.....	.....	8 3/4

Packed—Up to ½ inch, 12 only; 9/16 to 1½ inch, 3 only in a Box; Larger Sizes, Each Size in a Separate Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTER MACHINE OR NUT TAPS



U. S. Standard Threads furnished unless otherwise specified—Left Hand Taps are Special.
Sizes and Threads not Listed are Special.

Sizes and Prices

Diam. of Tap, Inches.	Price, Each.	Number of Threads to the Inch.				Length Over All, Inches.
		U. S. Standard.	S. A. E. Standard.	Whitworth Standard.	V Form.	
3/16	$0.60	24, 32	..	24	24	4 1/2
1/4	.60	20	28	20	20	5
5/16	.70	18	24	18	18	5 1/2
3/8	.80	16	24	16	16	6
7/16	.90	14	20	14	14	6 1/2
1/2	1.00	13	20	12	12	7
9/16	1.15	12	18	12	12	7 1/2
5/8	1.30	11	18	11	11	8
11/16	1.45	11	16	11	11	8 1/2
3/4	1.60	10	16	10	10	9
13/16	1.80	10	..	10	10	9 1/2
7/8	2.10	9	14, 18	9	9	10
15/16	2.40	9	..	9	9	10 1/2
1	3.15	8	14	8	8	11
1 1/8	3.60	7	12	7	7	11 1/2
1 1/4	4.25	7	12	7	7	12
1 3/8	4.80	6	12	6	6	12 1/2
1 1/2	5.65	6	12	6	6	13
1 5/8	6.50	5 1/2	..	5	..	13 1/2
1 3/4	7.20	5	..	5	..	14
1 7/8	8.25	5	..	4 1/2	..	14 1/2
2	9.25	4 1/2	..	4 1/2	..	15
2 1/8	10.80	4 1/2	..	4 1/2	..	15 1/2
2 1/4	12.25	4 1/2	..	4	..	16
2 3/8	13.80	4	..	4	..	16 1/2
2 1/2	15.00	4	..	4	..	17

Packed—Three only in a Box.

CARPENTER STOVE BOLT TAPS

American Screw Co.'s Standard.

Sizes and Threads not Listed are Special. Left-hand Taps are Special.

Diameter, Inch.	Number of Threads to Inch.	Each.	Per Dozen.	Diameter, Inch.	Number of Threads to Inch.	Each.	Per Dozen.
5/32	28	$0.35	$4.20	1/4	18	$0.45	$5.40
3/16	24	.35	4.20	5/16	18	.50	6.00
7/32	22	.35	4.20	3/8	16	.55	6.60

Packed—Twelve only in a Box.

PIPE TAPS

Pipe Tap.

Carpenter .....⅛ to 1½ inches.....% 2 to 3 inches.....%
Standard .....⅛ to 2 inches.....% 2½ and 3 inches.....%

Iron Pipe Size, inches.....	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Threads to inch.....	27	18	18	14	14	11½	11½	11½	11½	8	8
Pipe Taps.....Each,	$1.12	1.25	1.50	1.87	2.50	3.12	3.75	4.62	6.25	10.50	15.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTER MACHINE SCREW TAPS

American Screw Company's Standard.

Size of Screw Gauge Nos.	Standard Number of Threads per inch	Other Threads Also Furnished	A. S. M. E. Standard No. of Threads per inch	Other Threads Also Furnished	Per Dozen	Size of Screw Gauge Nos.	Standard Number of Threads per inch	Other Threads Also Furnished	A. S. M. E. Standard No. of Threads per inch	Other Threads Also Furnished	Per Dozen
2	56	64	64	56	$7.20	14	20	24	24	20	$5.40
3	48	56	56	48	6.00	16	18	20	22	20	5.40
4	36	32, 40, 48	48	36, 40	4.80	18	18	20	20	18	6.00
5	36	40	44	36, 40	4.20	20	16	18	20	18	6.00
6	32	40	40	32, 36	4.20	22	16	.....	18	16	6.60
7	32	.....	36	30, 32	4.20	24	16	.....	16	18	6.60
8	32	30, 40	36	30, 32	4.20	26	16	.....	16	14	6.60
9	30	32	32	24, 30	4.20	28	14	.....	14	16	7.20
10	24	28, 30, 32	30	24, 32	4.20	30	14	.....	14	16	7.20
12	24	32	28	24	4.20	.....	.....	.....	.....	.....	.....

Note.—Less than six taps of a size and thread will be charged at single tap prices.

Packed—Twelve only in a Box.

Drills and Taps Required for Machine Screws

Size of Machine Screws Nos.	Threads to inch	Decimal Diameter	Nearest Fractional Diameter, inches	Tap Drill Required		Tap Required			Size of Drill for outside diameter of Screw
				Nos.	Decimal Diameter	Nos.	Threads to inch	Decimal Diameter	
2	48	.0842	5/64	51	.0670	2	48	.0873	44
2	56	.0842	5/64	50	.0700	2	56	.0872	44
2	64	.0842	5/64	49	.0730	2	64	.0871	44
3	40	.0973	3/32	49	.0730	3	40	.1004	39
3	48	.0973	3/32	48	.0760	3	48	.1003	39
3	56	.0973	3/32	44	.0860	3	56	.1002	39
4	32	.1105	7/64	48	.0760	4	32	.1136	33
4	36	.1105	7/64	45	.0820	4	36	.1135	33
4	40	.1105	7/64	44	.0860	4	40	.1134	33
5	30	.1236	1/8	44	.0860	5	30	.1267	1/8
5	32	.1236	1/8	43	.0890	5	32	.1266	1/8
5	36	.1236	1/8	41	.0960	5	36	.1265	1/8
5	40	.1236	1/8	40	.0980	5	40	.1264	1/8
6	30	.1368	9/64−	41	.0960	6	30	.1397	28
6	32	.1368	9/64−	37	.1040	6	32	.1396	28
6	36	.1368	9/64−	36	.1065	6	36	.1395	28
6	40	.1368	9/64−	33	.1130	6	40	.1394	28
7	28	.1500	9/64+	35	.1100	7	28	.1527	24
7	30	.1500	9/64+	34	.1110	7	30	.1526	24
7	32	.1500	9/64+	31	.1200	7	32	.1526	24
8	24	.1631	5/32	34	.1110	8	24	.1658	19
8	30	.1631	5/32	30	.1285	8	30	.1656	19
8	32	.1631	5/32	30	.1285	8	32	.1656	19
9	24	.1763	11/64	30	.1285	9	24	.1788	16
9	28	.1763	11/64	29	.1360	9	28	.1786	16
9	30	.1763	11/64	28	.1405	9	30	.1786	16
9	32	.1763	11/64	27	.1440	9	32	.1786	16
10	24	.1894	3/16	28	.1405	10	24	.1918	11
10	28	.1894	3/16	26	.1470	10	28	.1917	11
10	30	.1894	3/16	24	.1520	10	30	.1916	11
10	32	.1894	3/16	24	.1520	10	32	.1916	11
11	24	.2026	13/64	24	.1520	11	24	.2098	6
11	28	.2026	13/64	21	.1590	11	28	.2046	6
11	30	.2026	13/64	19	.1660	11	30	.2046	6
12	20	.2158	7/32	24	.1520	12	20	.2181	7/32
12	22	.2158	7/32	20	.1610	12	22	.2180	7/32

Size of Machine Screws Nos.	Threads to inch	Decimal Diameter	Nearest Fractional Diameter, Inches	Tap Drill Required		Tap Required			Size of Drill for outside diameter of Screw
				Nos.	Decimal Diameter	Nos.	Threads to inch	Decimal Diameter	
12	24	.2158	7/32	19	.1660	12	24	.2178	7/32
13	20	.2289	15/64−	19	.1660	13	20	.2310	15/64
13	24	.2289	15/64−	15	.1800	13	24	.2308	15/64
14	20	.2421	15/64+	16	.1770	14	20	.2439	1/4
14	22	.2421	15/64+	13	.1850	14	22	.2438	1/4
14	24	.2421	15/64+	9	.1960	14	24	.2438	1/4
15	18	.2552	1/4	13	.1850	15	18	.2570	F
15	20	.2552	1/4	10	.1935	15	20	.2569	F
15	24	.2552	1/4	6	.2040	15	24	.2568	F
16	16	.2684	17/64	13	.1850	16	16	.2701	I
16	18	.2684	17/64	10	.1935	16	18	.2700	I
16	20	.2684	17/64	6	.2040	16	20	.2699	I
16	24	.2684	17/64	2	.2210	16	24	.2697	I
17	16	.2816	9/32	7	.2010	17	16	.2830	L
17	18	.2816	9/32	4	.2090	17	18	.2830	L
17	20	.2816	9/32	2	.2210	17	20	.2829	L
18	16	.2947	19/64	3	.2130	18	16	.2960	19/64
18	18	.2947	19/64	2	.2210	18	18	.2959	19/64
18	20	.2947	19/64	A	.2340	18	20	.2959	19/64
19	16	.3078	5/16	1	.2280	19	16	.3089	5/16
19	18	.3078	5/16	B	.2380	19	18	.3089	5/16
19	20	.3078	5/16	D	.2460	19	20	.3089	5/16
20	16	.3210	21/64	C	.2420	20	16	.3218	P
20	18	.3210	21/64	E	.2500	20	18	.3219	P
20	20	.3210	21/64	H	.2660	20	20	.3219	P
22	16	.3474	11/32	H	.2660	22	16	.3480	S
22	18	.3474	11/32	J	.2770	22	18	.3479	S
24	14	.3737	3/8	K	.2810	24	14	.3741	3/8
24	16	.3737	3/8	L	.2900	24	16	.3740	3/8
24	18	.3737	3/8	L N	.3020	24	18	.3739	3/8
26	14	.4000	13/32	N	.3020	26	14	.4001	13/32
26	16	.4000	13/32	O	.3160	26	16	.4000	13/32
28	14	.4263	27/64	Q	.3320	28	14	.4261	7/16
28	16	.4263	27/64	S	.3480	28	16	.4260	7/16
30	14	.4526	29/64	T	.3580	30	14	.4521	29/64
30	16	.4526	29/64	V	.3770	30	16	.4520	29/64

Note—Variations from above recommendations may be made according to individual requirements.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

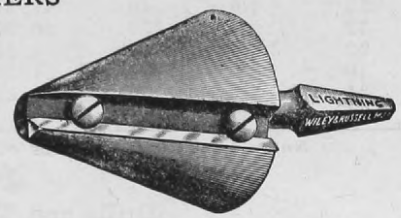
PIPE REAMERS

Standard—⅛ to 2 inch, 2½ and 3 inch.

Iron Pipe Size, inches	⅛	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Pipe Reamers.....Each,	$1.12	1.25	1.50	1.87	2.50	3.12	3.75	4.62	6.25	10.50	15.00

PIPE BURRING REAMERS

Nos. 544 and 546.



No. 549.

Lightning Pipe Burring Reamers

For Pipe and Countersinking. Made of Fine Steel and carefully ground to cut Iron, Brass, Wood, etc. Diameter at Point, 7/16 inch; Diameter at largest part, 1¼ inches; length of Flute 1 9/16 inches.

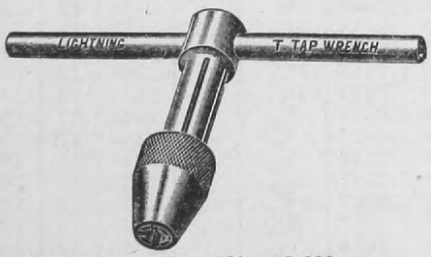
No. 544—For ½ to 1 inch Pipe.....Per Dozen, $15.00
No. 546—For 1 to 2 inch Pipe.....Per Dozen, 36.00

Improved Lightning Pipe Burring Reamers

Cutters triangular in shape; with three cutting edges which may be turned so as to present a fresh edge to the work at all times. Diameter at Point, 7/16 inch; Diameter at largest part, 2¼ inches; Length of Cutter, 2⅝ inches.

No. 549—For ½ to 2 inch Pipe.....Per Dozen, $27.00
Extra Cutters for above.....Per Dozen, 1.44

ADJUSTABLE TAP WRENCHES



Lightning. Nos. 329 and 333.

Clipper. Nos. 5 to 7.

Lightning Adjustable Tap Wrenches

Lightning Adjustable T Tap Wrenches made of the finest Steel, carefully hardened and tempered.

No. 329—Nos. 0 to 18 Machine Screw Sizes— 0 to 9/32 inch Fractional Sizes.....Per Dozen, $ 6.00
No. 333—Nos. 14 to 30 Machine Screw Sizes—5/16 to ½ inch Fractional Sizes.....Per Dozen, 12.00

Packed—Half Dozen in a Box.

Clipper Adjustable Tap Wrenches

Carefully hardened and tempered; nicely polished and finished.

No. 5—Nos. 5 to 16 Machine Screw Sizes—⅛ to 17/64 inch Fractional Sizes.....Per Dozen, $ 5.00
No. 6—Nos. 15 to 30 Machine Screw Sizes—¼ to 7/16 inch Fractional Sizes.....Per Dozen, 10.00
No. 7—Nos. 0 to 14 Machine Screw Sizes— 0 to 15/64 inch Fractional Sizes.....Per Dozen, 12.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TAP AND REAMER WRENCHES

No. 0.

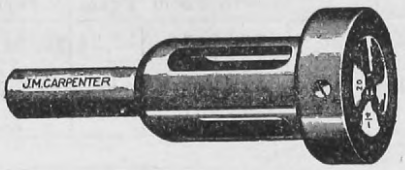
Cut showing working parts.

Tap and Reamer Wrenches

Nichols Patent Tap and Reamer Wrenches, made of the best material and fitted with hardened steel jaws. All parts interchangeable.

Nos.	**00**	**0**	**1**	**2**	**3**
Length, inches	7	11	15	20	30
Holds Tap, inches	0 to ¼	3/16 to ½	¼ to ¾	⅜ to 1	¾ to 1½
Each	$1.50	2.00	2.50	3.50	7.00

LATHE TOOL HOLDERS



BIT BRACE DIE HOLDERS

Lathe Tool Holders

For use in Lathe or Turret of Screw Machines; Holds Round Dies.

Nos.	**00**	**0**	**1**	**2**
For Dies, Nos.	00	0	1	2
Outside Diameter of Dies, inches	⅝	13/16	1	1½
Diameter of Shank, inch	½	½	½	⅝
Each	$0.75	.75	.75	1.50

Note.—Above Prices are for Holders Only.

Bit Brace Die Holders, for Round Dies

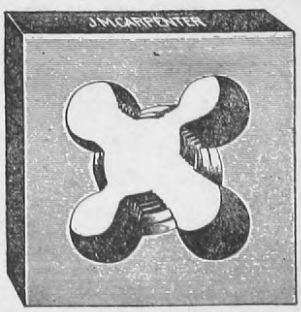
Nos.	**00**	**0**	**1**	**2**
For Dies, Nos.	00	0	1	2
Outside Diameter of Dies, inches	⅝	13/16	1	1½
Each	$0.75	.75	.75	1.50

Note.—Above Prices are for Holders Only.

SOLID BOLT DIES

U. S. Standard thread furnished unless otherwise specified.

Size, Inch	Number of Threads to Inch		Each
	U. S. Standard	V. Standard	
¼	20	20	$1.80
5/16	18	18	1.80
⅜	16	16	1.80
½	13	12	1.80
⅝	11	11	2.00
¾	10	10	2.20



2½×2½ inches.

Note.—Left Hand Dies are Special.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTER ADJUSTABLE ROUND DIES

No. 1—Outside Diameter, 1 Inch, 5/16 Inch Thick

Cutting Size, Inch.	Number of Threads to the Inch.						Each.	Cutting Size, Inch.	Number of Threads to the Inch.						Each.
	Standard Pitches.				Oth'r Thr'ds Also F'rn'd				Standard Pitches.				Oth'r Thr'ds Also F'rn'd		
	U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.			U. S.	S. A. E.	Whitworth	Form. V	U. S. Form.	V Form.	
1/8	40	.....	40	..	32	.....	$0.75	7/32	24	.....	24	24	32	.....	$0.75
9/16	40	.....	..	..	..	.....	.75	15/64	24	.....	..	..	..	.....	.75
5/32	36	.....	32	..	32	.....	.75	1/4	20	28	20	20	24,32	24, 27, 32	.75
11/64	32	.....	..	..	..	.....	.75	5/16	18	24	18	18	20,32	20, 24, 27	.75
3/16	24	.....	24	24	30,32	.....	.75	3/8	16	24	16	16	20	20, 24, 27	.75
13/64	24	.....	..	..	..	.....	.75	7/16	14	20	14	14	24	20, 24, 27	.75

No. 2—Outside Diameter, 1½ Inches, ½ Inch Thick

Cutting Size, Inch.	Number of Threads to the Inch.						Each.	Cutting Size, Inch.	Number of Threads to the Inch.						Each.
	Standard Pitches.				Oth'r Thr'ds Also F'rn'd				Standard Pitches.				Oth'r Thr'ds Also F'rn'd		
	U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.			U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.	
1/4	20	28	20	20	24,32	24, 27, 32	$1.00	1/2	13	20	12	12	12,24	20, 24, 27	$1.00
5/16	18	24	18	18	20,32	20, 24, 27	1.00	9/16	12	18	12	12	..	27	1.00
3/8	16	24	16	16	20	20, 24, 27	1.00	5/8	11	18	11	11	12	12, 27	1.00
7/16	14	20	14	14	24	20, 24, 27	1.00								

No. 3—Outside Diameter, 2 Inches, 5/8 Inch Thick

Cutting Size, Inch.	Number of Threads to the Inch.						Each.	Cutting Size, Inch.	Number of Threads to the Inch.						Each.
	Standard Pitches.				Oth'r Thr'ds Also F'rn'd.				Standard Pitches.				Oth'r Thr'ds Also F'rn'd		
	U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.			U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.	
1/4	20	28	20	20	24,32	24, 27, 32	$1.25	5/8	11	18	11	11	12	12,27	$1.50
5/16	18	24	18	18	20,32	20, 24, 27	1.25	11/16	11	16	11	11	..	.....	1.75
3/8	16	24	16	16	20	20, 24, 27	1.25	3/4	10	16	10	10	12	12,27	1.75
7/16	14	20	14	14	24	20, 24, 27	1.25	13/16	10	..	10	10	..	.....	2.00
1/2	13	20	12	12	12,24	20, 24, 27	1.25	7/8	9	14, 18	9	9	12	12,27	2.00
9/16	12	18	12	12	..	27	1.50								

No. 4—Outside Diameter, 2½ Inches, 11/16 Inch Thick

Cutting Size, Inch.	Number of Threads to the Inch.						Each.	Cutting Size, Inch.	Number of Threads to the Inch.						Each.
	Standard Pitches.				Oth'r Thr'ds Also F'rn'd.				Standard Pitches.				Oth'r Thr'ds Also F'rn'd		
	U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.			U. S.	S. A. E.	Whitworth	V Form.	U. S. Form.	V Form.	
1/2	13	20	12	12	12,24	20, 24, 27	$1.50	13/16	10	..	10	10	..	.....	$2.25
9/16	12	18	12	12	..	27	1.75	7/8	9	14, 18	9	9	12	12,27	2.25
5/8	11	18	11	11	12	12, 27	1.75	15/16	9	..	9	9	..	.....	2.50
11/16	11	16	11	11	..	.....	2.00	1	8	14	8	8	12	12,27	2.50
3/4	10	16	10	10	12	12, 27	2.00								

SOLID DIE STOCKS

For Holding Round Dies.

Nos.	00	0	1	2	3	4
For Dies, Nos.	00	0	1	2	3	4
Outside Diameter of Die, Inches	5/8	13/16	1	1½	2	2½
Length, inches	5½	7	9	13	18	23
Each	$0.40	.50	1.00	1.25	1.50	1.75

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CARPENTER ROUND DIE SETS

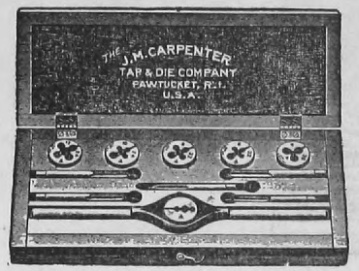
U. S. Standard Threads

Little Wonder Sets.

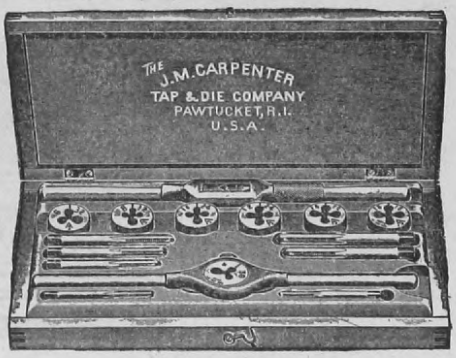
No. AA—U. S. Standard, Cutting 6 sizes: 2x56, 4x36, 6x32, 8x32, 10x24 and 12x24. **One** Stock, 7 inches long, **One** No. 00 Nichols Tap Wrench, 7 inches long, **Six** Round Dies and **Six** Plug Taps.....Per Set, $8.50

No. BB—U. S. Standard, Cutting 8 sizes: 2x56, 3x48, 4x36, 5x40, 6x32, 8x32, 10x24 and 12x24. **One** Stock, 7 inches long, **One** No. 00 Nichols Tap Wrench, 7 inches long, **Eight** Round Dies and **Eight** Plug Taps.....Per Set, $10.00

Packed—Each Set in a Hinged Cover Hardwood Box.



No. 00.



No. 02.

No. 00—U. S. Standard, Cutting 5 sizes: 2x56, 3x48, 4x36, 6x32, 8x32. **One** No. 0 Stock, 7 inches long, **One** No. 0B Round Tap Wrench, $1\frac{3}{16}$ inch in diameter, **Five** No. 0 Adjustable Dies $1\frac{3}{16}$ inch in diameter, **Five** Plug Taps.....Per Set, $6.00

No. 0—U. S. Standard, Cutting 5 sizes: 4x36, 6x32, 8x32, 10x24 and 12x24. **One** No. 0 Stock, 7 inches long, **One** each Nos. 0B and 0C Round Tap Wrenches, $1\frac{3}{16}$ inch in diameter. **Five** No. 0 Adjustable Dies, $1\frac{3}{16}$ in. in diameter, **Five** Plug Taps.....Per Set, $5.75

No. 01—U. S. Standard, Cutting 5 sizes: $\frac{1}{8}$x40, $\frac{5}{32}$x32, $\frac{3}{16}$x30, $\frac{7}{32}$x24 and $\frac{1}{4}$x20, otherwise the same as No. 0.....Per Set, $6.00

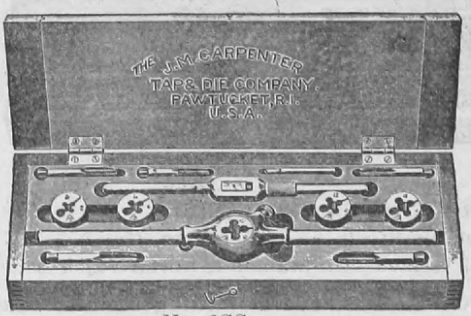
No. 02—U. S. Standard, Cutting 7 sizes: 4x36, 6x32, 8x32, 10x24, 12x24, 14x20 and 16x18. **One** No. 0 Stock, 7 inches long, **One** No. 00 Nichols Tap Wrench, 7 inches long, **Seven** No. 0 Adjustable Dies, $1\frac{3}{16}$ inch in diameter, **Seven** Plug Taps.....Per Set, $8.50

No. 02½—U. S. Standard, Cutting 7 sizes: 2x56, 3x48, 4x36, 6x32, 8x32, 10x24 and 12x24, otherwise the same as No. 02.....Per Set, $9.00

No. 03½—U. S. Standard, Cutting 7 sizes: $\frac{1}{16}$x72, $\frac{3}{32}$x56, $\frac{1}{8}$x32, $\frac{5}{32}$x32, $\frac{3}{16}$x24, $\frac{7}{32}$x24 and $\frac{1}{4}$x20, otherwise same as No. 02.....Per Set, $9.00

Packed—Each Set in a Hinged Cover Hardwood Box.

No. 5.



No. 6CC.

No. 5—U. S. Standard, Cutting 5 sizes: $\frac{3}{16}$x30, $\frac{7}{32}$x24, $\frac{1}{4}$x20, $\frac{5}{16}$x18 and $\frac{3}{8}$x16. **One** No. 1 Stock, 9 inches long, **One** each Nos. 1A and 1B Round Tap Wrenches, **Five** No. 1 Adjustable Dies, 1 inch in diameter, **Five** Plug Taps.....Per Set, $8.25

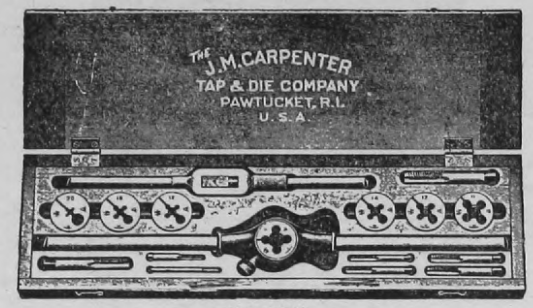
No. 6CC—U. S. Standard, Cutting 5 sizes: $\frac{1}{4}$x20, $\frac{5}{16}$x18, $\frac{3}{8}$x16, $\frac{7}{16}$x14 and $\frac{1}{2}$x13. **One** No. 2 Adjustable Stock, 17 inches long, **One** No. 0 Nichols Tap Wrench, 11 inches long, **Five** No. 2 Adjustable Dies, $1\frac{1}{2}$ inches in diameter, **Five** Taper Taps.....Per Set, $14.50

Packed—Each Set in a Hinged Cover Hardwood Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTER ROUND DIE SETS

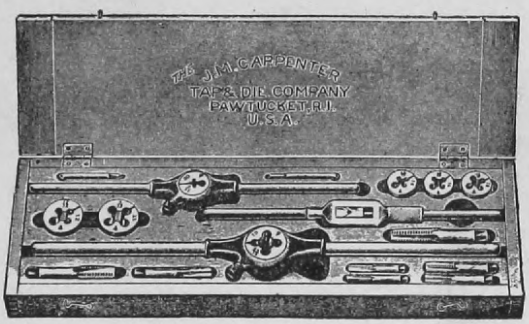
U. S. Standard Threads



No. 8CC.

No. 8CC—U. S. Standard, Cutting 7 sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11 and ¾x10. **One** No. 3 Adjustable Stock, 23 inches long, **One** No. 1 Nichols Tap Wrench, 15 inches long, **Seven** No. 3 Adjustable Dies, 2 inches in diameter, **Seven** Taper Taps..... Per Set, $19.00

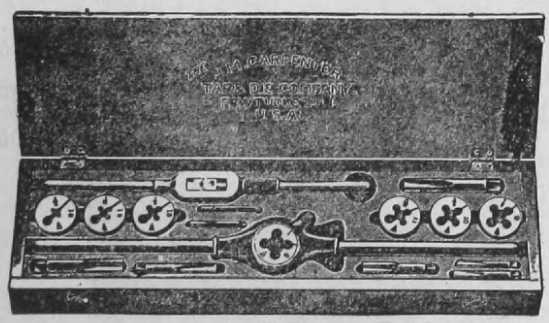
Packed—Each Set in a Hinged Cover Hardwood Box.



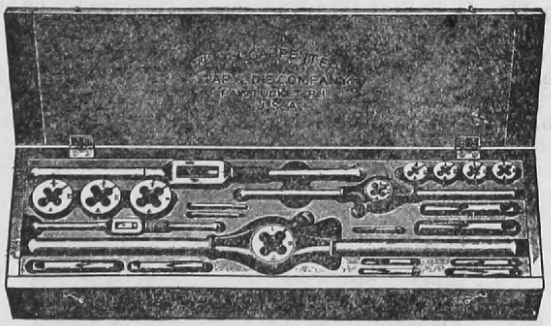
No. 9CC.

No. 9CC—U. S. Standard, Cutting 7 sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11 and ¾x10. **One** No. 2 Adjustable Stock, 17 inches long, **One** No. 3 Adjustable Stock, 23 inches long, **One** No. 1 Nichols Tap Wrench, 15 inches long, **Four** No. 2 Adjustable Dies, 1½ inches in diameter for four small sizes, and **Three** No. 3 Adjustable Dies for three large sizes, **Seven** Taper Taps.....Per Set, $21.00

Packed—Each Set in a Hinged Cover Hardwood Box.



No. 10CC.



No. 12CC.

No. 10CC—U. S. Standard, Cutting 7 sizes: ⅜x16, 7/16x14, ½x13, ⅝x11, ¾x10, ⅞x9 and 1x8. **One** No. 4 Adjustable Stock, 29 inches long, **One** No. 2 Nichols Tap Wrench, 20 inches long, **Seven** No. 4 Adjustable Dies, 2½ inches in diameter, **Seven** Taper Taps..... Per Set, $26.00

No. 12CC—U. S. Standard, Cutting 9 sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11, ¾x10, ⅞x9 and 1x8. **One** No. 2 Adjustable Stock, 17 inches long, **One** No. 4 Adjustable Stock, 29 inches long, **One** No. 0 Nichols Tap Wrench, 11 inches long, **One** No. 2 Nichols Tap Wrench, 20 inches long, **Five** No. 2 Adjustable Dies, 1½ inches in diameter for five small sizes, and **Four** No. 4 Adjustable Dies, 2½ inches in diameter for four large sizes, **Nine** Taper Taps.....Per Set, $34.00

Packed—Each Set in a Hinged Cover Hardwood Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

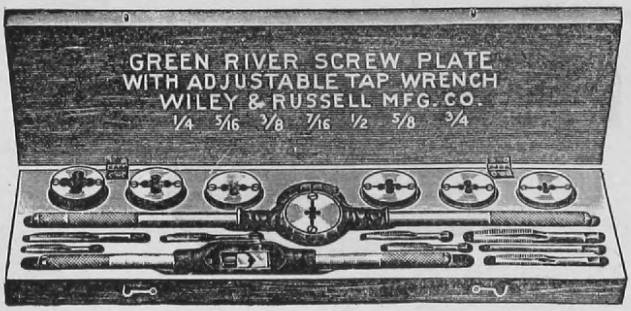
GREEN RIVER SCREW PLATES

U. S. Standard Threads

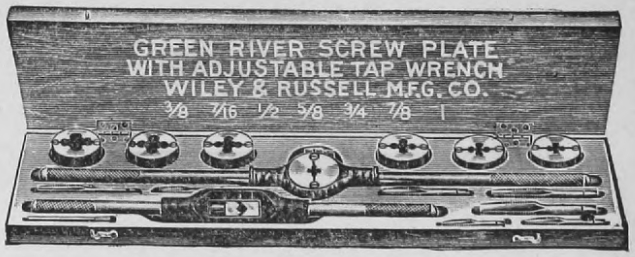
No. 2029

No. 2029—U. S. Standard. Cutting 5 Sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14 and ½x13. **One** Die Stock, 18 inches long. **One** No. 5 Adjustable Tap Wrench, 11½ inches long. **Five** Guides with Dies 2 3/16 inches in diameter. **Five** Taper Taps.....Per Set, $10.75

Packed—Each Set in a Hinged Cover Hardwood Box.



No. 1104.



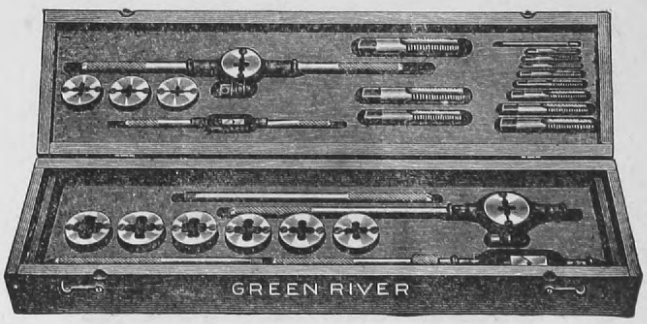
No. 1110.

No. 1104—U. S. Standard. Cutting 7 Sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11 and ¾x10. **One** Die Stock, 22 inches long. One No. 6 Adjustable Tap Wrench, 15 inches long. Seven Guides with Dies 2 3/16 inches in diameter. **Seven** Taper Taps.....Per Set, **$14.00**

No. 1110—U. S. Standard. Cutting 7 Sizes: ⅜x16, 7/16x14, ½x13, ⅝x11, ¾x10, ⅞x9 and 1x8. **One** Die Stock, 29 inches long. **One** No. 7 Adjustable Tap Wrench, 19½ inches long. **Seven** Guides with Dies 2¾ inches in diameter. **Seven** Taper Taps.....Per Set, 21.00

Packed—Each Set in a Hinged Cover Hardwood Box.

No. 1112.



No. 1119.

No. 1112—U. S. Standard. Cutting 9 Sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11, ¾x10, ⅞x9 and 1x8. **One** Die Stock, 29 inches long. **One** No. 5 Adjustable Tap Wrench, 11½ inches long, and **One** No. 7 Adjustable Tap Wrench, 19½ inches long. **Nine** Guides with Dies 2¾ inches in diameter. **Nine** Taper Taps.....Per Set, $24.00

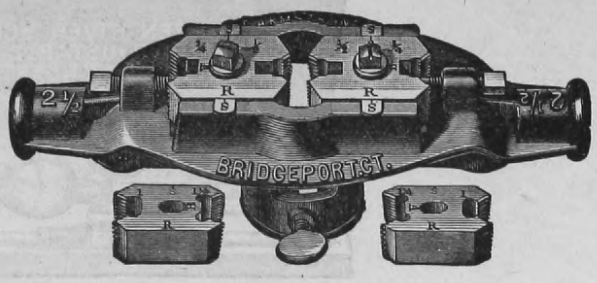
No. 1119—U. S. Standard. Cutting 11 Sizes: ¼x20, 5/16x18, ⅜x16, 7/16x14, ½x13, ⅝x11, ¾x10, ⅞x9, 1x8, 1⅛x7 and 1¼x7. **Two** Die Stocks, One 18 inches long and One 35 inches long. **Two** Adjustable Tap Wrenches, One No. 5, 11½ inches long, and One No. 7½, 31 inches long; **Eleven** Dies; Four 2 3/16 inches for four small sizes and Seven 2¾ inches in diameter for seven large sizes. **Eleven** Taper Taps.....Per Set, 40.00

Packed—Each Set in a Hinged Cover Hardwood Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ARMSTRONG PIPE STOCKS AND DIES

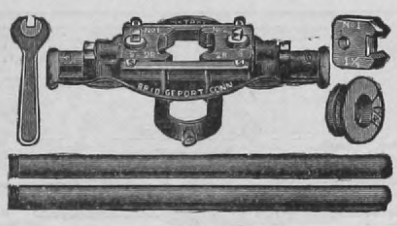
No. 2.



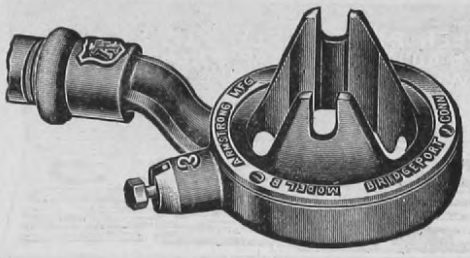
No. 2½.

No. 1 —Adjustable Stock, with Thumb Screw and 4 Right Hand Dies, ⅛, ¼, ⅜ and ½ inch.....Per Set, $ 9.00
No. 2 —Adjustable Stock, with Thumb Screw and 5 Right Hand Dies, ¼, ⅜, ½, ¾ and 1 inch...Per Set, 12.00
No. 2½—Adjustable Stock, with Thumb Screw and 2 Sets of Double End Right Hand Dies, ½x¾ and 1x1¼ inch .....Per Set, 12.00

Packed—One Set in a Box.



No. 3.



Model B Attachment.

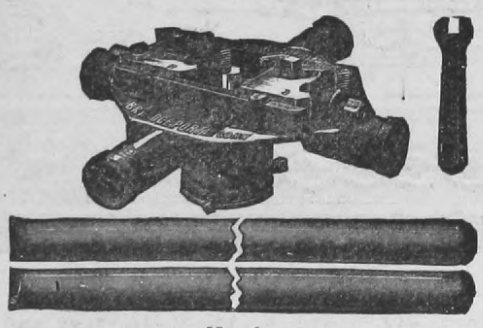
No. 3—Adjustable Stock, with Thumb Screw, and 3 Right Hand Dies, 1¼, 1½ and 2 inch.....Per Set, $20.00

Packed—One Set in a Box.

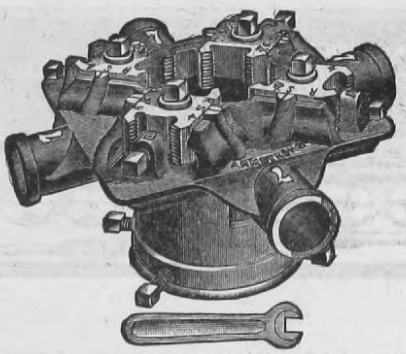
Armstrong Ratchet Attachments

With this Attachment any Armstrong Stock becomes a Ratchet Stock and Die. Made of Malleable Iron, Dust and Chip Proof. Can be used either right or left by reversing Pawl without removing from stock.

Model B Ratchet Attachments....	For Stocks, Nos.....	2	2½	3
	Each	$2.50	3.00	3.50



No. 6.



No. 7.

The change from 2½ to 3 inch is made by reversing Dies end for end when they will cut two standard sizes without further adjustment.

No. 6—Adjustable Stock and 1 Set of Double End Right Hand Dies, 2½x3 inch .....Per Set, $40.00

Packed—One Set in a Box.

One set of Dies is threaded 2½ inch on one end and 3 inch on the other, and one set is threaded 3½ inch on one end and 4 inch on the other, and by reversing any size mentioned may be obtained.

No. 7—Adjustable Stock and 2 Sets of Double End Right Hand Dies, 2½x3 and 3½x4 inch .....Per Set, $60.00

Packed—One Set in a Box.

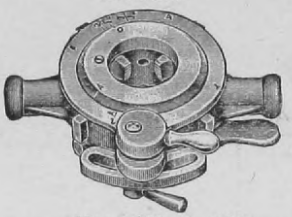
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PIPE STOCKS AND DIES

HART'S

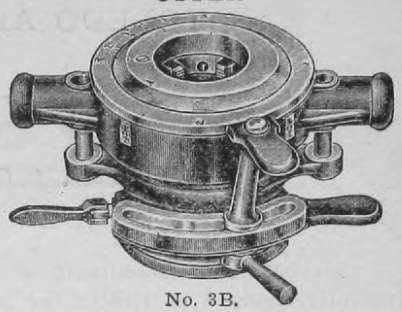
Nos. 41 to 45.

OSTER



Nos. 101 to 103.

OSTER



No. 3B.

"Hart's" New Pattern Duplex Pipe Stocks and Dies

These Tools are fitted with adjustable dies and guide or centering jaws. The distinguishing features between this and other tools are the means for setting the dies to size, holding them in position, and releasing them at the end of a cut. The setting is done with great accuracy and by simply using the hand, the holding is done by a positive lock; the releasing is accomplished instantly and avoids turning back over threads. The Dies are of the Chaser form and are readily adjusted and sharpened; they do their work while held stationarily; their quick adjustment enables the operator to at once alter the size of the threads, so as to suit any variation in the pipe fittings. The Guide Jaws center the pipe accurately to the dies and are adjusted simultaneously to all sizes of pipe; the mechanism for accomplishing it is self-locking, and its adjustment cannot be accidentally disturbed. The Cutting-off Device cuts the pipe square and clean.

Nos.	For Threading Pipe, Inches	Without Cut-off Per Set	With Cut-off Per Set	Extra Dies			
				For Nos.	Complete Sets, Per Set	Single Sets in Complete Set	Single Sets (4 pieces) Per Set
41	¼, ⅜, ½, ¾	$12.00	$15.00	41	$5.20	2	$2.60
41½	⅛, ¼, ⅜, ½, ¾	14.00	17.00	41½	7.80	3	2.60
42	½, ¾, 1, 1¼	15.50	18.50	42	6.20	2	3.10
42½	¼, ⅜, ½, ¾, 1, 1¼	17.00	20.00	42½	9.30	3	3.10
43	1, 1¼, 1½, 2	22.00	25.00	43	7.40	2	3.70
43½	½, ¾, 1, 1¼, 1½, 2	25.00	28.00	43½	11.10	3	3.70
44	1½, 2, 2½, 3	40.00	45.00	44	13.00	2	6.50
45	2½, 3, 3½, 4	55.00	60.00	45	15.00	2	7.50

Note.—Stocks always sent **without** cut-off unless otherwise ordered. With the exception of those for ⅛ inch pipe each set of dies thread two sizes.

Oster Bull-Dog Pipe Stocks and Dies

Equipped with Self-locking and Centering Guides which do away with loose bushings. These Guides are operated on a scroll and can be set for all sizes the tool will thread, the more pressure on the ends of the guides, the more solid the locking arrangement; great pressure on the ends of the guides only tends to lock them more firmly in position. The Dies are adjustable and controlled by the lever handle on top, by moving the handle to the extreme right, the dies are set and held in place while cutting; by moving the handle to the left, the dies are opened and the stock can be removed without turning back over the finished thread. Has no cut-off attachment.

Nos.	For Threading Pipe, Inches	Complete with Dies, Per Set	Extra Dies			
			For Nos.	Complete Sets, Per Set	Single Sets in Complete Sets	Single Sets (4 pieces) Per Set
101	⅛, ¼ & ⅜, ½ & ¾	$13.00	101	$4.50	3	$1.50
102	¼ & ⅜, ½ & ¾, 1 & 1¼	17.00	102	5.25	3	1.75
103	1 & 1¼, 1½ & 2	22.00	103	4.00	2	2.00

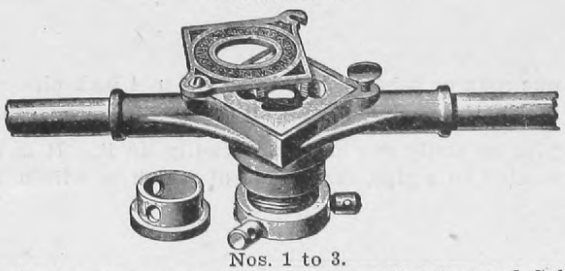
Note.—⅛ inch pipe dies may be added to range of No. 102 at the cost of one extra set of dies.

Oster Matchless Die Stocks

Self contained **Easy Pipe Threader** without any loose dies, loose bushings, or set screws. Dies and Guides easily adjusted by a small lever handle. **Patented Chip Shield** prevents chips and oil from clogging the leader screw.

No. 3B—For threading 1 to 2 inch pipe..... { Complete with Dies .....Per Set, $30.00 / Single Sets (4 pieces) .....Per Set, 2.00

STANDARD



Nos. 1 to 3.

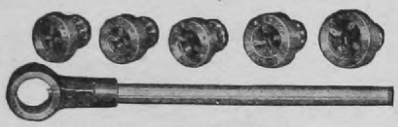
Standard Pipe Stocks and Dies, Malleable Iron Stock, with Loose Handles and Solid Dies. Nos. 2 and 3 have Leader Screws.

Nos	1	1½	2	3
Pipe Sizes of Dies, inches	¼, ⅜, ½, ¾, 1	¾, 1, 1¼	1¼, 1½, 2	2½, 3
Dimensions of Dies	2½x¾ inch	3x¾ inch	4x⅞ inch	5x1¼ inch
Complete with R. H. Dies, Per Set	$15.00	$13.50	$20.00	$43.00
Stocks Only, Each	5.00	6.00	9.50	25.00
Extra Dies, Right or Left Hand, Each	2.00	2.50	3.50	9.00
Extra Guides, Each	.35	.45	.60	1.00
Die Frames, Each	.30	.40	.50	.60

Packed—Entire Page, One Set in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TOLEDO ADJUSTABLE PIPE THREADING DEVICES



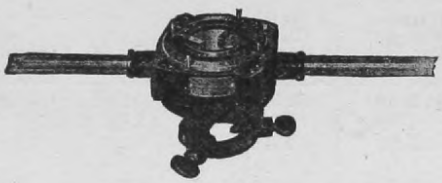
No. 00T.

No. 0T.

No. 00T is an exceedingly efficient ⅛ to ⅜ inch ratchet threader. A separate die head for each size pipe, and instantly changed by pulling the pawl knob. Furnished complete with five die heads, ratchet and oak case.

No. 0T threads ½ and ¾ inch pipe with one set of dies, ¼ and ⅜ inch with another set and ⅛ inch pipe with a third set. Utilizes the receding-die principle for threading ½ and ¾ inch pipe, making it the easiest operating to in use for threading these sizes.

No. 1T.



No. 10T.

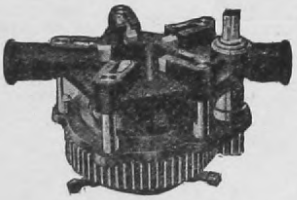
No. 1½RT.

No. 1T is the standard pipe threader today. It is the "original receding-die" tool. This is also made, at the same price, reversed in all its parts for cutting left-hand threads—neither tool will do both.

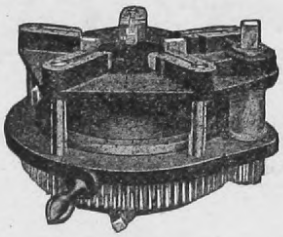
No. 1AT, listed below, like the No. 1 but equipped with ratchet.

No. 10T threads 1 to 2 inch pipe, with one set of dies. Is exceedingly simple, efficient and easy to operate Has no cams or other intricate mechanism for adjusting dies. No. 10AT, listed below, is like the No. 10 but equipped with ratchet.

No. 1½RT, threads 2½ and 3 inch pipe. It operates with a ratchet only, and for a direct-acting tool threads pipe very easily.



No. 2T.



No. 3T.

No. 2T is a remarkable tool, one man or a boy can thread 2½ to 4 inch pipe with it. There is no other tool of its capacity that can be compared with it for ease of operation or general satisfaction.

No. 3T threads 4½ to 8 inch pipe so easily one man can readily do it. It is strictly portable, and with clearance in other directions, may be operated on a pipe, the center of which is within 10 inches of a wall or other obstruction.

Number.	00T	0T	1T	*1AT	10T	*10AT	1½RT	2T	3T
Threads Pipe.....Inches	⅛ to ¾	⅛ to ¾	1 to 2	1 to 2	1 to 2	1 to 2	2½ to 3	2½ to 4	4½ to 8
Net Weight.....Pounds	10	7	18	22	16½	22	38	88	217
Price, Complete.....Each	$20.00	16.00	24.00	30.00	28.00	34.00	50.00	100.00	300.00
Price Dies, Single Set....Each	2.00	2.50	2.50	2.50	2.75	2.75	4.00	8.00	12.00

*No. 1AT and No. 10AT not illustrated are like No. 1T and 10T, respectively, but equipped with ratchet.

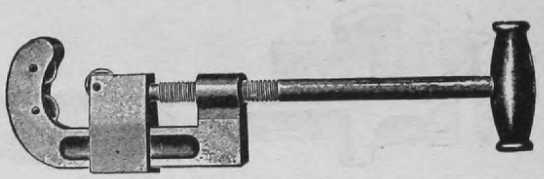
Complete catalogue will be mailed upon request.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PIPE CUTTERS

TRIMO

BARNES' PATTERN



Trimo Pipe Cutters

	Complete Cutters Each	Extra Wheels Each	Extra Rolls Each	Extra Pins Per Dozen
No. 1—Cuts ⅛ to 1¼ inch Pipe	$ 4.50	$0.30	$0.30	$1.00
No. 2—Cuts ½ to 2 inch Pipe	6.00	.30	.30	1.00
No. 3—Cuts 1 to 3 inch Pipe	10.00	.40	.40	1.00

Barnes' Pattern Improved Three-Wheel Pipe Cutters

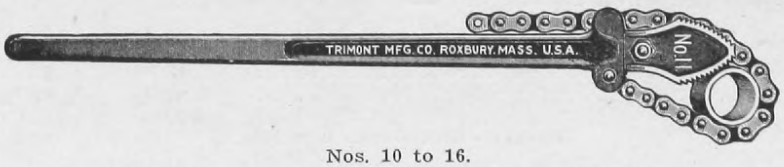
	Complete Cutters Each	Extra Wheels Each	Extra Pins Per Dozen
No. 1—Cuts ⅛ to 1 inch Pipe	$ 4.50	$0.25	$1.20
No. 2—Cuts ½ to 2 inch Pipe	6.00	.30	1.20
No. 3—Cuts 1½ to 3 inch Pipe	10.00	.40	1.20
No. 4—Cuts 2½ to 4 inch Pipe	20.00	.50	1.80

SAUNDERS' PATTERN

Saunders' Pattern Improved Roller Pipe Cutters

	Complete Cutters Each	Extra Wheels Each	Extra Rolls Each	Extra Pins Per Dozen
No. 1—Cuts ⅛ to 1 inch Pipe	$ 3.00	$0.24	$0.24	$1.20
No. 2—Cuts 1 to 2 inch Pipe	4.50	.32	.32	1.20
No. 3—Cuts 2 to 3 inch Pipe	11.00	.60	.50	1.80
No. 4—Cuts 2½ to 4 inch Pipe	18.00	.60	.50	1.80

CHAIN PIPE WRENCHES



Nos. 10 to 16.

With Flat Link Chain.

Trimo Bull Dog Chain Pipe Wrenches

Nos.	**10**	**11**	**12**	**13**	**13½**	**14**	**15**	**16**
Takes Pipe, inches	⅛ to 1	⅛ to 2	¼ to 3	¾ to 4	1 to 6	1½ to 8	2 to 12	2 to 15
Length over all, inches	14	21	28	36	44	51	65	78
Weight, each, pounds	2	5	9	15	22	30	61	102
With Flat Link Chain..Each,	$2.50	3.50	5.00	7.00	9.00	11.00	18.00	30.00

Packed—In Cases to Suit Order.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PIPE WRENCHES

BUHL-STILLSON

6 to 14 inch, with Wood Handle.

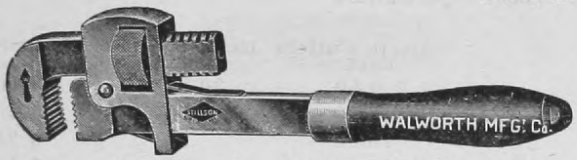
18 to 48 inch, all Steel.

Buhl-Stillson Wrenches are made from entirely new patterns and we recommend them both in quality and finish equal to any similar wrench manufactured; they are made from a high grade of material and great pains have been taken in their manufacture.

	Wood Handle.				All Steel.			
Inches	6	8	10	14	18	24	36	48
Takes Pipe, inches	⅛ to ½	⅛ to ¾	⅛ to 1	¼ to 1½	¼ to 2	¼ to 2½	¼ to 3½	1 to 5
Buhl-Stillson, each	$2.00	2.25	2.50	3.50	5.00	7.25	13.50	20.00

Packed—6 to 24 inch, Half Dozen; 36 and 48 inch, One-Sixth Dozen in a Box.

WALWORTH-STILLSON



6 to 14 inch, with Wood Handle.

18 to 48 inch, all Steel.

Walworth-Stillson Pipe Wrenches, Steel Head and Bar.

	Wood Handle.				All Steel.			
Inches	6	8	10	14	18	24	36	48
Takes Pipe, inches	⅛ to ½	⅛ to ¾	⅛ to 1	¼ to 1½	¼ to 2	¼ to 2½	¼ to 3½	1 to 5
Walworth-Stillson, each	$2.00	2.25	2.50	3.50	5.00	7.25	13.50	20.00

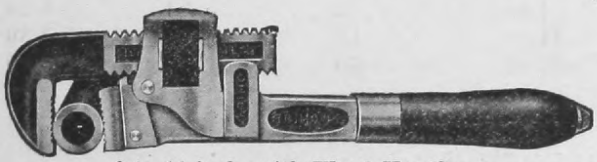
Packed—6 to 24 inch, Half Dozen; 36 and 48 inch, One-Sixth Dozen in a Box.

EXTRA PARTS FOR STILLSON WRENCHES

For Wrench ... Inches	**6**	**8**	**10**	**14**	**18**	**24**	**36**	**48**
Jaws ... Each,	$0.75	.80	.85	1.15	1.75	2.25	4.35	7.50
Frames ... Each,	.38	.42	.50	.60	.75	.95	1.70	2.20
Adjusting Nuts ... Each,	.12	.15	.20	.30	.35	.55	1.10	1.50
Front Springs ... Each,	.10	.10	.10	.10	.10	.11	...	.13
Back Springs ... Each,	...	...	.10	.10	.10	.11	...	.13

Note.—The 6, 8, 36 and 48 inch Stillson Wrenches have only **One** Spring. The others require **Three,** One Front and Two Back; one over the other.

TRIMO



6 to 14 inch, with Wood Handle.

6 to 48 inch, with Steel Handle.

Trimo Pipe Wrenches are equipped with Nut Guards that prevent the accidental turning of the adjusting nut in close quarters and with Steel Frames that will not break. All parts are interchangeable.

With Wood Handle

Inches	6	8	10	14
Takes Pipe, inches	⅛ to ½	⅛ to ¾	⅛ to 1	¼ to 1½
With **Wood Handle** ... Each	$2.00	2.25	2.50	3.50

Packed—Half Dozen in a Box.

With Steel Handle

Inches	6	8	10	14	18	24	36	48
Takes Pipe, inches	⅛ to ½	⅛ to ¾	⅛ to 1	¼ to 1½	¼ to 2	¼ to 2½	½ to 3½	1 to 5
With **Steel Handle** ... Each,	$2.00	2.25	2.50	3.50	5.00	7.25	13.50	20.00

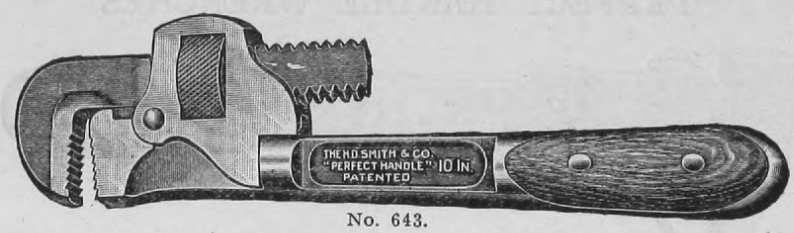
Packed—6 to 24 inch, Half Dozen; 36 and 48 inch, One-Sixth Dozen in a Box.

EXTRA PARTS FOR TRIMO PIPE WRENCHES

For Wrench ... Inches,	**6**	**8**	**10**	**14**	**18**	**24**	**36**	**48**
Movable Jaw ... Each,	$0.75	.80	.85	1.15	1.75	2.25	4.35	7.50
Nut ... Each,	.12	.15	.20	.30	.35	.55	1.10	1.50
Insert Jaw ... Each,	.35	.40	.50	.60	.70	.80	1.10	2.00
Frame ... Each,	.38	.42	.50	.60	.75	.95	1.70	2.20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"PERFECT HANDLE" PIPE WRENCHES



No. 643.

The "Perfect Handle" Wrench is stronger than the all-Steel Wrenches and has the additional merit that the handle is comfortable in all sorts of weather and conditions. The Steel parts are Drop Forged, the Wood of the Handle is Water-proof and rests solid against the Steel.

No. 643—Length when Open..	8	10	14	18	24
Capacity	⅛ in. wire to ¾ in. pipe	⅛ in. wire to 1 in. pipe	¼ in. wire to 1½ in. pipe	¼ in. wire to 2 in. pipe	¼ in. wire to 2½ in. pipe
Weight per Dozen, Pounds....	10¾	19¾	41½	65	120
Each	$2.00	2.25	3.00	4.00	6.00

Packed—8, 10, 14 inches, One-Half Dozen; 18 inches, One-Third Dozen; 24 inches, One-Sixth Dozen in a Wooden Box.

Movable Hook Jaws.....Each	$0.75	.80	1.00	1.33	2.10
Knurled Nuts .....Each	.11	.14	.17	.22	.35
Frame or Rocker.....Each	.35	.40	.50	.55	.80
Springs ..... Each	.03	.03	.03	.04	.04
Frame Pins ..... Each	.03	.04	.04	.04	.04
Spring Pins ..... Each	.03	.04	.04	.04	.04

COMBINATION WRENCHES

No. 43. Short Nut.

Bemis & Call Short Nut Combination Nut and Pipe Wrenches, forged Steel Head, Bar and Shank. Bright Finish.

No. 43—Inches	10	12	15
Takes Pipe, inches.....	¼ to 1	½ to 1¾	½ to 2¼
Per Dozen.....	$23.00	26.00	37.00

Packed—Half Dozen in a Box.

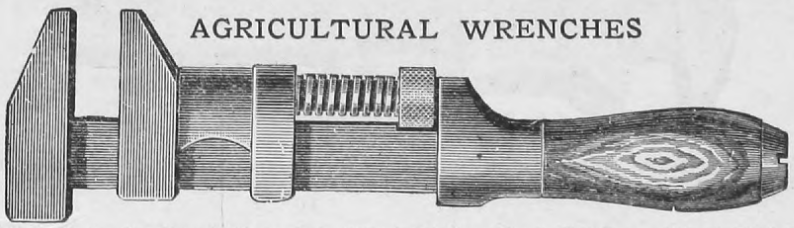
No. 45. Long Nut.

Bemis & Call Long Nut Combination Nut and Pipe Wrenches, forged Steel Head, Bar and Shank. Bright Finish.

No. 45—Inches	10	12	15
Takes Pipe, inches	¼ to 1	½ to 1¾	½ to 2¼
Per Dozen.....	$25.25	28.50	40.50

Packed—Half Dozen in a Box.

AGRICULTURAL WRENCHES

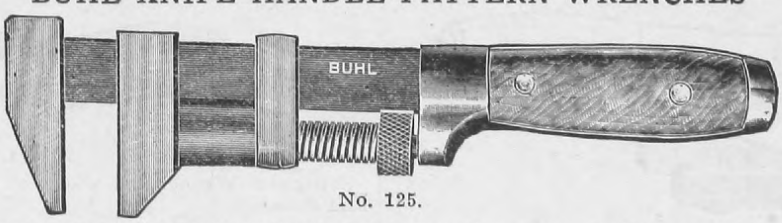


Standard Agricultural Wrenches, Wrought Bar, Coe's Pattern. Black Finish.

No. 120—Inches	6	8	10	12	15
Jaws Open, inches.....	1	1 5/16	1 13/16	2	2¼
Per Dozen.....	$10.00	12.00	14.00	18.00	24.00

Packed—Half Dozen in a Package.

BUHL KNIFE HANDLE PATTERN WRENCHES



No. 125.

Buhl Knife Handle Pattern Wrenches, Solid Wrought Bar, Extra Heavy, Case Hardened. Black Finish.

No. 125—Inches	6	8	10	12	15	18	21
Will Open, Inches.....	⅞	1¼	1¾	2⅛	2 9/16	3⅛	3 15/16
Weight, per dozen.....	9	16	25	40	53	80	105 lbs.
No. 025—Buhl, Black, Per Dozen.....	$10.00	12.00	14.00	18.00	24.00	32.00	39.00

Packed—6, 8, 10 and 12 inch in packages of One-Half Dozen; 15 and 18 inch in packages of One-Third Dozen; 21 inch in packages of One-Twelfth Dozen.

Digitized by Google UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PERFECT HANDLE WRENCHES

No. 615.

Perfect Handle Wrenches, Drop Forged from one piece of Steel, with inlaid or locked in Wood Handles which cannot become loose in any way.

No. 615—Inches	6	8	10	12	15	18	21
Jaws Open, inches	1 1/16	1 1/4	1 7/8	2 3/16	2 3/4	3 1/8	4
Per Dozen	$10.00	12.00	14.00	18.00	24.00	32.00	39.00

Packed—6 to 12-inch, Half Dozen; 15 and 18-inch, One-third Dozen; 21-inch, One-twelfth Dozen in a Box.

STEEL HANDLE WRENCHES

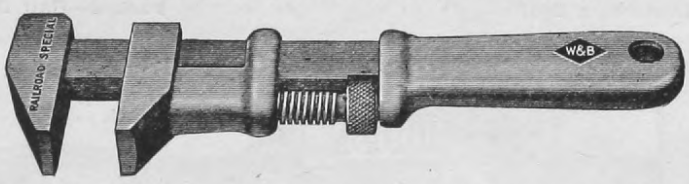
No. 300.

P. S. & W. Co., "Steel Handle" Wrenches, Head, Bar and Handle are forged solid from one piece of steel, insuring unusual strength and durability. Black Finish.

No. 300—Inches	6	8	10	12	15	18	21
Jaws Open, inches	7/8	1 1/4	1 3/4	2 1/8	2 9/16	3 1/8	4
Per Dozen	$10.00	12.00	14.00	18.00	24.00	32.00	39.00

Packed—6 to 12 inch, Half Dozen; 15-inch, One-third Dozen; 21-inch, One-twelfth Dozen in a Box.

RAILROAD SPECIAL WRENCHES

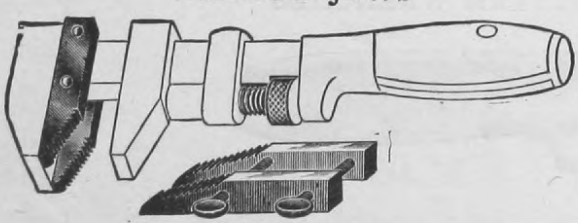


W. & B. Railroad Special Wrenches, Head and Bar are drop forged from one piece of Open Hearth Steel. Fitted with Indestructible Iron Handle. Jaws are Case Hardened. Black finish.

W. & B—Inches	6	8	10	12	15	18	21
Jaws Open, inches	1	1 1/2	1 7/8	2 1/4	2 13/16	3	3 15/16
Per Dozen	$10.00	12.00	14.00	18.00	24.00	32.00	39.00

Packed—Each Wrench Wrapped in Anti-Rust Paper.

WRENCH JAWS



Yankee Nos. 1 and 2.

Yankee Jaws convert an ordinary Wrench into a Pipe Wrench. Made of High-grade Tool Steel, thoroughly hardened. Inexpensive and very convenient. Easy to attach.

No. 1—For 18 to 21 inch Wrenches...Per Dozen, $6.00
No. 2—For 6 to 15 inch Wrenches...Per Dozen, 4.80

Packed—One Dozen in a Box.

ALLIGATOR WRENCHES

No. 11.

Alligator Wrenches, Solid Cast Steel, Oil Tempered, **Blued** and **Polished.**

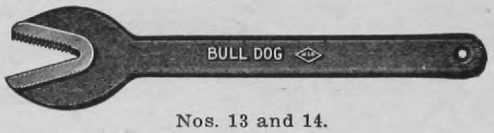
No.	**11**
Length, inches	5 3/4
Takes Pipe, inches	1/8 to 3/8
Takes Round or Square Iron, inches	1/4 to 3/4
Per Dozen	$4.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ALLIGATOR WRENCHES

No. 12.



Nos. 13 and 14.

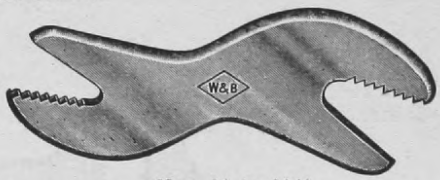
Alligator Wrenches, Solid Cast Steel, Drop Forged, Oil Tempered.

Nos.	12	13	14
Length, inches	9	16	22
Takes Pipe, inches	⅜ to ¾	½ to 1¼	1¼ to 2
Takes Round or Square Iron, inches	½ to 1	¾ to 1⅜	1½ to 2½
Per Dozen	$12.00	24.00	36.00

Packed—No. 2, Half Dozen in a Box; Nos. 3 and 4, Packed Loose.

ALWAYS READY WRENCHES

Nos. 1 to 2½.



Nos. 01 to 02½.

Always Ready Wrenches, High Carbon Steel, forged and tempered in oil.

Black Finish, Polished Jaws

Nos.	1	2	2½
Length, inches	5	7	9
Takes Nuts or Pipe, In.	¼ to ¾	¼ to 1¼	¼ to 1¾
Per Dozen	$4.60	6.30	10.00

Packed—Half Dozen in a Box.

Polished and Nickel Plated

Nos.	01	02	02½
Length, inches	5	7	9
Takes Nuts or Pipe, In.	¼ to ¾	¼ to 1¼	¼ to 1¾
Per Dozen	$5.00	6.75	10.50

Packed—Half Dozen in a Box.

UNIVERSAL GRIP WRENCHES

Universal Grip Wrenches

This Wrench has more uses than any Wrench on the market and is a necessity on the farm, in the shop and household; can be used without adjusting on any form of pipe or nut and is always ready. **Grips** from ¼ to 1-inch diameters.

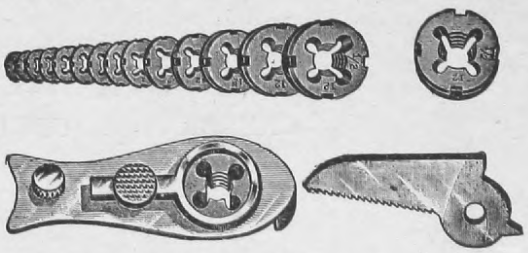
The Dies will rethread three sizes of bolts, ⅝-18, ½-13 and ⅜-16, and, as these three sizes of Bolts are used on all farm machinery, the value of this Wrench for farm use can readily be seen. Made of Toughened Carbon Steel, Frosted Nickel Finish.

Universal Grip, Combined Thread Cutter, Nut and Pipe Wrench, 8¼ inches long.....Per Dozen, $8.00

Packed—Half Dozen in a Carton.

ELGIN ADJUSTABLE WRENCHES

The Elgin.



The handiest Wrench made, can be used for all purposes, and is easily and accurately adjusted. Smoothly finished, **full** Nickel Plated. Hardened Jaws, all Solid Steel.

Rethreading Attachment—The Improved Elgin can be furnished with a **Ratcheting** Attachment, which will rethread damaged Bolts in corners and angles, without removing the Bolt from its position to a vise. The most perfect tool of its class today.

Elgin Adjustable Wrenches, Length 7 inches, Weight 10 ounces.....Per Dozen, $12.00
Extra Jaws.....Per Dozen, 3.00
Rethreading Attachments, with one Die only.....Per Dozen, 12.00
Extra Dies, ¼, ⅝, ⅜, 7/16 or ½ inch.....Per Dozen, 6.00

Packed—One Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ADJUSTABLE S WRENCHES

BUHL

No. 48.

BEMIS & CALL

No. 51.

Buhl Single End Adjustable S Wrenches

Adaptable to all purposes, can be used in many irregular places where it is impossible to operate a straight handle or monkey wrench. Drop Forged Jaw and Solid Bar, Case Hardened, Polished Heads, Black Enameled Bar.

No. 48—Inches	6	8	10	12	14
Opens, inches	¾	1	1⅜	1⅝	2
Price ..... Per Dozen,	$7.20	9.00	12.00	15.00	21.00
Extra Sliding Jaws ..... Each,	.12	.16	.21	.33	.51

Packed—Half Dozen in a Box.

Bemis & Call Double End Adjustable S Wrenches

For Nut and Pipe. Made of Drop Forged Steel, carefully Hardened and Tempered, all parts interchangeable. Very useful for working in corners and other places where a monkey wrench cannot be used.

No. 51—6 inches long, takes ¾ inch Nut and ⅛ to ½ inch Pipe ..... Per Dozen, $15.00

Packed—Half Dozen in a Box.

KEYSTONE ADJUSTABLE WRENCHES

Nos. 706 to 712.

Keystone Adjustable Wrenches

Made of a special grade of Steel, Case Hardened, Polished all over except the web. Will operate square as well as hexagon nuts, fully guaranteed.

Nos.	**706**	**708**	**710**	**712**
Length, inches	6	8	10	12
Opens, inches	¾	15/16	1⅛	15/16
Per Dozen	$7.80	9.60	12.00	15.00

Packed—Half Dozen in a Box.

CRESCENT ADJUSTABLE WRENCHES

Single End, 4 to 18 Inches.

The Crescent Wrench follows the outline of the solid 22½-degree Engineers' Wrench, which is the most serviceable of all solid wrenches. It can be used in practically every opening where a solid wrench can be used. Drop Forged from the highest grade Carbon Tool Steel, hardened and toughened by a special heat-treating process.

Size, inches	4	6	8	10	12	15	18
Opens, inches	½	¾	15/16	1⅛	15/16	111/16	21/16
Crescent Single End, Polished ..... Per Dozen,	$7.80	7.80	9.60	12.00	15.00	19.20	27.00

Packed—Each Wrench in a Separate Box.

CRESCENT DOUBLE END ADJUSTABLE WRENCHES

Double End 6-8, 8-10.

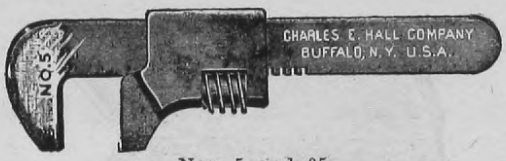
The Crescent Double End Wrench is of the same material and workmanship as the Single End Wrench. It is unsurpassed in general utility for automobile owners, repair men, machinists and others who require a number of sizes in the adjustable wrench and with whom weight and number of tools is an important item.

Size, inches	6-8	8-10
Opens, inches	¾–15/16	15/16–1⅛
Crescent Double End, Polished ..... Per Dozen,	$15.00	18.00

Packed—Each Wrench in a Separate Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BICYCLE WRENCHES

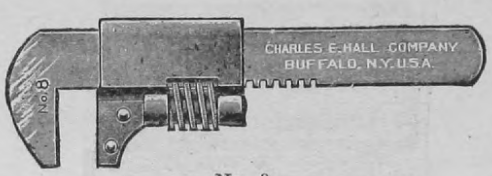


Nos. 5 and 05.

Adjustable Bicycle or Motor Boat Wrenches, Round Corners, Flat Bar, Extra Strong Malleable Jaw. Length 5 inches, Jaws open 1½ inches.

No. 5—Mottled Finish .....Per Dozen, $4.00
No. 05—Nickel Plated .....Per Dozen, 5.30

Packed—One Dozen in a Box.



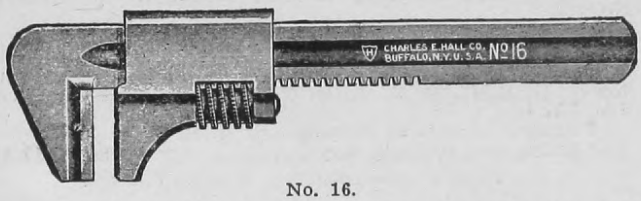
No. 8.

Adjustable Bicycle or Motor Boat Wrenches, Round Corners, Flat Bar, Stamped Jaw. Length 5 inches, Jaws open 1⅜ inches.

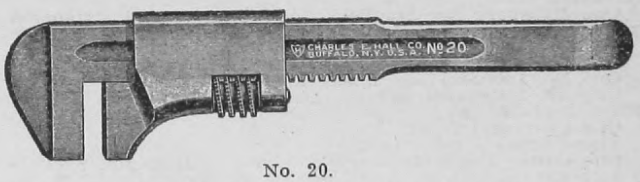
No. 8—Blued Finish.....Per Dozen, $3.00

Packed—One Dozen in a Box.

AUTOMOBILE WRENCHES



No. 16.



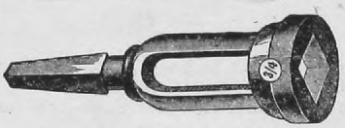
No. 20.

Adjustable Automobile, Motor Boat, Motor Truck and Machinists' Wrenches Rounded Edges, Fluted Drop Forged Bar, Malleable Jaw, Case Hardened, **Black Finish.**

No. 16—Length 7 inches, Jaws open 2 3/16 inches.....Per Dozen, $ 7.20
No. 18—Length 9¼ inches, Jaws open 2½ inches.....Per Dozen, 8.00
No. 23—Length 14 inches, Jaws open 2¾ inches.....Per Dozen, 23.00
No. 25—Length 18¼ inches, Jaws open 4¼ inches.....Per Dozen, 38.00
No. 20—With **Curved End** for removing automobile and bicycle tires. Length 11½ inches, Jaws open 2½ inches .....Per Dozen, 12.00

Packed—In Open Stock.

BIT BRACE NUT WRENCHES



Nos. 152 to 159.

Nos. 166 to 173.

"Hargrave" Standard Brace Wrenches

For Square Nuts.

Made of Malleable Iron, Japanned and Polished. The Round Base allows it to turn in the smallest possible space. The size of opening is marked on each wrench.

Nos.	152	153	154	155	156	157	158	159
Opening, Flat to Flat, inches	3/8	7/16	½	9/16	5/8	¾	⅞	1
Per Dozen	$3.50	4.00	4.00	5.00	5.00	6.00	7.00	8.00

For Hexagon Nuts.

Nos.	166	167	168	169	170	171	172	173
Opening, Point to Point, inches	½	9/16	5/8	25/32	⅞	1	1 1/32	1 1/16
Opening, Flat to Flat, inches	13/32	½	9/16	11/16	¾	⅞	1 1/16	1¼
Per Dozen	$3.50	4.00	4.00	5.00	6.00	7.00	9.00	10.00

Packed—One Dozen in a Box.

Nos. 1 to 9.

Little Giant Bit Brace Nut Wrenches

For "Square and Hexagon Nuts."—Round Base, Hollow Stem, Handsomely Mottled

Nos.	1	2	3	6	7	9
Opening, Flat to Flat, inches	9/16	5/8	11/16	⅞	15/16	1 1/8
All Sizes						Per Dozen, $3.50

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOSSBERG SOCKET WRENCH SETS

No. 14.

The largest and most complete Socket Wrench Set, especially adapted for machinists, auto repair men and marine engineers. It contains:

One 10 inch Mossberg Ratchet Wrench No. 350 and Extension Bar.

One Mossberg No. 340 Take-down Handle and Extension Bar.

One Mossberg No. 320 Offset Socket Wrench.

One "Gripsall" Pipe Wrench No. 470.

One No. 100 Sterling finest nickeled Plier.

One No. 1 General Service Double End Wrench Set, 10 different openings.

One Universal Joint.

Three Screw Driver Bits.

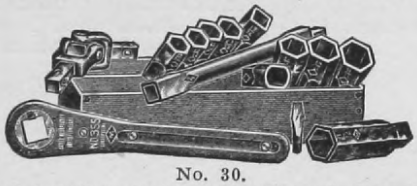
One Cotter Pin Extractor No. 1 and 23 Hexagon Sockets as follows: $\frac{5}{16}$, $\frac{3}{8}$, $\frac{13}{32}$, $\frac{7}{16}$, $\frac{15}{32}$, $\frac{1}{2}$, $\frac{17}{32}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{11}{16}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{27}{32}$, $\frac{7}{8}$, $\frac{29}{32}$, $\frac{31}{32}$, 1, $1\frac{1}{32}$, $1\frac{1}{16}$, $1\frac{3}{32}$, $1\frac{1}{8}$, $1\frac{5}{32}$.

11 Square Sockets as follows: $\frac{13}{32}$, $\frac{15}{32}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{21}{32}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{29}{32}$, $\frac{31}{32}$, $1\frac{1}{32}$, $1\frac{1}{16}$, $1\frac{1}{32}$.

Three Special Spark Plug Sockets, sizes $\frac{29}{32}$, inch, $1\frac{1}{32}$ inches and $1\frac{5}{32}$ inches.

No. 14—Socket Wrench Set.....Each, $12.00

Packed—Each Set in a Wooden Case.



No. 30.

The most popular **Ford** Socket Wrench Set. It contains:

One No. 355 8 inch Ratchet Socket Wrench, dead black finish.

One No. 351 Extension Tube, 9¼ inches long, nickeled finish.

One No. 302 Screw Driver Bit.

One No. 336 Universal Joint and 7 hexagon sockets as follows: $\frac{17}{32}$, $\frac{19}{32}$, $\frac{21}{32}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{29}{32}$, $\frac{31}{32}$.

One square socket $\frac{13}{32}$ inch.

One Oval Socket to fit main bearing nuts and bolts of Ford models up to 1915.

One Spark Plug Socket, $\frac{31}{32}$ inch, to fit the "Champion X" plug now in common use.

No. 30—Socket Wrench Set for **Ford** Cars..Each, $4.00

Packed—Each Set in a Fibre Board Case.

No. 320.

Holds sockets by ball friction. Length 10 inches.

No. 320—Offset Socket Wrench Handle ..... Each, $0.20

No. 355.

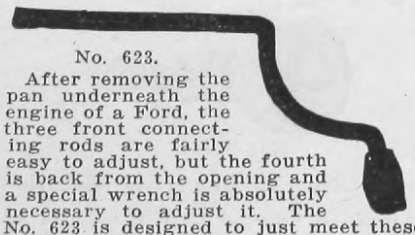
An inexpensive ratchet socket handle for use with all standard sockets. The socket shank fits the square opening and is firmly held by a tension spring. Is reversible by turning over. Steel construction, finished in **dead black.**

No. 355—8 inch Ratchet Socket Wrench Handle...Each, $1.00

No. 330.

This Wrench to be used with Mossberg sockets on machinery in which bolts, nuts, etc., are in an inaccessible position.

No. 330—Socket Wrench Handle .....Each, $0.30



No. 623.

After removing the pan underneath the engine of a Ford, the three front connecting rods are fairly easy to adjust, but the fourth is back from the opening and a special wrench is absolutely necessary to adjust it. The No. 623 is designed to just meet these conditions.

No. 623—Connecting Rod Wrenches .....Each, $0.30

No. 9.

This is an ideal repair assembly set of Socket Wrenches for factory work. It contains:

One 10 inch Mossberg Ratchet Socket Wrench Handle No. 350.

One 9½ inch Extension Bar No. 351.

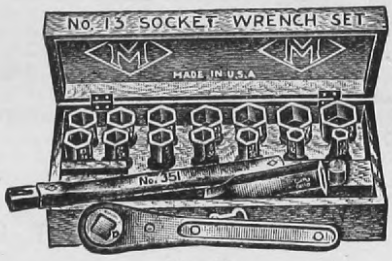
Universal Joint No. 336.

Two Screw Driver Bits and 19 hexagon sockets as follows: $\frac{13}{32}$, $\frac{1}{2}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{11}{16}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{27}{32}$, $\frac{7}{8}$, $\frac{29}{32}$, $\frac{31}{32}$, 1, $1\frac{1}{32}$, $1\frac{3}{32}$, $1\frac{5}{32}$, $1\frac{9}{32}$.

7 Square Sockets as follows: $\frac{13}{32}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{21}{32}$, $\frac{25}{32}$, $1\frac{1}{32}$, $1\frac{5}{32}$.

No. 9—Socket Wrench Set.....Each, $7.00

Packed—Each Set in a Wooden Case.



No. 13.

This Set includes all important Hexagon Sockets including Spark Plug Sockets. It contains:

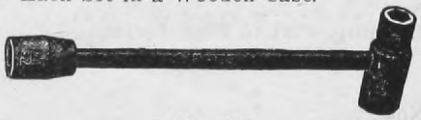
One 8 inch Mossberg Ratchet Socket Wrench Handle No. 355.

One Extension Tube No. 351, 9½ inches long, and 14 hexagon sockets as follows, $\frac{13}{32}$, $\frac{15}{32}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{27}{32}$, $\frac{29}{32}$, 1, $1\frac{1}{32}$, $1\frac{5}{32}$.

One $\frac{29}{32}$ inch Hexagon Spark Plug Socket, 4 inches long.

No. 13—Socket Wrench Set.....Each, $3.50

Packed—Each Set in a Wooden Case.



No. 630.

The large socket on the **double-end** gives high powered leverage to start or tighten cylinder head nuts. The single end socket "twirls" these nuts **rapidly after they are loosened. The** small socket on the double-end tapered to fit nuts on rear axle housing.

No. 630—Rear Axle Housing Nut Wrenches .....Each, $0.35

No. 350.

Made of finest quality steel, finished in full **nickel** plated.

No. 350—10 inch Ratchet Socket Wrench Handle.Each, $2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPARK PLUG WRENCHES

No. 406.

No. 451.

Mossberg Spark Plug Socket Wrenches with Steel Rod. Handle Hardened and Mottled. Removes or Inserts Spark Plugs without harming the delicate Porcelain Jacket, without burning or bruising the hands if the plugs are hot. Made of fine Steel, with single-end or double-end openings, thoroughly hardened.

No. 406—Single End Spark Plug Wrench with Steel Rod Handle. Length 4 inches, Opening $31/32$ inch ..... Each, $0.20

No. 451—Double End Spark Plug Wrench with Steel Rod Handle. Length 4 inches, Openings $29/32$ inch and $15/32$ inch ..... Each, $0.25

W. & B.

Made of Drop Forged Steel. Box End has ⅞ inch opening for ½ inch spark plug. Open End fits ⅝ inch U. S. Standard Cap Screws, ⅜ inch A. L. A. M. Standard Nuts; ⅜ inch A. L. A. M. Standard Cap Screws and $9/16$ inch Set Screws.

W. & B.	Unfinished	Semi-Finished	Finished
Each	$0.40	.58	.85

"Champion."

The Champion Spark Plug Wrench with Steel Rod Handle, Length 4½ inches; Openings ⅞ inch.

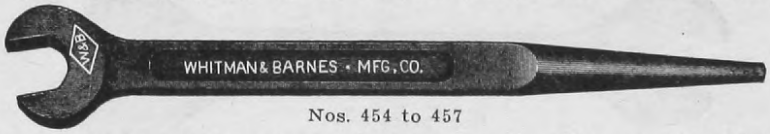
Champion Spark Plug Wrench ..... Each, $0.25

SINGLE HEAD SOCKET WRENCHES

For Hexagon Nuts and Cap Screws **with** Pin Handle and Hole for same.

Nos.	HEXAGON Openings: For U. S. Standard Nut; Size Bolt	HEXAGON Openings: For Cap Screw; Diam. Screw	HEXAGON Openings: Short Diam. Broached Opening	Extreme Length	Diam. of Head	Diam. of Shank	Hex. End same size as U. S. Nut for Size Bolt	Size of Pin-Handle: Diam.	Size of Pin-Handle: Length	Unfinished Price Each	Semi-Finished Price Each
964A	¼	5/16	33/64	5 ¼	¾	⅜	5/16	9/32	5 ⅛	$0.39	$0.52
965A	5/16	.....	39/64	5 ¾	⅞	7/16	⅜	5/16	5 ¾	.43	.58
967A	⅜	.....	45/64	6 ½	1 ⅛	9/16	½	13/32	6 ¾	.53	.71
968A	7/16	.....	51/64	7	1 ¼	⅝	½	13/32	6 ¾	.57	.77
969A	½	⅝	57/64	7 ⅜	1 ⅜	⅝	9/16	7/16	7 ⅜	.64	.87
970A	9/16	.....	63/64	7 ⅞	1 ½	11/16	⅝	½	8 ⅛	.72	.98
971A	⅝	.....	15/64	8 ¼	1 ⅝	¾	⅝	½	8 ⅛	.80	1.10

CONSTRUCTION AND CAR BUILDERS' WRENCHES



Nos. 454 to 457

The correct tool for use in the construction of roofs, bridges, cars, etc. The round tang is for bringing bolt and rivet holes into line. The openings are 15 degrees angle with the handle which admits turning a hexagon nut completely around, where the swing of the handle is limited to 30 degrees.

No.	For U. S. Standard Nuts; Bolt Sizes	Milled Openings Inches	Length Over All Inches	Thickness Head Inches	Price Each: Unfinished	Price Each: Semi-finished
454	⅝	1 1/16	14	⅝	$0.62	$0.80
455	¾	1 ¼	16	¾	.86	1.10
456	⅞	1 7/16	17 ½	13/16	1.18	1.50
457	1	1 ⅝	19	13/16	1.60	2.10

STRUCTURAL WRENCHES

STRAIGHT OPENING

No.	For U. S. Standard Nuts; Bolt Sizes	Milled Openings Inches	Length Over All Inches	Thickness Head Inches	Price Each: Unfinished	Price Each: Semi-finished
480	⅜	23/32	9 ½	13/32	$0.40	$0.52
481	7/16	13/16	9 ½	13/32	.40	.52
482	½	29/32	11 ½	15/32	.52	.70
483	9/16	1	12 ¾	17/32	.52	.70
484	⅝	1 ⅛	14 ⅛	⅝	.74	.98
485	¾	1 5/16	16	¾	1.02	1.34
486	⅞	1 ½	17 ½	13/16	1.40	1.80
487	1	1 11/16	19	13/16	1.90	2.50

Note.—Semi-Finished Wrenches case hardened all over, heads not ground.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ENGINEERS' WRENCHES

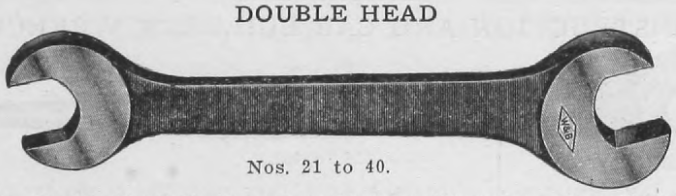
SINGLE HEAD

Nos. 0 to 17.

15° Angle, Single Head Engineers' or Machine Wrenches, Drop Forged Steel.

Nos.	Size Bolts U. S. Standard Nuts Inches	Openings Inches	Extreme Length Inches	**Unfinished** Each	**Semi-finished** Each	**Finished** Each
0	3/16	13/32	2 7/8	$0.10	$0.15	$0.25
1	1/4	1/2	3 3/4	.12	.18	.28
2	5/16	19/32	4 3/4	.15	.22	.32
3	3/8	11/16	5 5/8	.18	.26	.38
4	7/16	25/32	6 1/2	.22	.32	.45
5	1/2	7/8	7 1/2	.26	.38	.54
6	9/16	31/32	8 3/8	.31	.46	.65
7	5/8	1 1/16	9 1/4	.40	.57	.82
8	3/4	1 1/4	11 1/8	.55	.75	1.05
9	7/8	1 7/16	13	.85	1.15	1.52
10	1	1 5/8	14 7/8	1.20	1.60	2.10
11	1 1/8	1 13/16	16 5/8	1.65	2.10	2.80
12	1 1/4	2	18 1/2	2.20	2.85	3.70
13	1 3/8	2 3/16	20 1/4	2.80	3.65	4.70
14	1 1/2	2 3/8	22 1/4	3.45	4.60	5.80
15	1 5/8	2 9/16	24	4.15	5.60	7.10
16	1 3/4	2 3/4	25 3/8	4.90	6.70	8.50
16½	1 7/8	2 15/16	25 3/8	4.90	6.70	8.50
17	2	3 1/8	29 1/2	7.50	10.25	13.00

DOUBLE HEAD



Nos. 21 to 40.

15° Angle, Double Head Engineers' or Machine Wrenches. Drop Forged Steel.

Nos.	Size Bolts U. S. Standard Nuts Inches	Openings Inches	Extreme Length Inches	**Unfinished** Each	**Semi-finished** Each	**Finished** Each
21	1/8 and 3/16	5/16 and 13/32	3 1/4	$0.12	$0.17	$0.26
22	1/8 and 1/4	5/16 and 1/2	4	.14	21	.32
23	3/16 and 1/4	13/32 and 1/2	4	.14	.21	.32
24	3/16 and 5/16	13/32 and 19/32	4 7/8	.17	.25	.38
25	1/4 and 5/16	1/2 and 19/32	4 7/8	.17	.25	.38
26	1/4 and 3/8	1/2 and 11/16	5 7/8	.21	.31	.46
27	5/16 and 3/8	19/32 and 11/16	5 7/8	.21	.31	.46
28	5/16 and 7/16	19/32 and 25/32	6 7/8	.25	.37	.56
29	3/8 and 7/16	11/16 and 25/32	6 7/8	.25	.37	.56
30	3/8 and 1/2	11/16 and 7/8	7 3/4	.30	.45	.68
31	7/16 and 1/2	25/32 and 7/8	7 3/4	.30	.45	.68
32	7/16 and 9/16	25/32 and 31/32	8 3/4	.37	.55	.85
33	1/2 and 9/16	7/8 and 31/32	8 3/4	.37	.55	.85
34	1/2 and 5/8	7/8 and 1 1/16	9 3/4	.46	.68	1.08
35	9/16 and 5/8	31/32 and 1 1/16	9 3/4	.46	.68	1.08
36	9/16 and 3/4	31/32 and 1 1/4	11 5/8	.66	.96	1.40
37	5/8 and 3/4	1 1/16 and 1 1/4	11 5/8	.66	.96	1.40
38	5/8 and 7/8	1 1/16 and 1 7/16	13 1/2	1.00	1.40	1.90
39	3/4 and 7/8	1 1/4 and 1 7/16	13 1/2	1.00	1.40	1.90
40	3/4 and 1	1 1/4 and 1 5/8	15 1/2	1.40	1.90	2.60

Set No. 5—One each Nos. 23, 25, 27, 29 and 31, in Canvas Rolls { Kind ..... **Unfinished** **Semi-finished** **Finished**; Per Set.... $1.52 2.04 **2.85**

No. 10—Canvas Rolls, to hold 5 Wrenches, as contained in Set No. 5 ..... Each, $0.45

Unfinished Wrenches are the Plain Forging, not hardened, with Milled openings.
Semi-Finished Wrenches are case hardened, with Ground Edges, Bright Heads and Milled openings.
Finished Wrenches are case hardened, Ground, Polished and Lacquered, with Bright Heads and Milled openings.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SET SCREW WRENCHES

SINGLE HEAD

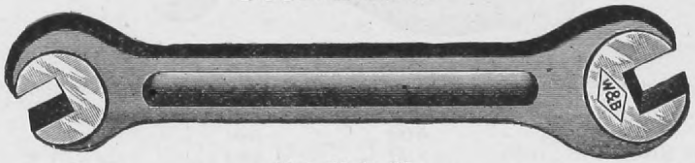
Nos. 280 to 291.

Single Head Set Screw Wrenches

15° Angle, Drop Forged Steel.

Nos.	For Set Screws Inches	Extreme Length Inches	**Unfinished** Each	**Semi-finished** Each	**Finished** Each
280	3/16	3	$0.10	$0.14	$0.23
281	1/4	3 5/8	.12	.17	.27
282	5/16	4 1/2	.14	.21	.31
283	3/8	5 3/8	.17	.25	.37
284	7/16	6 1/4	.21	.31	.45
285	1/2	7	.26	.38	.54
286	9/16	7 1/2	.31	.45	.65
287	5/8	8	.38	.65	.80
288	3/4	9 1/4	.48	.68	.98
289	7/8	10 1/2	.60	.84	1.20
290	1	11 1/2	.80	1.10	1.48
291	1 1/8	12	1.10	1.40	1.80

DOUBLE HEAD



Nos. 68 to 82.

Double Head Set Screw Wrenches

15° Angle, Drop Forged Steel.

Nos.	For Set Screws Inches	Extreme Length Inches	**Unfinished** Each	**Semi-finished** Each	**Finished** Each
68	1/4 and 3/8	4	$0.19	$0.29	$0.42
69	5/16 and 3/8	5	.19	.29	.42
70	5/16 and 7/16	5	.24	.35	.52
71	3/8 and 7/16	5 7/8	.24	.35	.52
72	3/8 and 1/2	5 7/8	.30	.45	.66
73	7/16 and 1/2	6 5/8	.30	.45	.66
74	7/16 and 9/16	6 5/8	.36	.54	.80
75	1/2 and 9/16	7 1/2	.36	.54	.80
76	1/2 and 5/8	7 1/2	.44	.65	.96
77	9/16 and 5/8	8 3/8	.44	.65	.96
78	9/16 and 3/4	8 3/8	.56	.80	1.15
79	5/8 and 3/4	10	.56	.80	1.15
80	5/8 and 7/8	10	.72	1.00	1.40
81	3/4 and 7/8	11 3/8	.72	1.00	1.40
82	3/4 and 1	11 3/8	.98	1.30	1.75

Unfinished Wrenches are the Plain Forging, not hardened, with Milled openings.
Semi-finished Wrenches are case hardened, with Ground Edges, Bright Heads and Milled Openings.
Finished Wrenches are case hardened, Ground, Polished and Lacquered, with Bright Heads and Milled Openings.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DOUBLE END S WRENCHES

Nos. 662C to 667B.
22½° Angle, Double End S Wrenches, Drop Forged Steel.

Nos.	Size Bolts U. S. Standard Nuts Inches	Openings Inches	Extreme Length Inches	Thickness of Heads Inches	Unfinished Each	Semi-finished Each	Finished Each
662C	¼ and ⅜	½ and 11/16	5	5/16	$0.20	$0.29	$0.42
663A	5/16 and ⅜	19/32 and 11/16	6¼	⅜	.27	.39	.56
663B	5/16 and 7/16	19/32 and 25/32	6¼	⅜	.27	.39	.56
663C	⅜ and 7/16	11/16 and 25/32	6¼	⅜	.27	.39	.56
664A	⅜ and ½	11/16 and ⅞	7½	7/16	.37	.53	.75
664B	7/16 and ½	25/32 and ⅞	7½	7/16	.37	.53	.75
664C	7/16 and 9/16	25/32 and 31/32	7½	7/16	.37	.53	.75
665A	½ and 9/16	⅞ and 31/32	9	½	.50	.72	1.00
665B	½ and ⅝	⅞ and 1 1/16	9	½	.50	.72	1.00
665C	9/16 and ⅝	31/32 and 1 1/16	9	½	.50	.72	1.00
666A	9/16 and ¾	31/32 and 1¼	10½	9/16	.74	1.00	1.35
666B	⅝ and ¾	1 1/16 and 1¼	10½	9/16	.74	1.00	1.35
666C	⅝ and ⅞	1 1/16 and 1 7/16	10½	9/16	.74	1.00	1.35
667A	¾ and ⅞	1¼ and 1 7/16	12	⅝	1.10	1.45	1.90
667B	¾ and 1	1¼ and 1⅝	12	⅝	1.10	1.45	1.90

GENERAL PURPOSE WRENCHES

Drop Forged Steel.

22½° Angle, For use in erecting or dismantling Plows, Carriages, Wagons, etc., and for general service where a light long wrench is desired.

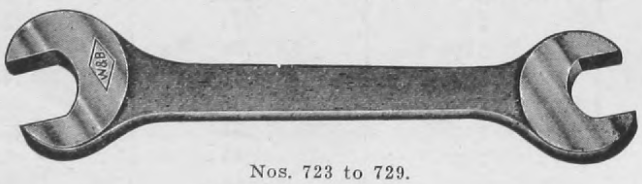
Nos.	500	501	502	503	504
Manufacturers' Standard Nut Size Bolts, inch	3/16 and ¼	¼ and 5/16	5/16 and ⅜	⅜ and 7/16	7/16 and ½
Openings, inch	⅜ and ½	½ and ⅝	⅝ and ¾	¾ and ⅞	⅞ and 1
Extreme Length, inches	6¼	7⅛	8¼	9¼	10⅜
Thickness of Head, inches	7/32	¼	5/16	⅜	7/16
Unfinished ..... Each,	$0.18	.23	.29	.38	.50
Semi-finished ..... Each,	.27	.34	.43	.55	.70
Finished ..... Each,	.38	.47	.58	.72	.90

Set No. 15—One each Nos. 500, 501, 502, 503 and 504, in Canvas Rolls.

	Unfinished	Semi-finished	Finished
Kind			
Per Set	$2.03	2.74	3.50

No. 20—Canvas Rolls to hold 5 Wrenches as contained in Set No. 15 ..... Each, $0.45

HEXAGON CAP SCREW WRENCHES



Nos. 723 to 729.

15° Angle, Double Head.

Nos.	For Cap Screws Inches	Openings Inches	Extreme Length Inches	Thickness of Heads Inches	Unfinished Each	Semi-finished Each	Finished Each
723	3/16 and ¼	⅜ and 7/16	4	17/64 and 19/64	$0.14	$0.21	$0.32
725B	5/16 and ⅜	½ and 9/16	4⅞	9/32 and 5/16	.17	.25	.38
727	⅜ and 7/16	9/16 and ⅝	5⅞	5/16 and 11/32	.21	.31	.46
729	7/16 and ½	⅝ and ¾	6⅞	11/32 and ⅜	.25	.37	.56

Unfinished Wrenches are the Plain Forging, not hardened, with Milled openings.
Semi-Finished Wrenches are case hardened, with Ground Edges, Bright Heads and Milled openings.
Finished Wrenches are case hardened, Ground, Polished and Lacquered, with Bright Heads and Milled openings.

Digitized by
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

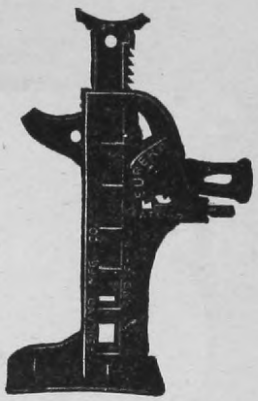
EUREKA AUTOMOBILE JACKS

Eureka Improved No. 1.

Eureka Improved No. 1—Capacity 1 ton, Adjusts from 10 to 17 inches, Weight 4 lbs. .....Each, $1.10

Eureka Atlas No. 0.

Eureka Atlas No. 0—Capacity 1 ton, Adjusts from 8 to 17 inches, Weight 4½ lbs. .....Each, $1.85

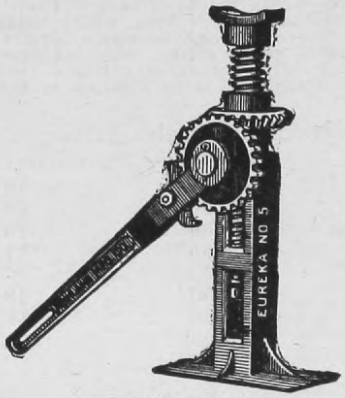


Eureka Atlas No. 1.

Eureka Atlas No. 1—Capacity 1½ tons, Adjusts from 7¾ to 18½ inches, Weight 6 lbs. .....Each, $2.20

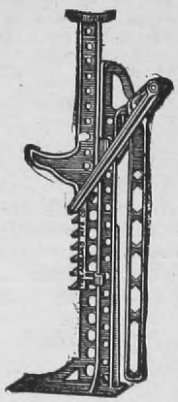
Eureka King.

Eureka King—Capacity 2 tons, Adjusts from 9 to 19½ inches, Weight 7 lbs. .....Each, $3.50



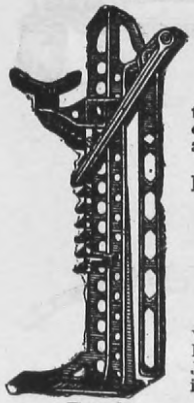
Eureka Truck No. 5.

Eureka Truck No. 5—Capacity 5 tons, Adjusts from 13 to 20 inches, Weight 15 lbs. .....Each, $5.00



Eureka Wagon Jack.

Eureka Wagon Jack—Capacity 1500 pounds, Adjusts from 10 to 25 inches, Weight 8 lbs.....Each, $1.80



Eureka Tire Saver.

TIRE SAVER JACKS

Eureka Tire Saver Jack. Designed especially for use in the Garage to hold the weight of the car off the tires, and also to keep the tires from resting on oily floors, chain grips, etc. Made entirely of malleable iron, easily adjusted to any height car instantly, and will raise 2½ inches with one lift.

Eureka Tire Saver Jack—Capacity **1500** Pounds, Adjusts from 8½ to 18½ inches, Weight per Set of four, 30 lbs.....Per Set of Four, $6.50

WEED CHAIN JACKS

To lift a car with the Weed Chain-Jack, simply give a few pulls on its chain while you stand away from the springs, tire carriers and other projections. To lower the car, pull the chain in the opposite direction. The 8 and 10 inch Weed Jacks are made with an auxiliary step as illustrated. When the auxiliary step is in operative position it adds two inches to the height of the Jack.

Weed Chain Jack.

Weed Chain Jacks—List Prices and Specifications

Size	Height when Lowered	Maximum Rise	Lifting Capacity	Weight	List Price
8 inch	8 inches	4½ inches	1 ton	10 lb. 8 oz.	$7.50
10 "	10 "	5⅜ "	1 "	11 " 1 "	7.50
12 "	12 "	6½ "	1 "	11 " 4 "	7.50
12 " Truck	12 "	7¼ "	5 "	25 "	15.00

Packed—One Jack in a Strong Carton, 12 Cartons in a Case.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE AND TRUCK JACKS

SIMPLEX

No. 36.
Middle Shoe.

No. 38
Adjustable Shoe.

Nos. 41 to 43.
Detachable Shoe.

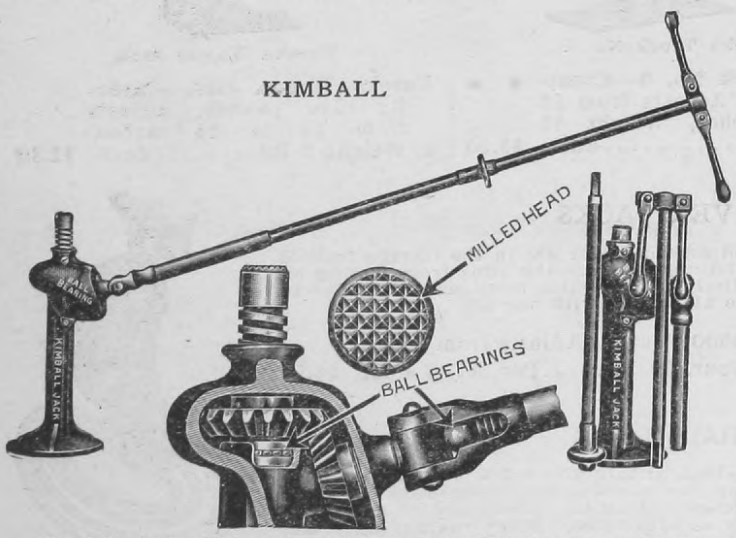
No. 45.
Detachable Shoe.

Nos. 36 and 38 Automobile Jacks are Single Acting. Operating on the down stroke of the lever bar only and are substantially built. **Nos. 41 to 43** Automobile Jacks are Double Acting. Operating on the up and down stroke of the lever bar and are substantially built. The Standard is heavy Malleable Iron and all working parts are Drop Forged Steel. The detachable Shoe adds another lifting point which is used in awkward positions. **No. 44** Automobile and Truck Jack is similar in construction to Nos. 41 to 43—every working part is Drop Forged Steel. Has convenient handle for carrying about and is furnished with Detachable Auxiliary Shoe which adds two additional lifting points. **No. 45** Automobile and Truck Jack is Single Acting. Operating on the down stroke of the lever bar. A powerful Jack of greatest efficiency because of the geared massive construction, ease of operation and absolute dependability. Has Detachable Shoe. **No. 47** Truck Jack—A bulldog for power, strength and durability. The gear and pinion construction permit handling excess loads in easy fashion. Furnished with Steel, Auxiliary Detachable Shoe, which provides additional lifting height.

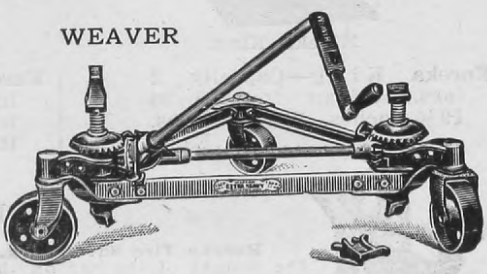
Specifications of Simplex Jacks

Nos. Kind.	Cap., Tons.	Each.	Height, Inches.	Lift, Inches.	Weight, Lbs.
36—Single Acting Auto Jack.....	¾	$2.00	10	6½	4¾
38—Single Acting Auto Jack.....	1	3.00	10½	6	6½
41—Double Acting Auto Jack.....	1½	5.00	10	7	11
42—Double Acting Auto Jack.....	2	6.00	11½	8½	14½
43—Double Acting Auto Jack.....	3	7.00	13	10	16
44—Double Acting Auto and Truck	4	9.00	13¼	9	19
45—Geared Auto and Truck.....	3	10.00	10½	6⅞	16
47—Geared Truck Jack.....	7½	20.00	12	6⅝	23

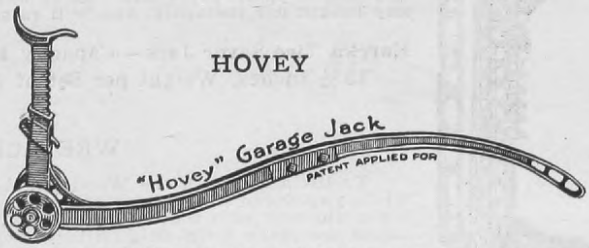
KIMBALL



WEAVER



HOVEY



Kimball Auto Jacks are equipped with Ball Bearings and Long Operating Handle. They hold anywhere, do not slip and avoid the necessity of getting under the car. **Packed**—One in a Strong Carton.

No. 1—Height closed, 9 inches. Lift, 6 inches.....Each, $4.50
No. 2—Height closed, 11 inches. Lift, 7 inches.....Each, 5.00
No. 3—Height closed, 12 inches. Lift, 8 inches.....Each, 5.50

Weaver Auto Twin-Jacks provide a means by which one man can readily manipulate a car in the garage, repair shop or storage room in any desired manner. They supply all the service of Turn Table, Transport, Lifting Jacks and Tire Rests. Ball and Roller Bearings throughout. Lifting leverage, 400 to 1. 34 inch Wheel Base. Shipping Weight, 50 lbs.

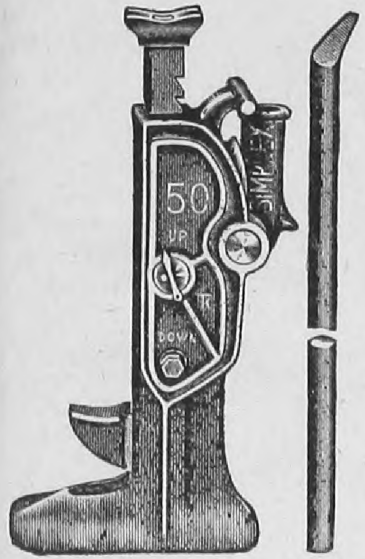
Weaver Twin-Jacks. Lifting Capacity, 4,000 lbs.....Each, $12.00

Hovey Garage Jack. The most practical Jack for the garage owner. Instant in operation. It operates by merely "kicking up" the movable head and depressing the handle, and lets down by lifting the handle. Locked by gravity. Adjustment is made by the foot. No working on hands and knees, the four foot handle gives tremendous leverage. Made throughout of malleable iron and open hearth steel.

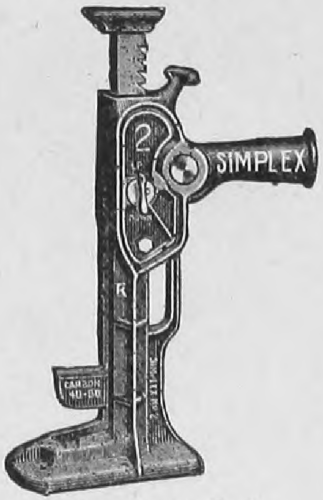
Hovey Garage Jack. Capacity, 2 tons. Adjust from 3 inches to 18 inches.....Each, $7.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

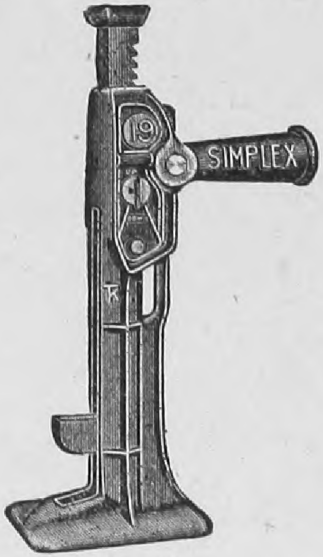
SIMPLEX INDUSTRIAL, TRACK AND CAR JACKS.



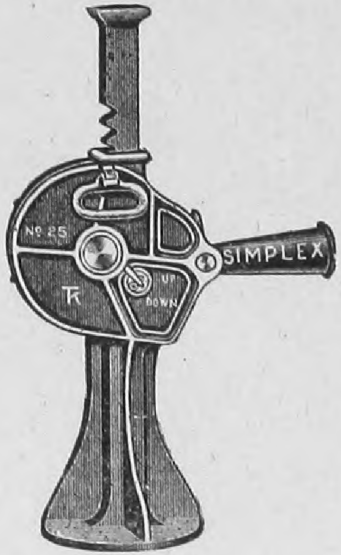
Nos. 50 and 51.



Nos. 2 and 4.



No. 19.



No. 25.

Nos. 1 and 6.

Simplex Car and **Track** Jacks. Single or double action, Automatic lowering, operate at any angle. All working parts are Drop Forged Steel with massive malleable standards. Bearings are heavy Trunnions. Extensively used by Steam and Electric Railroads, by Contractors, Bridge Builders and many classes of Industries. They are powerful, rapid, highly efficient and built for rough, abusive service.

Single Acting

No. 50—Capacity **5** tons, adjusts from 15½ to 24 inches, weight with Bar 34 lbs.....Each, $20.00
No. 51—Capacity **5** tons, adjusts from 20 to 33½ inches, Weight with Bar 38 lbs.....Each, 22.00
No. 2—Capacity **10** tons, adjusts from 20½ to 32½ inches, Weight with Pole 56 lbs.....Each, 25.00
No. 4—Capacity **15** tons, adjusts from 22½ to 34 inches, Weight with Bar 91 lbs.....Each, 35.00
No. 19—Capacity **15** tons, adjusts from 28 to 45½ inches, Weight with Pole 100 lbs.....Each, 35.00
No. 25—Capacity **25** tons, adjusts from 27 to 43½ inches, Weight with Pole 150 lbs.....Each, 100.00

Double Acting

No. 1—Capacity **10** tons, Adjusts from 25 to 38½ inches, Weight with Pole 65 lbs.....Each, $22.00
No. 6—Capacity **15** tons Adujsts from 31 to 49½ inches, Weight with Pole 98 lbs.....Each, 32.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

SIMPLEX POLE JACKS

Single Acting—Operating on the down stroke of the lever, or tripping at any position.

No. 318.

No. 318.

Capacity, tons	15
Lift, inches	24
Height, inches	39
Weights: Jack, lbs	90
Chain, lbs	34
Bar, lbs	17
I-beam Base, lbs	48
Total weight, lbs	189

No. 310.

Capacity, tons	15
Lift, inches	12½
Height, inches	21½
Weights: Jack, lbs	59
Chain and Bar, lbs	30
Total Weight, lbs	89

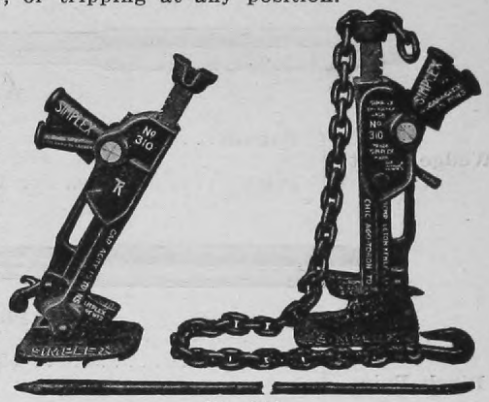
Standard Equipment. Eight feet of heavy Chain with Pear Link attached. Five-foot Steel Lever Bar, Pinch Bar construction. Two feet of 10-in. 25-lb. I Beam Base Support to prevent slipping.

This Jack has been especially designed for pulling, reinforcing, and straightening telephone, trolley and lighting poles. "It pivots on its base," and lifts the largest pole from solid ground in but a fraction of the time required by former methods.

Every requirement for pole pulling or straightening has been anticipated. The recessed cap into which any of the links of the chain are dropped, holds firmly under every load.

No. 318—Simplex Pole Jacks.....Each $40.00

SIMPLEX EMERGENCY JACKS



No. 310.

Standard Equipment. Five feet of Chain with Grab Hook. Five-foot Steel Lever, Pinch Bar and Car Mover combined.

This Jack is a combination of a Crane and a Jack. "It pivots on its base" from 30 degrees to 90 degrees to the horizontal and lifts, lowers, pushes or pulls at any angle. The base of the standard rests, with a machine fit, upon two curved shoulders which project upward from, and form a part of the base. Two studs hold it in position. The base, therefore, takes all thrust.

A double socket is provided by means of which the lever pole is always in a convenient position—no matter what the angle of the Jack may be.

No. 310—Simplex Emergency Jacks.....Each $32.00

LOCOMOTIVE JACK SCREWS

Locomotive Jack Screws.

CAST IRON JACK SCREWS

Cast Iron Jack Screws.

Locomotive Jack Screws, Bell Shape

Diameter of Screw, Inches	Height of Stand, Inches	Height Over all, Inches	Capacity Tons	List Price Each	Diameter of Screw, Inches	Height of Stand, Inches	Height Over all, Inches	Capacity Tons	List Price Each
1½	6	8¾	12	$3.75	2	18	21½	20	$10.25
1½	8	10¾	12	4.25	2	20	23½	20	11.50
1½	10	12¾	12	4.75	2¼	14	17¾	24	10.00
1½	12	14¾	12	5.25	2¼	16	19¾	24	11.00
1¾	10	13	16	5.75	2¼	18	21¾	24	12.00
1¾	12	15	16	6.25	2¼	20	23¾	24	13.25
1¾	14	17	16	6.75	2¼	22	25¾	24	14.50
1¾	16	19	16	7.50	2½	18	22	28	14.50
2	12	15½	20	7.50	2½	20	24	28	15.75
2	14	17½	20	8.25	2½	22	26	28	17.00
2	16	19½	20	9.25	2½	24	28	28	18.25

Cast Iron Jack Screws

3 Inch Screw, Height over all, 20 inches.....Each, $3.50
3 Inch Screw, Height over all, 24 inches.....Each, 4.00

These Screws are cast with seamless threads, which makes them very smooth and uniform.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

RAILROAD TRACK TOOLS

CROW BARS

Wedge Point Crow Bars, Solid Steel.

Wedge Point { Pounds..... 8 10 12 14 16 18 20 22 24 26 28 and 30
Price ..... 8 lbs., Per Pound $..... 10 lbs. and over, Per Pound $.....

Pinch Point Crow Bars, Solid Steel.

Pinch Point { Pounds..... 12 14 16 18 20 22 24 26 28 and 30
Price .....12 lbs. and over, Per Pound $.....

LINING BARS

No. 462.

No. 462—Diamond or Needle Point Lining Bars, Solid Steel, 18 to 30 pounds..... Per Pound $0.15

CLAW BARS

No. 442.

No. 442—Claw Bars, with Heel, Solid Steel, Weight 29 pounds ..... Per Pound **$0.18**

PINCH BARS

No. 481.

No. 481—Pinch Bars, with Heel, Solid Steel, Weight 26 pounds .....Per Pound, $0.16

TAMPING BARS

No. 471.

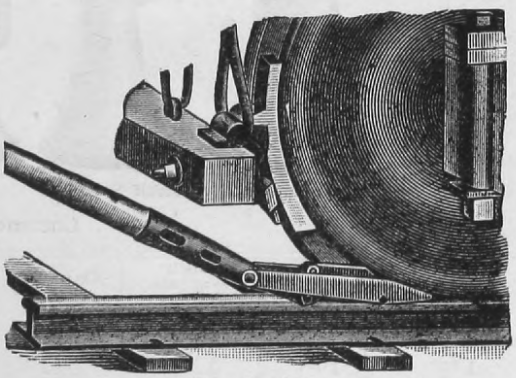
No. 471—Tamping Bars, Solid Steel, Weight 14 pounds.... .....Per Pound, **$0.16**

CAR STARTER BARS

No. 472.

No. 472—Car Starter Bars, Solid Steel, 28 pounds..Per Pound, $0.22

CAR MOVERS



Atlas Car Mover.

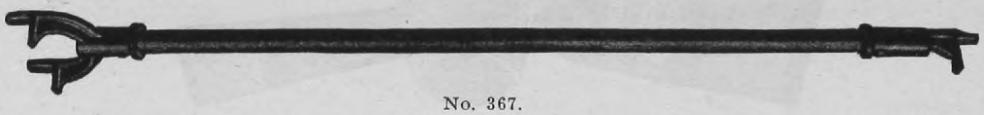
Will work on any rail, whether wet or greasy, and move a car farther at a stroke than any other car mover. Metal parts are Malleable Iron and Steel. Handle is of selected Hardwood. Spur of Heel is of the finest Tool Steel.

Atlas Car Movers.....Each, $5.00
Extra Spurs .....Each, .40
Double Spurs .....Each, .45

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RAILROAD TOOLS

TRACK GAUGES



No. 367.

No. 367—Huntington Standard Track Gauge, Length 4 feet 8½ inches ..... Each, $.....

STEP LEVEL BOARDS

No. 369.

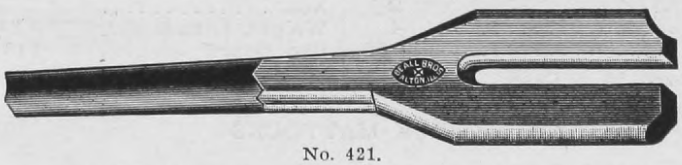
No. 369—Best White Pine, with wear plates at both ends ..... Each, $.....

TRACK WRENCHES

No. 412.

No. 412—Single End Straight Track Wrenches, weight 4½ pounds ..... Per Pound, $0.25

RAIL FORKS

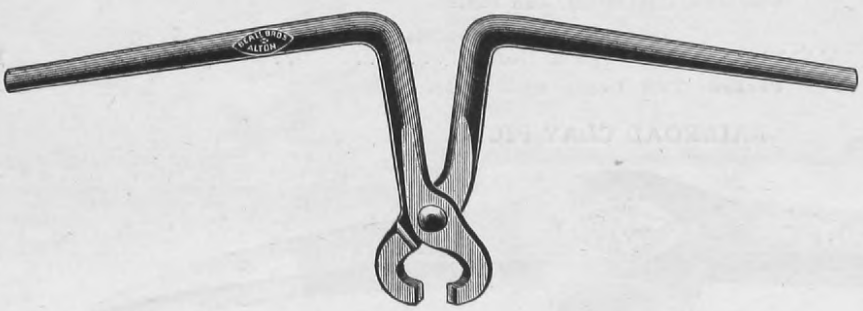


No. 421.

No. 421—Solid Steel Rail Forks, weight 15 pounds ..... Per Pound, $0.25

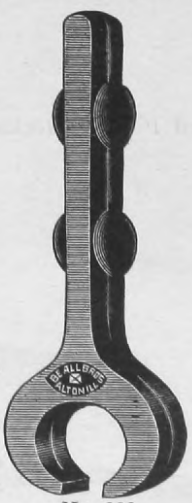
SPIKE PULLERS

RAIL TONGS



No. 422.

No. 422—Solid Steel Rail Tongs, weight 17 pounds ..... Per Pound $0.30



No. 382.

No. 382—Solid Steel Spike Pullers ..... { Two Ball ..... Per Pound, $0.50 / Three Ball ..... Per Pound, .50

Note.—For Mauls and Track Chisels, see page 281.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CONTRACTORS' TOOLS

MATTOCKS

Western Pattern, Cast Steel, Axe Finish.

Buhl Extra "Short Cutter" Mattocks

Weight, pounds	5½
Hoe, inches	8¼x4¼
Cutter, inches	4½x3
Per Dozen	$16.50

Buhl Extra "Long Cutter" Mattocks

Weight, pounds	6
Hoe, inches	8½x4¼
Cutter, inches	6x3
Per Dozen	$17.00

Standard "Short Cutter" Mattocks

Weight, pounds	5	5½
Hoe, inches	7½x3½	8¼x4¼
Cutter, inches	4¼x2½	4½x3
Per Dozen	$16.00	16.50

Packed—Two Dozen in a Case.

Standard "Long Cutter" Mattocks

Weight, pounds	5	6
Hoe, inches	7½x3½	8½x4¼
Cutter, inches	5¼x2½	6x3
Per Dozen	$16.00	17.00

Packed—Two Dozen in a Case.

GRUB HOES

Adze Eye, Cast Steel, Axe Finish.

Buhl Extra Grub Hoes

No.	**2**
Weight, pounds	4
Per Dozen	$13.50

Packed—Two Dozen in a Case.

Standard Grub Hoes

Nos.	**1**	**2**	**3**
Weight, pounds	3½	4	4½
Per Dozen	$13.00	13.50	14.00

Packed—Two Dozen in a Case.

PICK MATTOCKS

Adze Eye, Cast Steel, Axe Finish.

Standard Pick Mattocks	Weight, pounds	5	6
	Per Dozen	$16.00	17.00

Packed—Two Dozen in a Case.

RAILROAD CLAY PICKS

Railroad or Clay Picks, Adze Eye, Cast Steel, Axe Finish.

"Buhl Extra" Railroad Picks

Weights Assorted, pounds	5 to 6	6 to 7
Regular Pattern ....Per Dozen,	$14.00	15.00
Double Chisel Point....Per Dozen,	14.00	15.00
Double Pick Point.....Per Dozen,	14.00	15.00

Packed—Two Dozen in a Case.

Standard Railroad Picks

Weights Assorted, pounds	4 to 5	5 to 6	6 to 7
Regular Pattern ....Per Dozen,	$13.00	14.00	15.00
Double Chisel Point..Per Dozen,	13.00	14.00	15.00
Double Pick Point...Per Dozen,	13.00	14.00	15.00

Packed—Two Dozen in a Case.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CONTRACTORS' TOOLS

CONCRETE PICKS

Standard Concrete Picks, Adze Eye, Cast Steel, Oil Finish.

Weight, pounds	6	6½	7	7½	8	8½	9
Per Dozen	$17.50	18.00	18.50	19.00	19.50	20.50	21.50

Packed—Two Dozen in a Case.

STONE PICKS

Standard Stone Picks, Cast Steel, Natural Finish, Polished Points.

Weight, lbs...	5	5½	6	6½	7	7½	8	8½	9
Per Dozen ...	$16.00	16.50	17.00	17.50	18.00	18.50	19.00	19.50	20.00

Packed—Two Dozen in a Case.

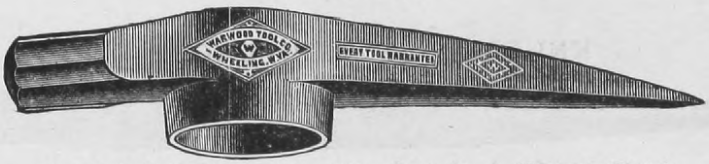
DRIFTING PICKS

Standard Drifting Picks, Adze Eye, Cast Steel, Natural Finish.

Nos.	**2**	**3**	**4**
Weight, pounds	4	4½	5
Per Dozen	$14.00	15.00	16.00

Packed—Two Dozen in a Case.

POLL PICKS



Standard Poll Picks, Adze Eye, Cast Steel, Natural Finish.

Nos.	**3**
Weight, pounds	4½
Per Dozen	$17.00

Packed—Two Dozen in a Case.

COAL PICKS

Standard Coal Picks, Axe Eye, Cast Steel, Natural Finish.

Weight, pounds	4	5
Per Dozen	$10.50	11.50

Packed—Four Pounds, Three Dozen in a Case; Heavier, Two Dozen.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' DRIFT PUNCHES

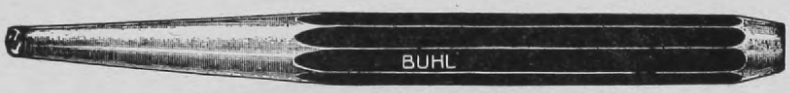
No. 74.

Buhl, Hand Forged Tool Steel. Ground parallel back from point.

No. 74—Size of Stock	3/8	1/2	5/8
Length, inches	5 1/2	6	6 1/2
Size of Point	5/32	3/16	7/32
Per Dozen	$3.00	3.20	3.40

Packed—Half Dozen in a Box.

MACHINE PUNCHES



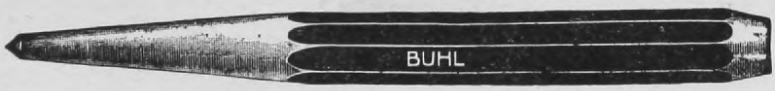
No. 51.

Buhl, Made of Solid Octagon Cast Steel, **Price Per Dozen.**

Size of Stock, inch	1/4	5/16	3/8	3/8	1/2	1/2	5/8
Length, inches	4 1/2	5	5 1/2	10	6	10	6 1/2
Size at Point, inch	3/32	4/32	5/32	5/32	6/32	6/32	7/32
No. 41 —Common Grade, Oil Finish	$1.00	1.30	1.50	.....	1.80	.....	2.20
No. 51 —"Buhl," Half Polished	3.20	3.40	3.60	.....	3.80	.....	4.00
No. 51X—"Buhl," Half Polished	.....	.....	.....	7.20	.....	7.60	.....
No. 61 —"Buhl," Full Polished	3.40	3.60	3.80	.....	4.00	.....	4.20

Packed—Half Dozen in a Box.

CENTER PUNCHES



No. 48.

Buhl, Solid Cast Steel, Half Polished.

No. 48—Inch	1/4	5/16	3/8	1/2	5/8
Length, inches	4 1/2	5	5	6	7
Per Dozen	$2.90	3.10	3.30	3.50	3.70

Packed—Half Dozen in a Box.

KNURLED CENTER PUNCHES

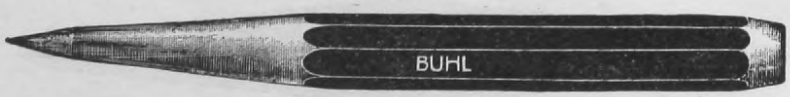
No. 42.

Made of Good Quality Crucible Steel, Half Polished, both ends Tempered in Oil.

No. 42—Size of Stock, inch	3/8
Length, inches	4
Per Dozen	$2.40

Packed—One Dozen in a Box.

PRICK PUNCHES



No. 47.

Buhl, Solid Cast Steel, Half Polished.

No. 47—Inch	1/4	5/16	3/8	1/2	5/8
Length, inches	4 1/2	5	5	6	6 1/2
Per Dozen	$2.90	3.10	3.30	3.50	3.70

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ROUND KNURLED DRIVE PIN PUNCHES

No. 38.
Made of High Grade Steel.

Size of Point, Inches	1/8	5/32	3/16	7/32	1/4
Size of Stock, Inches	3/8	3/8	3/8	3/8	3/8
No. 38—Drive Pin Punches.....Per Dozen, $					

Packed—One Dozen in a Box.

DRIVE PIN PUNCH SETS

No. 385.

No. 385—Drive Pin Punch Set, consisting of 5 Drive Pin Punches, one each, 1/8, 5/32, 3/16, 7/32 and 1/4 inch; thickness of body, 3/8 inch.....Per Set, $.....

Packed—One Set in a Box.

CENTER PUNCH SETS

No. 3 C. P.

No. 3CP—Center Punch Set, consisting of one each, 3/16, 1/4 and 9/32 inch Center Punch, mounted on a card.....Per Set, $0.25

Packed—Six Sets in a Box.

ASSORTMENT OF TEN PUNCHES

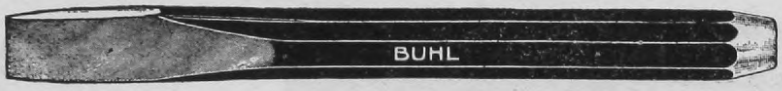
No. 100R.

No. 100R—Punch Set, consisting of Five Pin Punches, one each, 1/8, 5/32, 3/16, 7/32 and 1/4 inch diameter; one Drive Punch, 1/8 inch Point; one Prick Punch and three sizes of Center Punches put up in a cloth roll. Tools 4 inches long .....Per Set, $.....

Packed—Six Sets in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COLD CHISELS



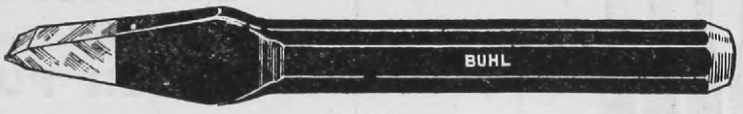
No. 45.

Buhl, Octagon, Solid Cast Steel, **Price Per Dozen.**

Diameter, Inch	¼	5/16	⅜	½	½	⅝	⅝	¾	⅞	1
Length, inches	4½	4½	5½	6	9	6½	10	7	7¾	8½
Weight Per Dozen, Pounds	1	1½	2¼	4	6½	7	11½	11	15	20
No. 40—Common Grade, Oil Finish	$...	1.00	1.30	1.60	...	2.20	...	3.20	4.40	6.00
No. 45—"Buhl," **Half Polished**	3.00	3.20	3.40	3.60	...	3.80	...	5.40	7.70	8.70
No. 45X—"Buhl," **Half Polished**	...	...	...	...	6.00	...	6.35	...	...	...
No. 50—"Buhl," **Full Polished**	3.20	3.40	3.60	3.80	...	4.00	...	5.60	8.00	9.00

Packed—Half Dozen in a Box.

CAPE CHISELS



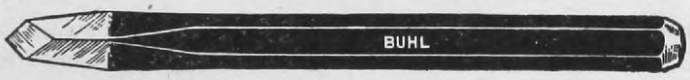
No. 200.

Buhl, Solid Cast Steel, Black Rustproof Finish, Half Polished.

Width Cutting Edge, Inch	¼	5/16	⅜	½	⅝
Length, Inches	6¼	6¼	7	8	8
Weight Per Dozen, Pounds	4¼	4¼	7¾	12½	12½
No. 200—Cape Chisels, Per Dozen	$3.00	3.20	3.70	6.20	6.50

Packed—Half Dozen in a Box.

DIAMOND POINT CHISELS



No. 300.

Buhl, Diamond Point, Solid Cast Steel, Black Rustproof Finish Half Polished.

Width Cutting Edge, Inch	⅜	½
Length, Inches	7	8
Weight Per Dozen, Pounds	6½	11
No. 300—Diamond Point Chisels, Per Dozen	$4.40	7.30

Packed—Half Dozen in a Box.

ROUND NOSE CAPE CHISELS

No. 250.

Buhl, Round Nose, Solid Cast Steel, Black Rustproof Finish, Half Polished.

Width Cutting Edge, Inch	⅜	½
Length, Inches	7	8
Weight Per Dozen, Pounds	7¾	12½
No. 250—Round Nose Cape Chisels, Per Dozen	$4.40	7.30

Packed—Half Dozen in a Box.

WALL OR BRICK CHISELS

No. 1300.

Solid Cast Steel, Black Rustproof Finish Half Polished.

No. 1300—Wall or Brick Chisels	Inches	½x12	⅝x16	¾x18
	Per Dozen	$5.00	5.70	6.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

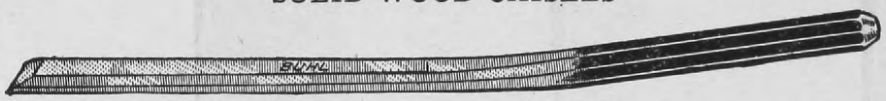
DRILLING CHISELS

No. 1350.
Solid Cast Steel, Black Rustproof Finish, Half Polished.

No. 1350—Drilling Chisels	Inches	⅝ x15	¾ x18
	Per Dozen	$7.70	9.00

Packed—Half Dozen in a Box.

SOLID WOOD CHISELS



No. 350.
Buhl, Solid Cast Steel, Highly Polished, with Bevel Edges.

Width Cutting Edge, Inch	½	⅝	¾	1
Length, inches	9	9½	10	10
Weight per Dozen Pounds	4	6	9	12
No. 350—Buhl Solid Wood Chisels	$6.50	7.50	8.00	11.00

Packed—Half Dozen in a Box.

CARPENTERS' NAIL CHISELS

No. 400.
Solid Cast Steel, Black Rustproof Finish; Half Polished.

No. 400—Carpenters' Nail Chisels	Inches	⅝ x12	¾ x15
	Per Dozen	$9.00	11.50

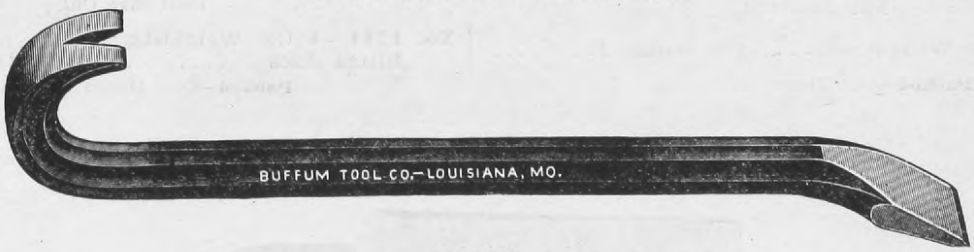
Packed—Half Dozen in a Box.

CARPENTERS' FLOOR BARS

No. 500.
Solid Cast Steel, Black Rustproof Finish, Half Polished.

No. 500—Carpenters' Floor Bars	Inches	¾ x20	¾ x30
	Per Dozen	$9.00	13.00

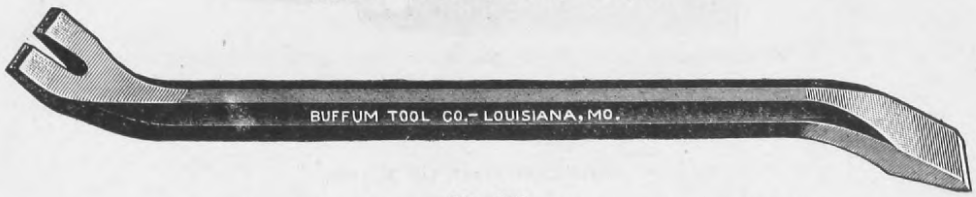
CROOK NECK CLAW BARS



No. 600.
Solid Cast Steel, Black Rustproof Finish, Half Polished.

No. 600—Crook Neck Claw Bars	Inches	½ x12	¾ x24	¾ x30
	Per Dozen	$3.30	5.30	6.00

STRAIGHT CLAW BARS



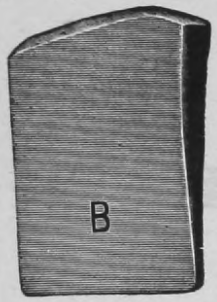
No. 650.
Solid Cast Steel, Black Rustproof Finish, Half Polished.

No. 650—Straight Claw Bars	Inches	¾ x24	¾ x30
	Per Dozen	$5.50	6.20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAWYER'S AXE, HATCHET AND HAMMER WEDGES

Made of Best Open Hearth Steel and Are Very Malleable



No. B.
Full Size Cut.

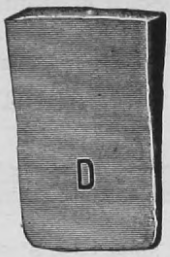
No. B—Hatchet Wedges, Per Dozen, $.....

Packed—Three Dozen in a Box.

No. G.
Full Size Cut.

No. G—Adze Eye Nail Hammer Wedges .... Per Dozen, $.....

Packed—Three Dozen in a Box.



No. D.
Full Size Cut.

No. D—Maul Wedges... Per Dozen, $.....

Packed—Three Dozen in a Box.

No. 1743.
Full Size Cut.

No. 1743—S Hammer Wedge, for any type of Hammer or Sledge... Per Dozen, $.....

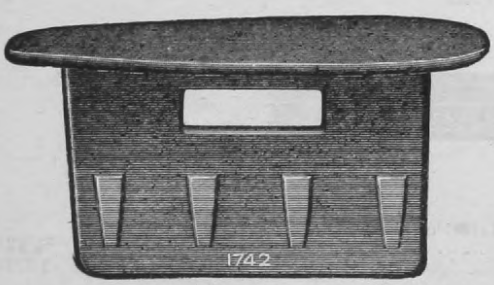
Packed—Three Dozen in a Box.

No. 1747.

Assorted Six Sizes.

No. 1747—Hammer Wedges, for Nail Hammers, etc. **Assorted**—Six Sizes. Per Dozen, $.....

Packed—Three Dozen in a Box.



No. 1742.

Full Size Cut.

No. 1742—Axe Wedges.....Per Dozen, $.....

Packed—One Dozen in a Box.

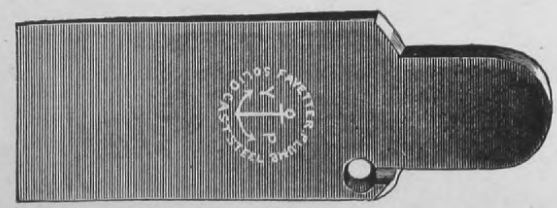
No. 1744.

Half Size Cut.

No. 1744—4 Oz. Weighting Wedge, for Double-Bitted Axes .....Per Dozen, $.....

Packed—One Dozen in a Box.

SAW WEDGES



No. 1.

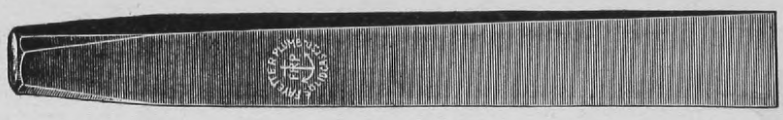
Improved Round Head Pattern Saw Wedges.

Solid Cast Steel, Oil Finish.

No. 1—Saw Wedges	Weight, lbs.	1 to 1¼	1½ to 2	2¼ to 3
	Per Pound.....	$.....		.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WOOD CHOPPERS' WEDGES



Lake Superior Pattern.

No. 2450—Lake Superior Pattern, Solid Cast Steel, Oil Finish, 4 to 8 pounds.....Per Pound, $0.36

Packed—Weights Assorted, About 250 Pounds in a Keg.

Regular Pattern.
Solid Cast Steel, Oil Finish.

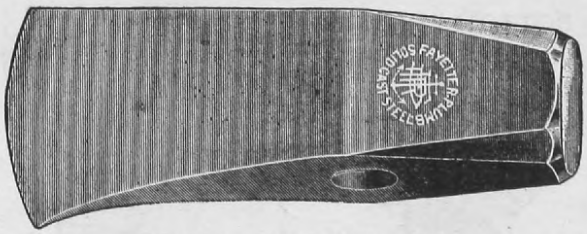
No. 1510—Regular Pattern, 3 to 7 pounds.....Per Pound, $0.15

Truckee Pattern.
Solid Cast Steel, Oil Finish.

No. 1490—Truckee Pattern, 3 to 7 pounds.....Per Pound, $0.25

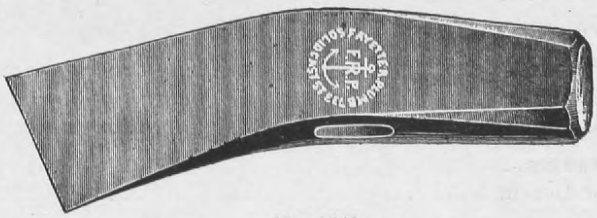
Packed—Weights Assorted, About 250 Pounds in a Keg.

WOOD CHOPPERS' MAULS



No. 1541. Style of No. 01541.
Solid Cast Steel, Polished Faces, Oil Finished.

No. 1541—Detroit Pattern, 5, 6, 7, 8 or 9 pounds.....Per Pound, $0.36
No. 01541—Detroit Pattern, 5, 6, 7, 8 or 9 pounds, Axe Eye.....Per Pound, .36



No. 2540.
Solid Cast Steel, Polished Faces, Oil Finished.

No. 2540—Lake Superior Pattern, 5, 6, 7 or 8 pounds.....Per Pound, $0.36

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLACKSMITHS' TOOLS

FLATTERS

No. 1190.

SET HAMMERS

No. 1210.

HARDIES

No. 1200.

Flatters

Solid Cast Steel—Inches.....	2	2¼	2½	2¾	3	3¼	3½
No. 1190—Flatters..Per Dozen, $.....	.....	.....	.....	.....	.....	.....	.....

Set Hammers

Solid Cast Steel—Inches.....	1½
No. 1210—Set Hammers .....Per Dozen, $.....	

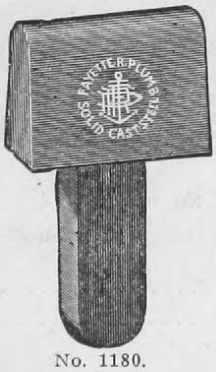
Hardies

Solid Cast Steel—Shank, Inches.....	½	⅝	¾	⅞	1
No. 1200—Hardies.....Per Dozen, $.....	.....	.....	.....	.....	.....

TOP FULLERS

No. 1170.

BOTTOM FULLERS



No. 1180.

TOP SWAGES

No. 1130.

BOTTOM SWAGES

No. 1140.

Solid Cast Steel.

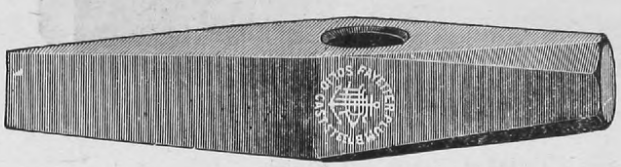
Inches	⅜	½	⅝	¾	⅞	1	1¼	1½
No. 1170—Blacksmiths' Top Fullers.. .....Per Dozen, $.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 1180—Blacksmiths' Bottom Fullers .....Per Dozen,	.....	.....	.....	.....	.....	.....	.....	.....
No. 1130—Blacksmiths' Top Swages.. .....Per Dozen,	.....	.....	.....	.....	.....	.....	.....	.....
No. 1140—Blacksmiths' Bottom Swages .....Per Dozen,	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Shanks of all bottom Blacksmiths' Tools, should be heated and fitted to anvil, as all anvil holes are not true, consequently cause most of the breakage of shanks.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BLACKSMITHS' TOOLS

COLD CHISELS

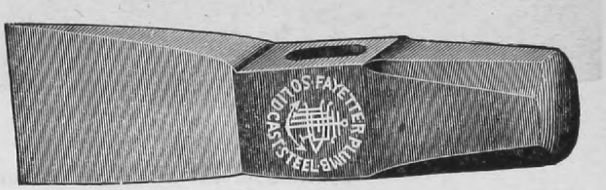


No. 1350.

Blacksmiths' Cold Chisels, Solid Cast Steel.

No. 1350—Pounds	**2 lbs.**	**2½ lbs.**	**3 lbs.**
Across the Eye, Inches	1¼	1⅜	1½
Per Dozen	$0.50	.50	.50

HOT CHISELS

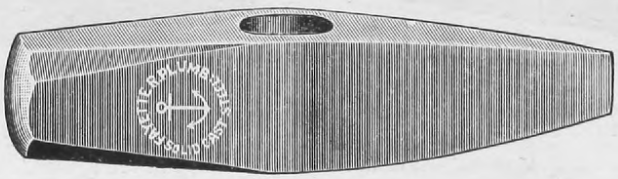


No. 1355.

Blacksmiths' Hot Chisels, Solid Cast Steel.

No. 1355—Pounds	**1½ lbs.**	**2 lbs.**
Across the Eye, Inches	1⅜	1½
Per Dozen	$0.50	.50

TRACK CHISELS



No. 1580.

Solid Cast Steel, Polished Face, Oil Finish.

No. 1580—Railroad Track Chisels, 4, 4½ or 5 pounds.....Per Pound, $0.50

RAILROAD MAULS

No. 1570.

Solid Cast Steel, Polished Faces, Oil Finish.

No. 1570—Railroad Track or Spike Mauls, 6, 7, 8, 9 or 10 pounds.....Per Pound, $0.30

SHIP OR TOP MAULS

No. 1560.

Solid Cast Steel, Polished Faces, Painted Blue.

No. 1560—Ship or Top Mauls, 4, 4½, 5, 5½ or 6 pounds.....Per Pound, $0.42

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPALLING HAMMERS

SINGLE FACE

No. 950.

DOUBLE FACE

No. 960.

Spalling or Stone Hammers, Solid Cast Steel, Polished Faces, Oil Finish.

No. 950.....Single Face

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.55	.50	.40

Stock Sizes—3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 18 and 20 Pound.

No. 960.....Double Face

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.55	.50	.40

Stock Sizes—4, 5, 6, 8, 10, 12, 14, 16 and 18 Pound.

MASONS' HAMMERS

No. 970.

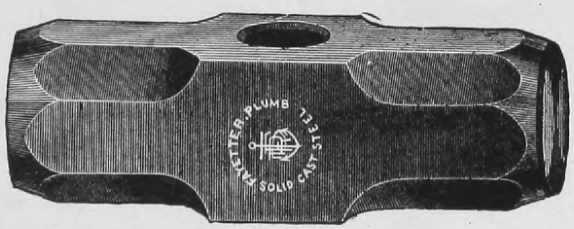
Masons' Hammers, Solid Cast Steel, Polished Face and Pein. Bronzed Axe Finish.

No. 970.....Masons' Hammers

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.60	.55	.50

Stock Sizes—3, 4, 5, 6 and 7 Pound.

STRIKING HAMMERS



No. 1060.

Blacksmiths' Sledges or Striking Hammers, Double Face, Solid Cast Steel, Oil Finish.

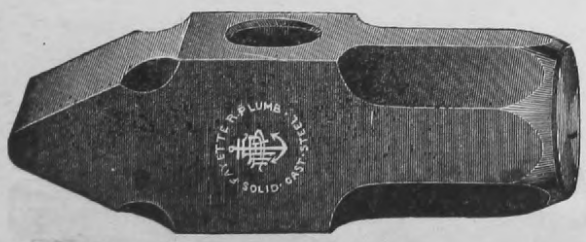
No. 1060.....Double Face

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.50	.40	.30

Stock Sizes—2½, 3, 4, 5, 6, 8, 10, 12, 14 and 16 Pound.

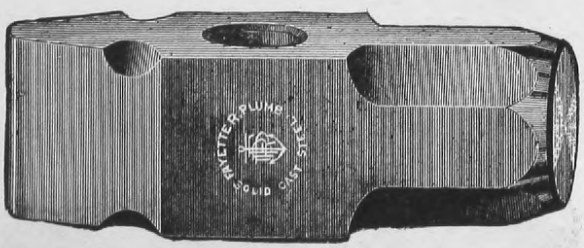
BLACKSMITHS' SLEDGES

CROSS PEIN



No. 1030.

STRAIGHT PEIN



No. 1040.

Blacksmiths' Sledges, Solid Cast Steel, Polished Faces and Peins, Oil Finish.

No. 1030.....Cross Pein

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.50	.40	.30

Stock Sizes—2½, 3, 4, 5, 6, 8, 10, 12, 14, 16 and 20 Pound.

No. 1040.....Straight Pein

	Under 3 lbs.	3 to 4 lbs.	5 to 24 lbs. inc.
Per Pound,	$0.50	.40	.30

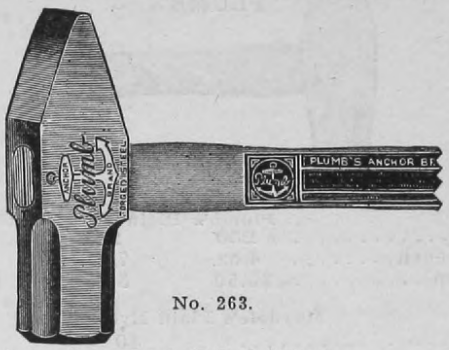
Stock Sizes—6, 8, 10, 12, 14 and 16 Pound.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLACKSMITHS' HAND HAMMERS

Nos. 280 to 283.

ENGINEERS' HAMMERS



No. 263.

Plumb's Blacksmiths' Hand Hammers, Cross Pein, Solid Cast Steel, Full Polished.

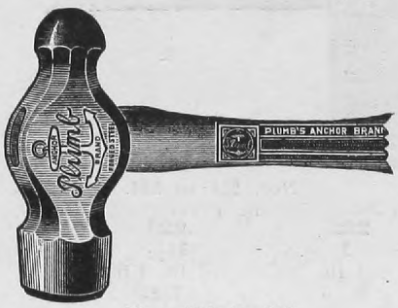
Nos.	280	281	282	283
Weight, each, without Handles	1 lb. 10 oz.	2 lbs.	2 lbs. 10 oz.	3 lbs.
Per Dozen	$13.00	14.00	15.00	16.00

Plumb's Engineers' or Plow Hammers, Riveting Pein, Solid Cast Steel, Full Polished.

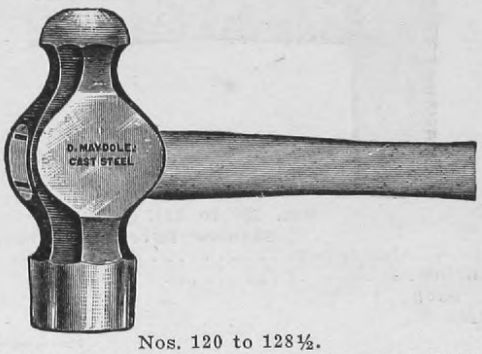
Nos.	263
Weight, each, without Handles	2 lbs. 8 oz.
Per Dozen	$15.00

Packed—One-third Dozen in a Box.

MACHINISTS' HAMMERS



Nos. 370 to 381.



Nos. 120 to 128½.

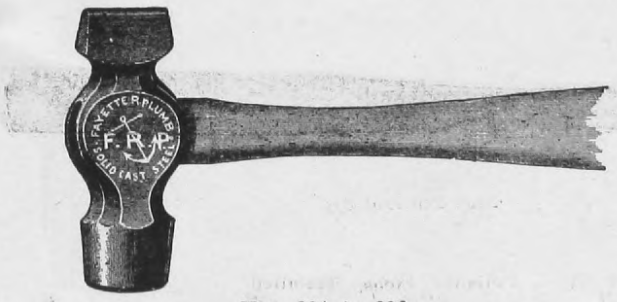
Plumb's Ball Pein Machinists' Hammers, Octagon Pattern, Solid Cast Steel, Polished Sides, Face and Pein.

Nos.	370	371	372	373	374	375	376	377	378	379	380	381
Weight, each,	6 oz.	8 oz.	12 oz.	1 lb.	1 lb. 4 oz.	1 lb. 8 oz.	1 lb. 12 oz.	2 lbs.	2 lbs. 4 oz.	2 lbs 8 oz.	2 lbs. 12 oz.	3 lbs.
Per Dozen	$12.00	12.00	12.00	12.50	13.50	14.50	15.50	16.50	17.50	19.00	20.50	22.00

Maydole's Ball Pein Machinists' Hammers, Octagon Pattern, Solid Crucible Cast Steel, Polished Sides, Face and Pein.

Nos.	120	121	122	123	124	125	126	127	128	128½
Weight, each	3 lbs.	2 lbs. 4 oz.	1 lb. 14 oz.	1 lb. 8 oz.	1 lb. 4 oz.	1 lb.	13 oz.	10 oz.	7 oz.	5 oz.
Per Dozen	$30.00	25.50	23.25	21.00	19.50	18.00	16.50	15.25	14.25	13.50

Packed—One-third Dozen in a Box.

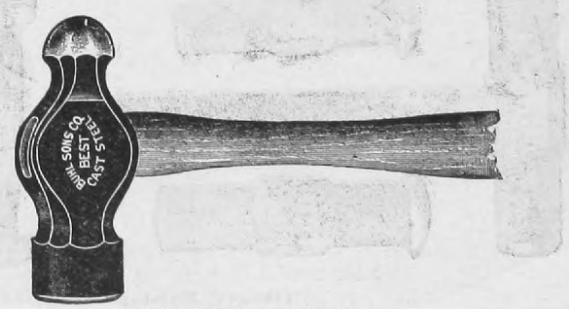


Nos. 394 to 396.

Plumb's Straight Pein Machinists' Hammers, Octagon Pattern, Solid Cast Steel, Polished Sides, Face and Pein.

Nos.	394	395	396
Weight, each	1 lb. 4 oz.	1 lb. 8 oz.	1 lb. 12 oz.
Per Dozen	$13.50	14.50	15.50

Packed—One-third Dozen in a Box.



Nos. 0371 and 0372.

"Buhl" Ball Pein "Automobile" or Machinists' Hammers, Octagon Pattern, Drop Forged Steel, Polished Sides, Face and Pein.

Nos.	0371	0372
Handle, inches	10	10
Weight, each	8 oz.	12 oz.
Per Dozen	$.....	.....

Packed—Half Dozen in a Box.

Note.—Weights given above do **not** include Handles.

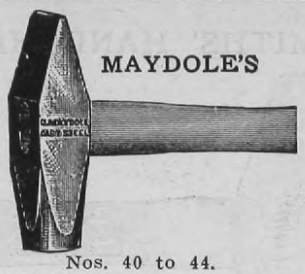
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RIVETING HAMMERS

PLUMB'S

Nos. 250 to 257.

MAYDOLE'S



Nos. 40 to 44.

Plumb's Plain Eye Riveting Hammers, Solid Cast Steel, Full Polished.

Nos.	250	251	252	253	254	255	256	257
Weight, each	4 oz.	7 oz.	9 oz.	12 oz.	15 oz.	1 lb. 2 oz.	1 lb. 6 oz.	1 lb. 10 oz.
Per Dozen	$5.50	5.75	6.00	6.25	6.50	7.00	7.50	8.00

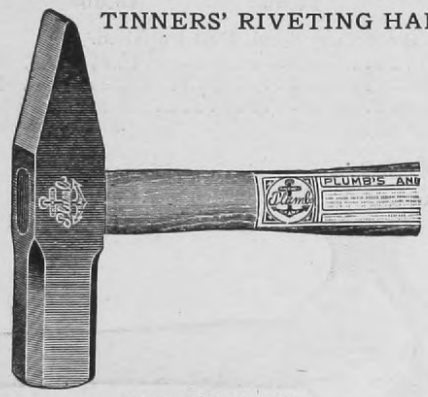
Packed—Half Dozen in a Box.

Maydole's Plain Eye Riveting Hammers, Solid Crucible Cast Steel, Full Polished.

Nos.	40	41	42	42½	43	44
Weight, each	1 lb. 8 oz.	1 lb. 2 oz.	13 oz.	10 oz.	7 oz.	4 oz.
Per Dozen	$12.00	10.50	9.25	8.50	8.00	7.50

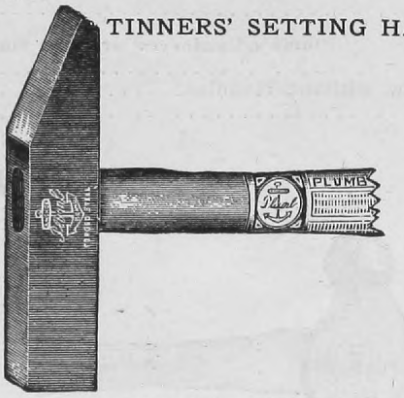
Packed—Half Dozen in a Box.

TINNERS' RIVETING HAMMERS



Nos. 220 to 224.

TINNERS' SETTING HAMMERS



Nos. 230 to 234.

Tinners' Riveting Hammers, Octagon Face, Cast Steel, Bright Finish.

Nos.	220	221	222	223	224
Face, inches	⅝	13/16	1	1 1/16	1 ⅜
Weight, each	8 oz.	12 oz.	1 lb.	1 lb. 4 oz.	1 lb. 8 oz.
Per Dozen	$6.00	6.25	6.75	7.25	7.75

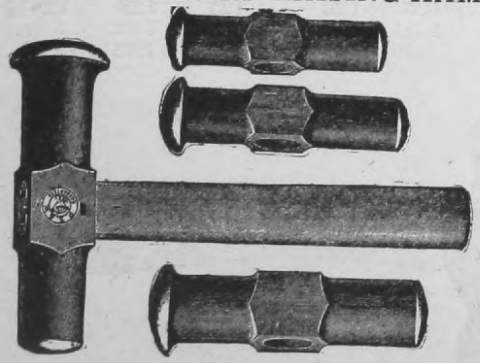
Packed—Half Dozen in a Box.

Tinners' Setting or Paneing Hammers, Square Face, Cast Steel, Bright Finish.

Nos.	230	231	232	233	234
Face, inches	⅝	¾	⅞	1	1 ⅛
Weight, each	8 oz.	12 oz.	1 lb.	1 lb. 4 oz.	1 lb. 8 oz.
Per Dozen	$6.00	6.25	6.75	7.25	7.75

Packed—Half Dozen in a Box.

TINNERS' RAISING HAMMERS



Nos. 1 to 4.

BUMPING OR AUTO BODY HAMMERS

Nos. 210 and 212

Tinners' Raising Hammers, Extra Fine Steel, Polished Faces, Handled.

Nos.	1	2	3	4
Size of faces, inches	1 11/16x2 3/16	1 ½x2	1 ¼x1 ⅝	1 ⅛x1 7/16
Weight, Lbs.	4 lbs., 8 oz.	3 lbs., 8 oz.	2 lbs.	1 lb., 12 oz.
Each	$2.35	1.85	1.35	.85

Packed—In Open Stock.

Bumping or Auto Body Hammers, Forged from One Piece of Solid Tool Steel, Guaranteed; Polished Faces.

Nos.	210	212
Weight, each	13 oz.	1 lb.
Per Dozen	$11.00	12.00

Packed—Half Dozen in a Box. **Note.**—Weights given above do **not** include Handles.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRICK HAMMERS

PLUMB'S, PLAIN EYE

Nos. 2580 to 2582.

Plumb's Plain Eye Brick Hammers, Chicago Pattern, Solid Cast Steel, Oil Finish.

Nos.	2580	2581	2582
Weight, each	1 lb. 8 oz.	2 lbs.	2 lbs. 8 oz.
Per Dozen	$12.00	13.00	14.00

Packed—Half Dozen in a Box.

PLUMB'S, ADZE EYE

Nos. 461 and 462.

Plumb's Adze Eye Brick Hammers, Solid Cast Steel, Oil Finish.

Nos.	461	462
Weight, each	1 lb. 8 oz.	2 lbs.
Per Dozen	$14.00	15.00

Packed—Half Dozen in a Box.

MAYDOLE'S, ADZE EYE

Nos. 562 and 563.

Maydole's Adze Eye Brick Hammers, Solid Cast Steel, Oil Finish.

Nos.	562	563
Weight, each	1 lb. 14 oz.	1 lb. 8 oz.
Per Dozen	$20.00	18.00

Packed—One-third Dozen in a Box.

FARRIERS HAMMERS

MAYDOLE'S, ROUND POLL

No. 552.

Maydole's Round Poll, Adze Eye, Farriers' Driving Hammers, Whaleback Claw, Solid Crucible Cast Steel, Full Polished.

No.	552
Weight, each	10 oz.
Per Dozen	$13.00

Packed—Half Dozen in a Box.

MAYDOLE'S, OCTAGON POLL.

Nos. 851 and 852.

Maydole's Octagon Poll, Adze Eye, Farriers' Driving Hammers, Whaleback Claw, Solid Crucible Cast Steel, Oil Finish.

Nos.	851	852
Weight, each	12 oz.	10 oz.
Per Dozen	$12.00	11.25

Packed—Half Dozen in a Box.

PLUMB'S, ROUND POLL

No. 181.

Plumb's Round Poll, Adze Eye, Farriers' Driving Hammers, Solid Cast Steel, Full Polished.

No.	181
Weight, each	10 oz.
Per Dozen	$7.75

Packed—Half Dozen in a Box.

Note—Weights given above do **not** include Handles.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PLUMB'S NAIL HAMMERS

ROUND FACE

Nos. 70 to 74.

BELL FACE

Nos. 80 to 84.

Round Face, Adze Eye Nail Hammers, Solid Cast Steel.

Nos.	70	71	72	73	74
Weight, each, without Handles	1 lb. 12 oz.	1 lb. 4 oz.	1 lb.	13 oz.	7 oz.
Per Dozen	$12.50	9.00	8.50	8.00	7.50

Packed—Half Dozen in a Box.

Bell Face, Adze Eye Nail Hammers, Solid Cast Steel.

Nos.	80	81	82	83	84
Weight, each, without Handles	1 lb. 4 oz.	1 lb.	13 oz.	7 oz.	4 oz.
Per Dozen	$9.00	8.50	8.00	7.50	7.25

Packed—Half Dozen in a Box.

ARTISANS' CHOICE

Nos. 0221 and 21.

Artisans' Choice, Octagon Pattern, Adze Eye Nail Hammers, Best Tool Steel, Hickory Handles.

Full Polished.

No.	0221
Weight, each	1 lb. 1 oz.
Per Dozen	$11.00

Packed—Half Dozen in a Box.

Nickel Plated.

No.	21
Weight, each	1 lb. 1 oz.
Per Dozen	$13.50

Packed—Half Dozen in a Box.

STRAIGHT CLAW, ROUND FACE

Nos. 75 and 76.

Round Face, Adze Eye, Straight Claw Ripping Hammers, Solid Cast Steel.

Nos.	75	76
Weight, each	1 lb. 4 oz.	1 lb.
Per Dozen	$9.00	8.50

Packed—Half Dozen in a Box.

STRAIGHT CLAW, BELL FACE

Nos. 85 and 86.

Bell Face, Adze Eye, Straight Claw Ripping Hammers, Solid Cast Steel.

Nos.	85	86
Weight, each	1 lb. 4 oz.	1 lb.
Per Dozen	$9.00	8.50

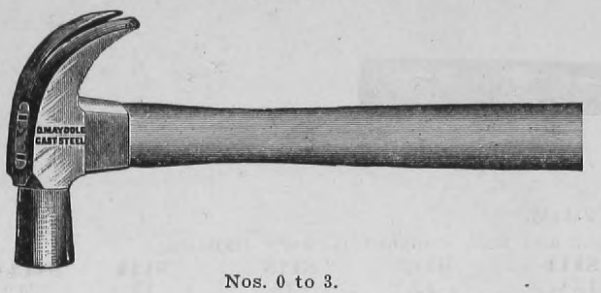
Packed—Half Dozen in a Box.

Note.—Weights given above do **not** include Handles.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MAYDOLE'S NAIL HAMMERS

ROUND FACE



Nos. 0 to 3.

BELL FACE

Nos. 10 to 13.

Round Face, Adze Eye Nail Hammers, Solid Crucible Cast Steel.

Nos.	0	1	1½	2	3
Weight, each	1 lb. 10 oz.	1 lb. 4 oz.	1 lb.	13 oz.	7 oz.
Per Dozen	$16.00	13.00	12.00	11.25	10.00

Packed—Half Dozen in a Box.

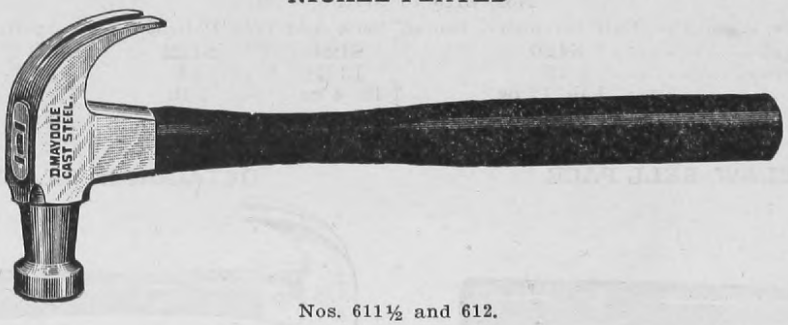
Bell Face, Adze Eye Nail Hammers, Solid Crucible Cast Steel.

Nos.	10	11	11½	12	12½	13
Weight, each	1 lb. 9 oz.	1 lb. 3 oz.	1 lb.	12 oz.	10 oz.	7 oz.
Per Dozen	$16.00	13.00	12.00	11.25	10.50	10.00

No. 811—Same as No. 11, except with **Scored or Creased** Face ..... Per Dozen, $14.50

Packed—Half Dozen in a Box.

NICKEL PLATED



Nos. 611½ and 612.

Nickel Plated, Adze Eye, **Bell Face** Nail Hammers, Solid Crucible Cast Steel, **Ebonized** Handles.

Nos.	611½	612
Weight, each	1 lb.	12 oz.
Per Dozen	$18.50	17.50

Packed—Half Dozen in a Box.

STRAIGHT CLAW, ROUND FACE

Nos. 701 and 701½.

Round Face, Adze Eye, Straight Claw Ripping Hammers, Solid Crucible Cast Steel.

Nos.	701	701½
Weight, each	1 lb. 4 oz.	1 lb.
Per Dozen	$13.00	12.00

Packed—Half Dozen in a Box.

STRAIGHT CLAW, BELL FACE

Nos. 711 to 712.

Bell Face, Adze Eye, Straight Claw Ripping Hammers, Solid Crucible Cast Steel.

Nos.	711	711½	712
Weight, each	1 lb. 3 oz.	1 lb.	12 oz.
Per Dozen	$13.00	12.00	11.25

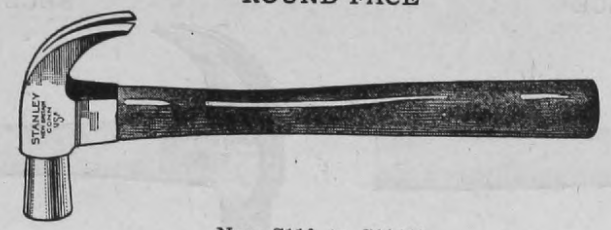
Packed—Half Dozen in a Box.

Note.—Weights given above do **not** include Handles.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY NAIL HAMMERS

ROUND FACE



Nos. S110 to S114½.

Round Face, Adze Eye Nail Hammers, Plain Neck and Poll, Polished Hickory Handles.

Nos.	S110	S111	S112	S113	S114	S114½
Length over all, inches	15	13½	13	13	12	12
Weight, each	1 lb. 12 oz.	1 lb. 4 oz.	1 lb.	13 oz.	7 oz.	5 oz.
Per Dozen	$11.40	8.40	7.80	7.20	6.60	6.40

Packed—Half Dozen in a Box.

BELL FACE

Nos. S120 to S125.

Bell Face, Adze Eye Nail Hammers, Round Neck and Poll, Polished, Hickory Handles.

Nos.	S120	S121	S122	S123	S124	S125
Length over all, inches	15	13½	13	13	12	12
Weight, each	1 lb. 12 oz.	1 lb. 4 oz.	1 lb.	13 oz.	7 oz.	5 oz.
Per Dozen	$11.40	8.40	7.80	7.20	6.60	6.40

Packed—Half Dozen in a Box.

STRAIGHT CLAW, BELL FACE

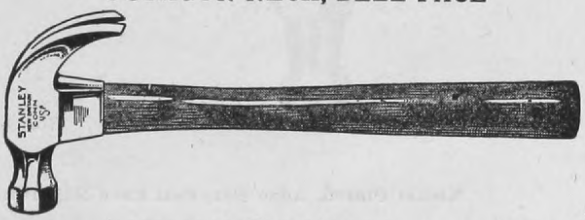
Nos. S221 and S222.

Bell Face, Adze Eye Nail Hammers, Straight Claw, Round Neck and Poll, Polished Hickory Handles.

Nos.	S221	S222
Length over all, inches	13½	13
Weight, each	1 lb. 4 oz.	1 lb.
Per Dozen	$8.40	7.80

Packed—Half Dozen in a Box.

OCTAGON NECK, BELL FACE



No. S14.

Bell Face, Adze Eye Nail Hammers, Curved Claw Octagon Neck and Poll, Full Nickel Plated, Hickory Handles.

No.	S14
Length over all, inches	13
Weight, each	1 lb.
Per Dozen	$12.60

Packed—Half Dozen in a Box.

OCTAGON NECK, ROUND FACE

Nos. 41½ and 42.

View of end of handle showing wax Hole.

Made of Vanadium Alloy Steel, properly tempered. Non-Slip Claw will firmly grip any size nail, from brad to spike. Wax hole in the end of handle, used by carpenters for waxing nails to be driven into hardwood.
Round Face Nail Hammer, Octagon Neck and Round Poll, Polished Hickory Handles.

Nos.	41½	42
Length over all, inches	13½	13
Weight, each	1 lb.	13 oz.
Per Dozen	$.....	.....

Packed—Each in a Separate Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NAIL HAMMERS

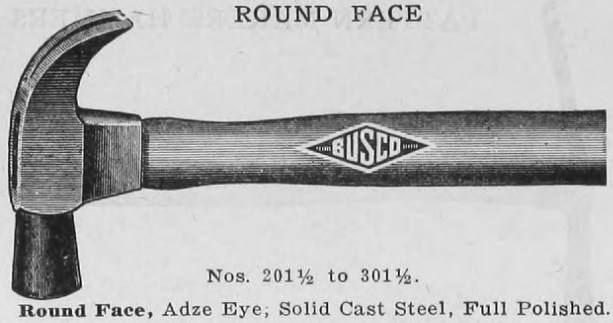
No. 0121.

Octagon Face, Round Neck, Adze Eye, Forged Tool Steel.

No. 0121—Weight 1½ Pounds Each.....Per Dozen, $7.50

Packed—Half Dozen in a Box.

ROUND FACE



Nos. 201½ to 301½.

Round Face, Adze Eye; Solid Cast Steel, Full Polished.

Nos.	201½	202	203
Weight, each	1 lb.	13 oz.	7 oz.
Per Dozen	$8.85	8.55	8.25

No. 301½—Hand Forged Steel **Natural** Finish, Weight 1 pound each.....Per Dozen, $11.00

Packed—Half Dozen in a Box.

BELL FACE

Nos. 211½ to 311½.

Bell Face, Adze Eye; Solid Cast Steel, Full Polished.

Nos.	211½	212	213
Weight, each	1 lb.	13 oz.	7 oz.
Per Dozen	$8.85	8.55	8.25

No. 311½—Hand Forged Steel **Natural** Finish, Weight 1 pound each.....Per Dozen, $11.00

Packed—Half Dozen in a Box.

ROUND FACE

No. 115.

Converted Steel, **Round** Face, Adze Eye.

No. 115—Weight 18 ounces each.....Per Dozen, $3.90

Packed—Half Dozen in a Box.

BELL FACE

No. 215.

Converted Steel, **Bell** Face, Adze Eye.

No. 215—Weight 18 ounces each.....Per Dozen, $3.90

Packed—Half Dozen in a Box.

OCTAGON FACE

No. 1355.

Cast Iron, **Octagon** Face, Adze Eye, Black Enameled Handles 13 inches long.

No. 1355—Finely Finished and Nickel Plated, Weight 18 ounces.....Per Dozen, $2.25

Packed—Half Dozen in a Box.

ROUND FACE

No. 0255.

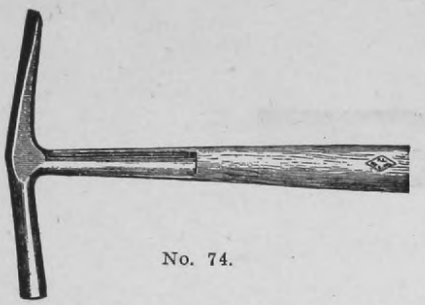
Cast Iron; **Round** Face; Adze Eye.

No. 0255—Polished .....Per Dozen, $1.65

Packed—Half Dozen in a Box.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

UPHOLSTERERS' HAMMERS

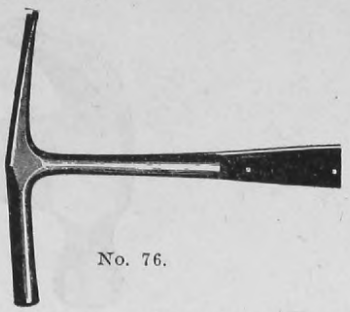


No. 74.

Cast Steel, Varnished White Hickory Handles.

No. 74—Size of Face, Assorted, ⅜ to ½ inch.... ..... Per Dozen $8.00

Packed—Half Dozen in a Box.



No. 76.

Cast Steel, Inlaid Rosewood Handles.

No. 76—Size of Face, Assorted, ¼, ⅜, ½ and ⅝ inch..... Per Dozen $14.00

Packed—Half Dozen in a Box.

BODY TRIMMERS' HAMMERS

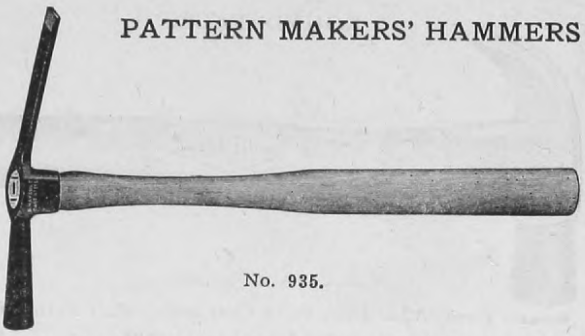
No. 265.

Plain Eye Body Trimmers, Hammers, Solid Crucible Cast Steel, Full Polished.

No. 265—Weight, each, without Handle 6 ounces, ... Per Dozen, $8.00

Packed—Half Dozen in a Box.

PATTERN MAKERS' HAMMERS



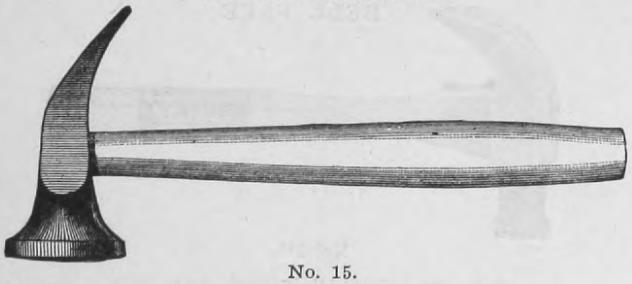
No. 935.

Adze Eye Pattern Makers' Hammers, Solid Crucible Cast Steel.

No. 935—Weight, each, without Handle, 5 ounces ..... Per Dozen, $12.00

Packed—Half Dozen in a Box.

SHOE HAMMERS



No. 15.

No. 15—Full Polished Iron Head, best Oval Handles .....Per Dozen, $1.90

Packed—Half Dozen in a Box.

GLAZIERS' HAMMERS

Pitts.

A new Hammer for Glaziers' and Picture Frame Makers' use. With this Hammer glass can be set quicker and with more absolute security than if a chisel is used. Has a rotary triangular head which permits it to be laid flat against the glass no matter what position you hold the handle in when driving points. Triangular Head is of Tool Steel and reversible; other end is of Malleable Iron.

Pitts Glaziers' Hammers, Nickel Plated.... .....Per Dozen, $9.00

Packed—Half Dozen in a Box.

TACK HAMMERS

No. 150.

No. 150—Family Tack Hammers, Adze Eye, Full Polished, Steel Finish, Varnished Handles, 11 inches long.....Per Dozen, $.....

Packed—One Dozen in a Box.

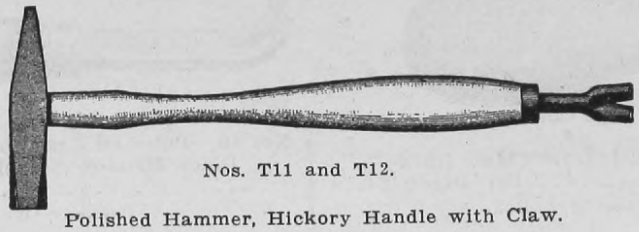
No. 50.

No. 50—Upholsterers' Style Tack Hammer, Fine Polished Iron, Nickel Plated, Varnished 12 inch Hickory Handles..... ..... Per Dozen, $.....

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TACK HAMMERS



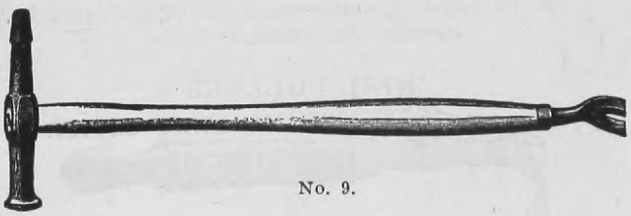
Nos. T11 and T12.

Polished Hammer, Hickory Handle with Claw.

No. T11—Large Size .....Per Dozen, $.....

No. T12—Medium Size .....Per Dozen, ...

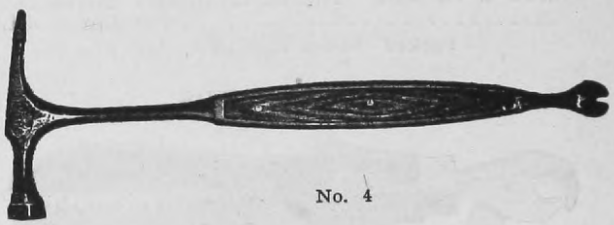
Packed—One Dozen in a Box.



No. 9.

No. 9—Magnetic Head, Nickel Plated, Polished Hickory Handle.....Per Dozen, $.....

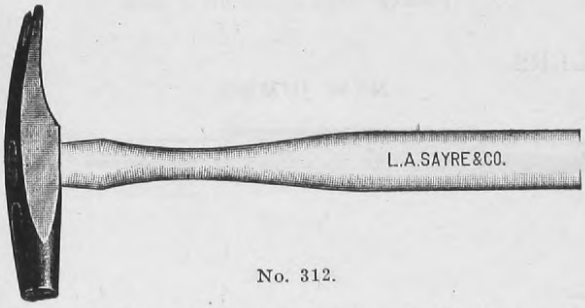
Packed—One Dozen in a Box.



No. 4

No. 4—Stanley Improved Tack Hammer, Malleable Iron, Hardened Face, Black Walnut Inlaid Handle.....Per Dozen, $.....

Packed—One Dozen in a Box.



No. 312.

Horse Shoe Magnet Tack Hammers. Made from a good grade of Cast Steel, with Mixed Hickory Handles.

No. 312—Extra Polished.....Per Dozen, $.....

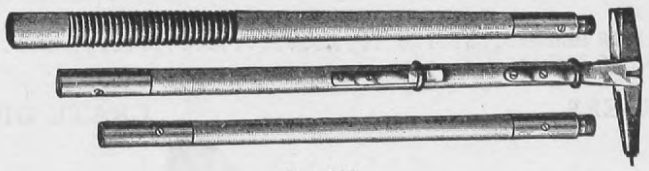
Packed—One Dozen in a Box.

No. 412.

Horse Shoe Magnet Tack Hammers. Best Cast Steel, strong permanent Magnet. Head weighs 4 ounces; 12 inch Handle.

No. 412—Bright Finish.....Per Dozen $.....

Packed—One Dozen in a Box.



No. 502.

Robertson Patent Horse Shoe Magnet Tack Hammers, Drop Forged from Superior Magnet Steel; fully warranted. Especially adapted for tacking up cards and posters. Hammer Head and Handle Trimmings are Nickel Plated.

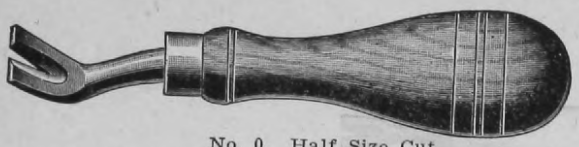
No. 502—With 5 ounce Head and 36 inch Jointed Handle (Two 18 inch sections).....Per Dozen, $21.00

No. 803—With 8 ounce Head and 45 inch Jointed Handle (Three 15 inch sections).....Per Dozen, 30.00

Packed—One-sixth Dozen in a Box.

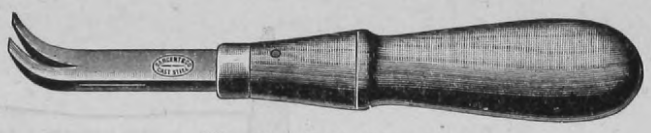
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TACK CLAWS



No. 0. Half Size Cut.

No. 0—Short Shank, Polished Iron Claw, Hardwood Handle.....Per Dozen $1.10
Packed—One Dozen in a Box.



No. 46. Half Size Cut.

No. 46—Polished Cast Steel Blade, Riveted Tang, Black Handle, Nickel Plated Ferrule..... Per Dozen, $2.20
Packed—One Dozen in a Box.

No. 10.

No. 10—Sterling Tack Claws, Polished Handle, Tempered Steel Claws, Nickel Finish, will draw a 6d Nail. Packed in Display Boxes. ..... Per Dozen, $1.20
Packed—One Dozen in a Box.

No. 38.

No. 38—Cast Steel Tempered Claws, Nickel Plated, Packed in Display Boxes.....Per Dozen, $0.70
Packed—One Dozen in a Box.

TACK PULLERS

No. 42.

No. 42—Tack Pullers, with Cast Steel Grip and polished handle.....Per Dozen, $1.00
Packed—One Dozen in a Box.

NAIL PULLERS

No. 101.

The Giant Red Devil Nail Puller is made from the highest grade forged tool steel for the jaws, and best grade iron for the rammer. The Box Chisel on the back of the tool cuts wooden or iron hoops, thus releasing barrel head intact.

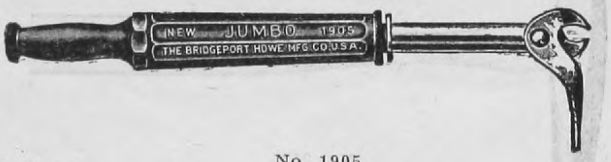
No. 101—Giant Nail Puller. Length, 21 inches, closed..... Per Dozen, $18.00
Packed—One Dozen in a Box.

NAIL PULLERS

REX

Nos. 13 and 15.

NEW JUMBO



No. 1905.

Rex Nail Pullers

A good reliable Tool. Fully warranted. Jaws are forged from fine quality steel, hardened, oil tempered and polished. Handles finished in jet black enamel.

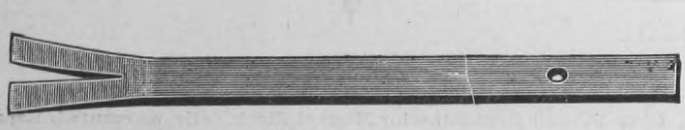
No. 13—Rex, Large Size. Length, 18 inches.....Per Dozen, $16.00
No. 15—Rex Junior, Small Size. Length, 15 inches.....Per Dozen, 13.50

New Jumbo Nail Pullers

Forged from finest quality Tool Steel. Shank, Guard and Claw are highly polished. Rammer is finished in jet black enamel.

No. 1905L—Large Size, Length 18 inches.....Per Dozen, $18.00
No. 1905S—Small Size, Length, 15 inches.....Per Dozen, 15.00

BOX CHISELS



No. 20.

Forged from Cast Steel, hardened and tempered. Size: ½x⅝x13½ inches, Black Steel Finish, Polished Points.

No. 20—Box Chisels.....Per Dozen, $5.00
Packed—Half Dozen in a Box.

CRATE OPENERS

No. 82.

Forged in one piece from fine quality Steel. One Hammer Head is scored, the other is plain. Length, 9¼ inches. Full Polished and Nickel Plated.

No. 82—Box Terrier Crate Openers...Per Dozen, $11.50
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BOX AND CRATE OPENERS

No. 90.

Most Useful Tool ever made for opening Boxes, Barrels, Crates, Cases, etc. Hammer, Box, Chisel and Nail Puller combined. Will pull and drive anything from a carpet tack to an 8d nail. Made of fine steel, hardened and tempered, with Oval Scale Handle. Length, 12½ inches.

No. 90—Matchless Box and Crate Openers, Blued Steel, Polished Claws.....Per Dozen, $10.00

Packed—One-third Dozen in a Box.

NAIL CLAWS

No. 2.

No. 2—Wrought Nail Claws, Five Steel Fingers, Painted.....Per Dozen, $10.00

Packed—Half Dozen in a Box.

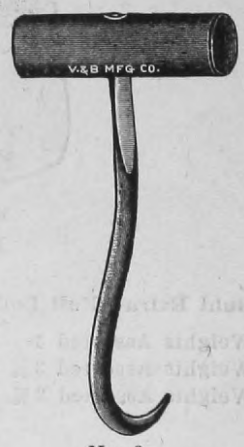
BOX, HAY AND COTTON HOOKS

No. 20.

Nos. 6 to 15.

No. 1.

No. 0.



No. 8.

No. 20—Box Hook, ⅜ in. Square Steel, Round Hardwood Loop Handle, Length over all 11 in...Per Dozen, $5.00
No. 6—Box Hook, 5/16 in. Round Steel, Oval Hardwood Handle, Length over all 6 in.....Per Dozen, 4.00
No. 9—Box Hook, ⅜ in. Round Steel, Oval Hardwood Handle, Length over all 9 in.....Per Dozen, 4.50
No. 12—Box Hook, 7/16 in. Round Steel, Oval Hardwood Handle, Length over all 12 in.....Per Dozen, 5.00
No. 15—Box Hook, ½ in. Round Steel, Oval Hardwood Handle, Length over all 15 in.....Per Dozen, 6.50
No. 1—Hay Hook, 7/16 in. Round Steel, Oval Hardwood Handle, Length over all 9 in.....Per Dozen, 3.50
No. 0—Hay Hook, ⅜ in. Round Steel, Malleable Loop Handle, Length over all 9 in.....Per Dozen, 7.00
No. 8—Cotton Hook, ⅜ in. Round Steel, Oval Hardwood Handle, Length over all 9 in.....Per Dozen, 3.00

Packed—No. 0, Half Dozen in a Box; Others In Open Stock.

BOX HOOKS

No. 10.

No. 10—Box Hook, ½ inch Round Steel, Wrought Loop Handle, Length over all 9 in..... Per Dozen, $9.00

Packed—In Open Stock.

BOX SCRAPERS

No. 6.

No. 6—Single Handle Box Scrapers, Wrought Steel Shanks, Cast Steel Blades, 2¾ inch Cut....Per Dozen, $7.00

Packed—Half Dozen in a Box.

BOX SCRAPERS

No. 1.

No. 1—Double Handle Box Scrapers, Riveted Tangs, Cast Steel Blades..... ..... Per Dozen, $9.00

Packed—Half Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BUHL EXTRA AXES

SINGLE BITTED

DOUBLE BITTED

Full Polished and Deep Etched

Michigan Pattern.

Michigan Pattern.

Best Solid Silver Steel, Finely Tempered, Full Polished and Deep Etched

	Single Bitted No. 13	Double Bitted No. 013
Buhl Extra—Full Polished.....		
Weights Assorted 3 to 4 pounds.....Base Price Per Dozen,	$.....	.....
Weights Assorted 3¼ to 4¼ and 3½ to 4½ pounds..Advance Per Dozen,	$0.25	.25
Weights Assorted 3¾ to 4¾ and 4 to 5 pounds..Advance Per Dozen,	.50	.50

Packed—Each in a Separate Carton, One Dozen in a Box.

SINGLE BITTED

DOUBLE BITTED

Black Finish
Gold Filled
Deep Etching

Michigan Pattern.

Michigan Pattern.

Best Solid Silver Steel, Finely Tempered, Black Finish, Gold Filled Deep Etching

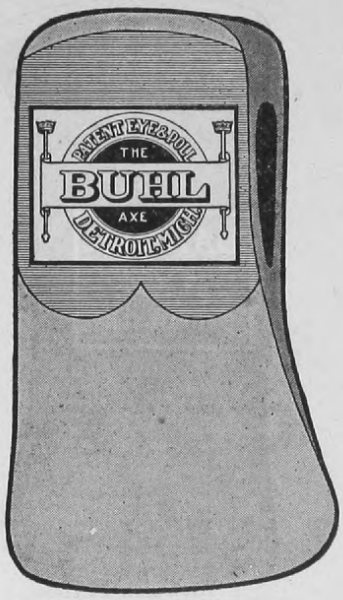
	Single Bitted No. 12	Double Bitted No. 012
Buhl Extra—Black Finish.....		
Weights Assorted 3 to 4 pounds.....Base Price Per Dozen,	$.....	.....
Weights Assorted 3¼ to 4¼ and 3½ to 4½ pounds..Advance Per Dozen,	$0.25	.25
Weights Assorted 3¾ to 4¾ and 4 to 5 pounds..Advance Per Dozen,	.50	.50

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Packed—Each in a Separate Carton, One Dozen in a Box

BUHL BRONZED AXES

SINGLE BITTED



Michigan Pattern.

Gold Bronze Finish
Labeled

DOUBLE BITTED

Michigan Pattern.

Extra Fine Crucible Steel, Finely Tempered, Gold Bronze Finish, Labeled

	Single Bitted No. 14	Double Bitted No. 014
Buhl Bronzed—Gold Bronze Finish.....	$.....	.....
Weights, Assorted, 3 to 4 Pounds.....Base price, Per Dozen,	$0.25	.25
Weights, Assorted, 3¼ to 4¼ and 3½ to 4½ Pounds, Advance, Per Dozen,	.50	.50
Weights, Assorted, 3¾ to 4¾ and 4 to 5 Pounds....Advance, Per Dozen,		

Packed—One Dozen in a Box.

BUHL PONTIAC AXES

SINGLE BITTED

Michigan Pattern.

Natural Forge Finish
Labeled

DOUBLE BITTED

Michigan Pattern.

Best Cast Steel, Hand Hammered, Finely Tempered, Natural Forge Finish, Labeled Pontiac.

	Single Bitted No. 15	Double Bitted No. 015
Pontiac—Natural Forge Finish.....	$.....	.....
Weights, Assorted, 3 to 4 Pounds.....Base Price, Per Dozen,	$0.25	.25
Weights, Assorted, 3¼ to 4¼ and 3½ to 4½ Pounds, Advance, Per Dozen,	.50	.50
Weights, Assorted, 3¾ to 4¾ and 4 to 5 Pounds....Advance, Per Dozen,		

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BANNER AXES

Michigan Pattern.

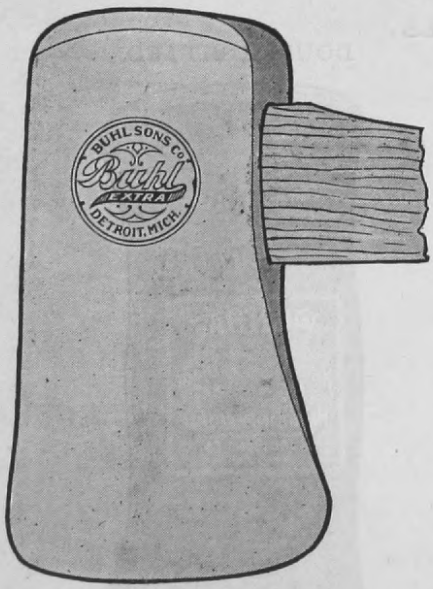
Michigan Pattern.

Standard Quality Cast Steel, Tempered, Black Finish, Labeled

	Single Bitted No. 75	Double Bitted No. 075
Banner—Black Finish		
Weights assorted 3 to 4 pounds.....**Base** Price, per Dozen,	$.....	.....
Weights assorted 3¼ to 4¼ and 3½ to 4½ pounds..... Advance, Per Dozen,	.25	.25
Weights assorted 3¾ to 4¾ and 4 to 5 pounds..... Advance, Per Dozen,	.50	.50

Packed—One Dozen in a Box.

BUHL EXTRA HANDLED AXES



Michigan Pattern.

Best Solid Silver Steel, Finely Tempered. Full Polished, Deep Etched.

Michigan Pattern.

Best Solid Silver Steel, Finely Tempered. Black Finish, Gold Filled Deep Etching.

With 36 Inch Extra Quality Handles.

	Single Bitted No. 136	Double Bitted No. 0136
Buhl Extra, Handled, Full Polished.....**Base** Price, Per Dozen,	$.....	.....
	No. 126	**No. 0126**
Buhl Extra, Handled, Black Finish.....**Base** Price, Per Dozen,	$.....	.....

Packed—Half Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HANDLED AXES

PONTIAC

Michigan Pattern.

"Pontiac" Single Bitted Handled Axes

Best Cast Steel, Hand Hammered, Finely Tempered.
Natural Forge Finish, Labeled.
With 36 Inch Extra Quality Handles.

No. 156—Base Price . . . Per Dozen, $. . . . .

Packed—Half Dozen in a Crate.

PONTIAC

Michigan Pattern.

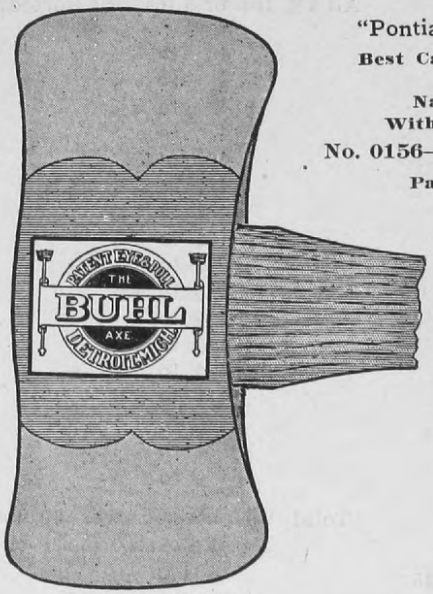
"Pontiac" Double Bitted Handled Axes

Best Cast Steel, Hand Hammered, Finely Tempered.
Natural Forge Finish, Labeled.
With 36 Inch Extra Quality Handles.

No. 0156—Base Price . . Per Dozen, $. . . . . .

Packed—Half Dozen in a Crate.

BUHL BRONZED



Michigan Pattern.

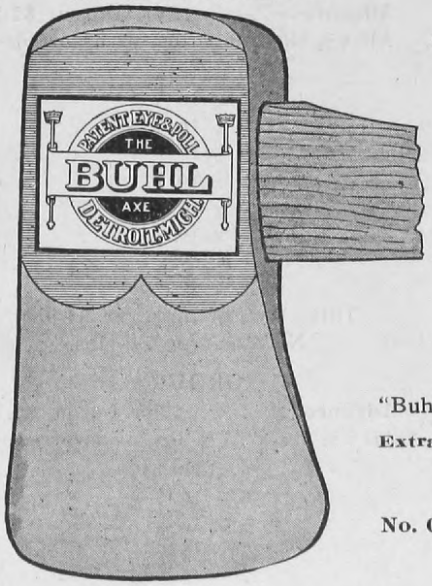
"Buhl" Bronzed Double Bitted Handled Axes

Extra Fine Crucible Cast Steel, Finely Tempered.
Gold Bronze Finish, Labeled.
With 36 Inch Extra Quality Handles.

No. 0146—Base Price . . Per Dozen, $. . . . . .

Packed—Half Dozen in a Crate.

BUHL BRONZED



Michigan Pattern.

"Buhl" Bronzed Single Bitted Handled Axes

Extra Fine Crucible Cast Steel, Finely Tempered.
Gold Bronze Finish, Labeled.
With 36 Inch Extra Quality Handles.

No. 146—Base Price . . . . . Per Dozen, $. . . . . .

Packed—Half Dozen in a Crate.

BANNER

Michigan Pattern.

"Banner" Single Bitted Handled Axes

Standard Quality Cast Steel, Tempered.
Black Finish, Labeled.
With 36 Inch Extra Quality Handles.

No. 756—Base Price . . . . . Per Dozen, $. . . . . .

Packed—Half Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD AXE LIST

BASE GROUP

(Base Weights.)

All 2 lbs. or 2¼ or 2½ or 2¾ or 3 or 3¼ or 3½ lbs. or assorted:—

2 to 2¼
2 to 2½
2 to 2¾
2 to 3
2 to 3¼
2 to 3½
2¼ to 2½
2¼ to 2¾
2¼ to 3
2¼ to 3¼
2¼ to 3½
2½ to 2¾
2½ to 3
2½ to 3¼
2½ to 3½
2¾ to 3
2¾ to 3¼
2¾ to 3½
2¾ to 3¾
2¾ to 4
3 to 3¼
3 to 3½
3 to 3¾
3 to 4
3¼ to 3½
3¼ to 3¾

Total Weight not over 42 lbs.
No Axe over 4 lbs.

GROUP 2

Advance.....Per Dozen, $0.25

All 3¾ lbs. or 4 lbs. or assorted:—

3 to 4¼
3 to 4½
3¼ to 4
3¼ to 4¼
3¼ to 4½
3½ to 3¾
3½ to 4
3½ to 4¼
3½ to 4½
3¾ to 4
3¾ to 4¼

Total Weight not over 48 lbs.
No Axe over 4½ lbs.

GROUP 3

Advance.....Per Dozen, $0.50

All 4¼ lbs. or 4½ lbs. or assorted:—

3½ to 4¾
3½ to 5
3¾ to 4½
3¾ to 4¾
3¾ to 5
4 to 4¼
4 to 4½
4 to 4¾
4 to 5
4¼ to 4½
4¼ to 4¾

Total Weight not over 54 lbs.
No Axe over 5 lbs.

GROUP 4

Advance.....Per Dozen, $0.75

All 4¾ lbs. or 5 lbs. or assorted:—

4 to 5¼
4 to 5½
4 to 5¾
4 to 6
4¼ to 5
4¼ to 5¼
4¼ to 5½
4¼ to 5¾
4¼ to 6
4½ to 4¾
4½ to 5
4½ to 5¼
4½ to 5½
4½ to 5¾
4½ to 6
4¾ to 5
4¾ to 5¼

Total Weight not over 60 lbs.
No Axe over 6 lbs.

GROUP 5

Advance.....Per Dozen, $1.00

All 5¼ lbs. or 5½ lbs. or assorted:—

4¾ to 5½
4¾ to 5¾
4¾ to 6
5 to 5¼
5 to 5½
5 to 5¾
5 to 6
5¼ to 5½
5¼ to 5¾

Total Weight not over 66 lbs.
No Axe over 6 lbs.

GROUP 6

Advance.....Per Dozen, **$1.25**

All 5¾ lbs. or 6 lbs. or assorted:—

5¼ to 6
5¼ to 6¼
5¼ to 6½
5½ to 5¾
5½ to 6
5½ to 6¼
5½ to 6½
5¾ to 6
5¾ to 6¼

Total Weight not over 72 lbs.
No Axe over 6½ lbs.

GROUP 7

Advance.....Per Dozen, **$1.75**

All 6¼ lbs. or 6½ lbs. or assorted:—

5¾ to 6½
5¾ to 6¾
5¾ to 7
6 to 6¼
6 to 6½
6 to 6¾
6 to 7
6¼ to 6½
6¼ to 6¾

Total Weight not over 78 lbs.
No Axe over 7 lbs.

GROUP 8

Advance.....Per Dozen, **$2.25**

All 6¾ lbs. or 7 lbs. or assorted:—

6¼ to 7
6¼ to 7¼
6¼ to 7½
6½ to 6¾
6½ to 7
6½ to 7¼
6½ to 7½
6¾ to 7
6¾ to 7½

Total Weight not over 84 lbs.
No Axe over 7½ lbs.

GROUP 9

Advance.....Per Dozen, **$2.75**

All 7¼ lbs. or 7½ lbs. or assorted:—

6¾ to 7½
6¾ to 7¾
6¾ to 8
7 to 7¼
7 to 7½
7 to 7¾
7 to 8

Total Weight not over 90 lbs.
No Axe over 8 lbs.

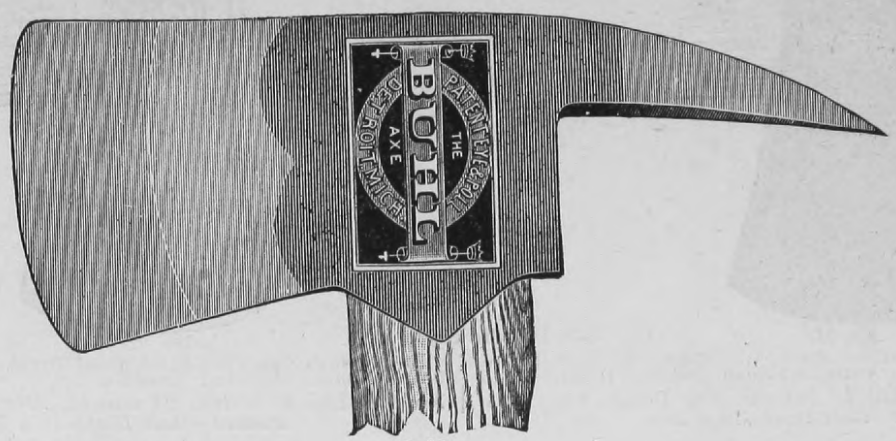
GROUP 10

Advance.....Per Dozen, **$3.25**

All 7¾ lbs. or 8 lbs.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

FIREMEN'S AXES



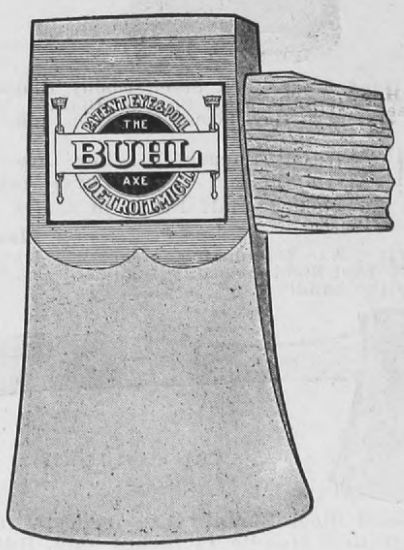
Buhl.

Buhl Firemen's Axes, Best Cast Steel, Painted Red, Weight 5½ pounds, with 36 inch **Red** Handles....
.....Per Dozen, $.....

Packed—One Dozen in a Case.

BOYS' HANDLED AXES

No. 1.



No. 2. Style of No. 3.

No. 1—Kelly Perfect Boys' Handled Axes, All Steel, with 28 inch Handles, Weight 2 pounds.....
.....Per Dozen, $.....

No. 2—"Buhl" Boys' Handled Axes, Best Cast Steel, Gold Bronzed, with 28 inch Handles, Weight 2½ pounds .....Per Dozen, ...

No. 3—Standard Boys' Handled Axes, Cast Steel, Gold Bronzed, with 28 inch Handles, Weight 2½ pounds .....Per Dozen, ...

Packed—One Dozen in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL HUNTERS' AXES

No. 01.

Axe Handle Style

No. 02.

Buhl Hand Made, Cast Steel, Black Finish, Gold Filled Deep Etching. Green Antique Finish Hickory Handles.

No. 01—Size 1, Weight 20 ounces..Per Dozen, $.....

Packed—Half Dozen in a Box.

Buhl Sons Co., Cast Steel, Gold Bronze Finish, with polished Hickory Handles. Labeled.

No. 02—Size 2, Weight 24 ounces..Per Dozen, $.....

Packed—Half Dozen in a Box.

"Boy Scout"

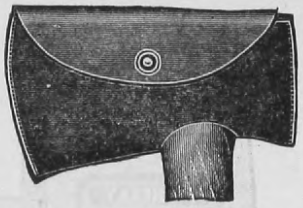
Buhl Hand Made, Cast Steel, Ebony Black Finish, Gold Filled Deep Etching. Nail Slot in Blade. Antique Finish Hickory Handles, Boy Scout Label on same. Weight 20 ounces.

No. 011—Without Sheath ....Per Dozen, $.....

No. 0111—With Sheath .....Per Dozen, ...

Packed—Half Dozen in a Box.

HUNTERS' AXE SHEATHS



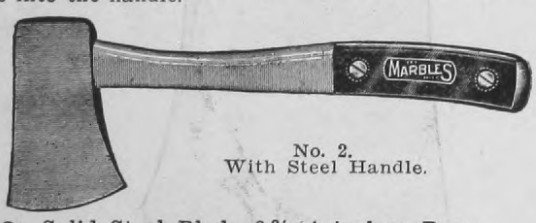
Strong Leather Sheath for carrying Axe on Belt.

No. 1—Hunters' Axe Sheaths....Per Dozen, $.....

Packed—Half Dozen in a Box.

Marble Safety Pocket Hunters' Axes

A perfect Axe for blazing, clearing a trail or setting a tent; as necessary in the woods as a gun or knife. The Blade is made of Tool Steel carefully tempered and sharpened; the nickel plated Spring Hinged Guard is lined with lead and folds into the handle.



No. 2.
With Steel Handle.

No. 2½.
With Steel Handle.

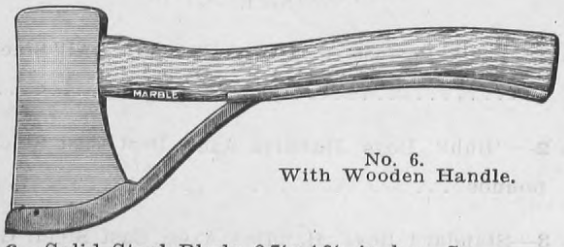
No. 2—Solid Steel Blade 2⅜x4 inches, Drop Forged Steel Handle 11 inches long, Rubber Side Plates, Weight 20 ounces..Each, $.....

Packed—Two in a Box.

No. 2½—With Nail Claw, Solid Steel Blade 2⅜x4 inches, Drop Forged Steel Handle 11 inches long, Rubber Side Plates, Weight 20 ounces .....Each, $.....

Packed—Two in a Box.

No. 3.
With Steel Handle.



No. 6.
With Wooden Handle.

No. 3—Solid Steel Blade 2½x4⅜ inches, Drop Forged Steel Handle 12 inches long, Rubber Side Plates, Weight 27 ounces...Each, $.....

Packed—Two in a Box.

No. 6—Solid Steel Blade 2⅞x4¾ inches, Selected Hickory Handle 12 inches long, Weight 22 ounces.....Each, $.....

Packed—Two in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ADZES

HOUSE CARPENTERS'

Approximate Weight Per Dozen.

Cut Inches	H. H. Lbs.	F. H. Lbs.	Ship Lbs.
3½	44	..	..
4	46	49	38
4½	48	52	41
5	50	58	43
5½	..	59	..

No. 1.

Half Head House Carpenters' Adzes.
Best Cast Steel, **Gold Bronzed.**

No. 1—Buhl Sons Co., 3½ to 4½ inch Cut..Per Dozen, $36.00

Packed—One Dozen in a Box.

SHIP CARPENTERS'
Plain.

No. 3.

Plain, Spur Head Ship Carpenters' Adzes.
Best Cast Steel, **Gold Bronzed.**

No. 3—Buhl Sons Co., 4 to 4½ inch Cut..Per Dozen, $37.50

Packed—One Dozen in a Box.

SHIP CARPENTERS'
Lipped.

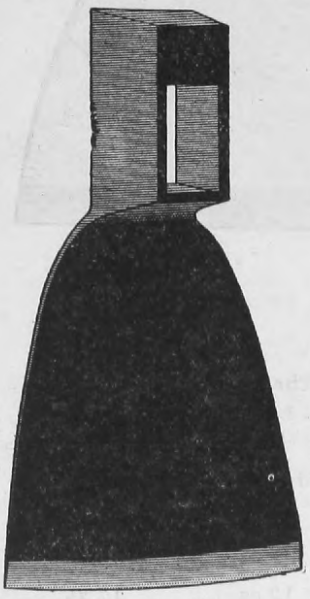
No. 4.

Lipped, Spur Head Ship Carpenters' Adzes.
Best Cast Steel, **Gold Bronzed.**

No. 4—Buhl Sons Co., 4 to 4½ inch Cut..Per Dozen, $45.00

Packed—One Dozen in a Box.

RAILROAD ADZES



No. 20.
Black Finish.

Full Head Railroad Adzes, Cast Steel.

No. 20—Tracker Adzes, 4 to 5½ inch Cut.....Per Dozen, $39.00

Packed—One Dozen in a Box.

BUHL BROAD AXES

No. RC720.

Buhl-Baker Round Corner or Improved **Canada Pattern.**
Best Cast Steel, Black Finish.

No. RC720—Weight 5 to 7 pounds, assorted.....Per Dozen, $63.00

Packed—One Dozen in a Box.

BUHL SHIP AXES

No. 10.

Buhl Ship Axes.
Best Cast Steel, Gold Bronzed Finish.

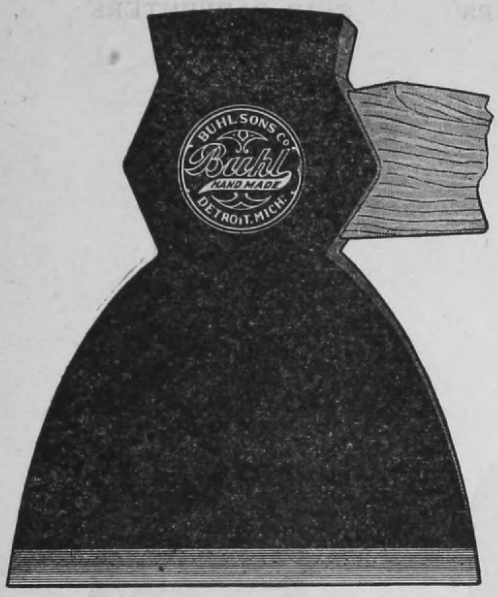
No. 10—Weight 5 to 5½ pounds, assorted.....Per Dozen, $45.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BROAD HATCHETS

BUHL HAND MADE



"Buhl Hand Made" Broad Hatchets

Solid Cast Steel, Black Finish, Gold Filled Deep Etching.

Nos.	Cut, Inches	Weight, each, without Handle	Per Dozen
B121	4	1 lb. 8 oz.	$18.00
B122	4½	1 lb. 12 oz.	19.50
B123	5	2 lbs. 2 oz.	22.50
B124	5½	2 lbs. 8 oz.	24.75
B125	6	2 lbs. 14 oz.	27.75

Packed—Half Dozen in a Box.

BUHL SONS CO.

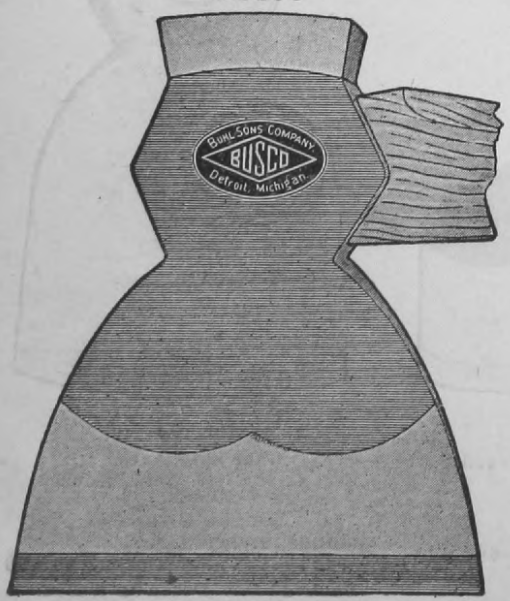
"Buhl Sons Co." Bronzed Broad Hatchets

Best Cast Steel, Gold Bronzed Finish, Labeled.

Nos.	Cut, Inches	Weight, each, without Handle	Per Dozen
B141	4	1 lb. 8 oz.	$15.75
B142	4½	1 lb. 12 oz.	17.25
B143	5	2 lbs. 2 oz.	19.50
B144	5½	2 lbs. 8 oz.	21.75
B145	6	2 lbs. 14 oz.	24.75

Packed—Half Dozen in a Box.

"BUSCO"



"Busco" Broad Hatchets

Cast Steel, Black Finish, Labeled.

Nos.	Cut, Inches	Weight, each, without Handle	Per Dozen
B751	4	1 lb. 8 oz.	$15.75
B752	4½	1 lb. 12 oz.	17.25
B753	5	2 lbs. 2 oz.	19.50
B754	5½	2 lbs. 8 oz.	21.75
B755	6	2 lbs. 14 oz.	24.75

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHINGLING HATCHETS

BUHL EXTRA

Buhl Extra Shingling Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

Nos.	S131	S132
Cut, inches	3½	4
Per Dozen	$15.75	16.50

Packed—Half Dozen in a Box.

BUHL HAND MADE

Buhl Hand Made Shingling Hatchets

Solid Cast Steel, Black Finish, Gold Filled Deep Etching.

Nos.	S121	S122
Cut, inches	3½	4
Per Dozen	$13.85	14.65

Packed—Half Dozen in a Box.

BUHL SONS CO.

Buhl Sons Co. Shingling Hatchets

Best Cast Steel, Gold Bronzed Finish, Labeled.

Nos.	S141	S142
Cut, inches	3½	4
Per Dozen	$12.00	12.75

Packed—Half Dozen in a Box.

"BUSCO"

"Busco" Shingling Hatchets

Cast Steel, Black Finish, Labeled.

Nos.	S751	S752
Cut, inches	3½	4
Per Dozen	$12.00	12.75

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CLAW HATCHETS

BUHL EXTRA

Buhl Extra Claw Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

Nos.	C131	C132
Cut, inches	3½	4
Per Dozen	$17.25	18.00

Packed—Half Dozen in a Box.

BUHL HAND MADE

Buhl Hand Made Claw Hatchets

Solid Cast Steel, Black Finish, Gold Filled Deep Etching.

Nos.	C121	C122
Cut, inches	3½	4
Per Dozen	$15.40	16.15

Packed—Half Dozen in a Box.

BUHL SONS CO.

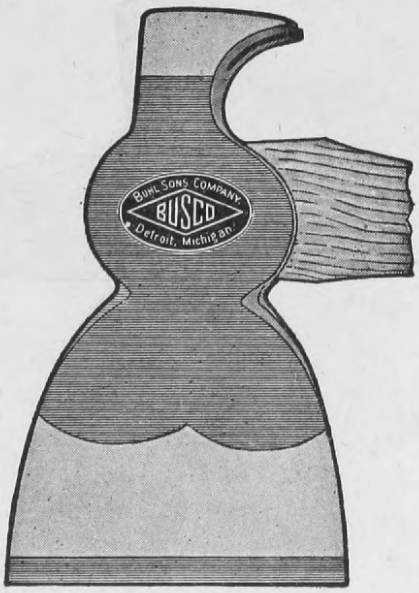
Buhl Sons Co. Claw Hatchets

Best Cast Steel, Gold Bronzed Finish, Labeled.

Nos.	C141	C142
Cut, inches	3½	4
Per Dozen	$13.50	14.25

Packed—Half Dozen in a Box.

"BUSCO"



"Busco" Claw Hatchets

Cast Steel, Black Finish, Labeled.

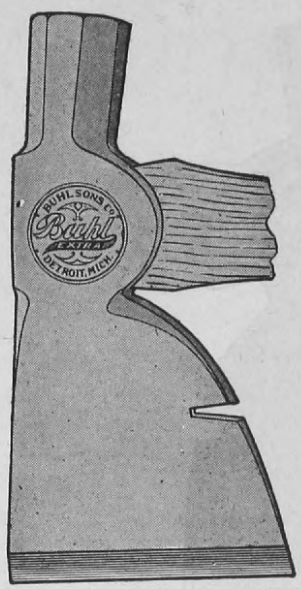
Nos.	C751	C752
Cut, inches	3½	4
Per Dozen	$13.50	14.25

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HALF HATCHETS

BUHL EXTRA



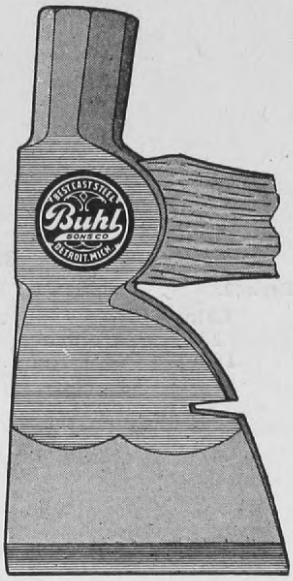
Buhl Extra Half Hatchets

Solid Cast Steel, Full Polished, Deep Etched.

Nos.	H131	H132
Cut, inches	3 ¼	3 ⅝
Per Dozen	$16.50	17.25

Packed—Half Dozen in a Box.

BUHL SONS CO.



Buhl Sons Co. Half Hatchets

Best Cast Steel, Gold Bronzed Finish, Labeled.

Nos.	H141	H142
Cut, inches	3 ¼	3 ⅝
Per Dozen	$12.75	13.50

Packed—Half Dozen in Box.

BUHL HAND MADE

Buhl Hand Made Half Hatchets

Solid Cast Steel, Black Finish. Gold Filled Deep Etching.

Nos.	H121	H122
Cut, inches	3 ¼	3 ⅝
Per Dozen	$14.65	15.40

Packed—Half Dozen in a Box.

"BUSCO"

"Busco" Half Hatchets

Round Neck, Octagon Pole.
Forged Steel, Black Finish, Labeled.

Nos.	H0121	H0122
Cut, inches	3 ¼	3 ⅝
Per Dozen	$11.50	12.00

Packed—Half Dozen in a Box.

"BUSCO"

"Busco" Half Hatchets

Cast Steel, Black Finish, Labeled.

Nos.	H751	H752
Cut, inches	3 ¼	3 ⅝
Per Dozen	$12.75	13.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LATHING HATCHETS

BUHL EXTRA

Buhl Extra Lathing Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

Nos.	L131	L132
Cut, inches	2¼	2½
Per Dozen	$15.75	16.50

Packed—Half Dozen in a Box.

BUHL HAND MADE

Buhl Hand Made Lathing Hatchets

Solid Cast Steel, Black Finish, Gold Filled Deep Etching.

Nos.	L121	L122
Cut, inches	2¼	2½
Per Dozen	$13.85	14.65

Packed—Half Dozen in a Box.

BUHL SONS CO.

Buhl Sons Co. Lathing Hatchets

Best Cast Steel, Gold Bronzed Finish, Labeled.

Nos.	L141	L142
Cut, inches	2¼	2½
Per Dozen	$12.00	12.75

Packed—Half Dozen in a Box.

"BUSCO"

"Busco" Lathing Hatchets

Cast Steel, Black Finish, Labeled.

Nos.	L751	L752
Cut, inches	2¼	2½
Per Dozen	$12.00	12.75

Packed—Half Dozen in a Box.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BUHL EXTRA LATHING HATCHETS

ADZE EYE, BELL POLL

No. 550.

Buhl Extra, Adze Eye, Bell Poll, Lathing Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

No.	**550**
Weight, each, without Handle	16 oz.
Per Dozen	$15.00

Packed—Half Dozen in a Box.

BOSTON PATTERN

No. 540.

Buhl Extra, Boston Pattern, Lathing Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

No.	**540**
Weight, each, without Handle	14 oz.
Per Dozen	$18.00

Packed—Half Dozen in a Box.

PHILADELPHIA PATTERN

No. 570.

Buhl Extra, Philadelphia Pattern, Lathing Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

No.	**570**
Weight, each, without Handle	10 oz.
Per Dozen	**$14.00**

Packed—Half Dozen in a Box.

UNDERHILL PATTERN

Nos. 1960 and 1961.

Buhl Extra, Underhill Pattern, Lathing Hatchets

Solid Cast Steel, Full Polished and Deep Etched.

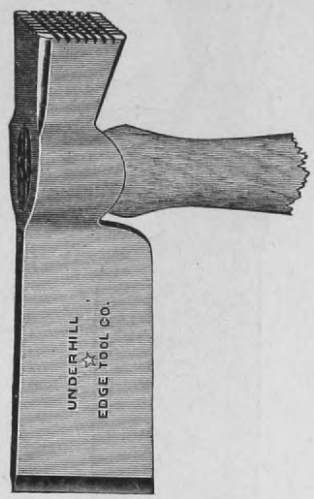
Nos.	**1960**	**1961**
Weight, each, without Handle	13 oz.	15 oz.
Per Dozen	$16.00	16.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UNDERHILL STAR LATHING HATCHETS

REGULAR PATTERN.



No. 20.

BOSTON PATTERN.

No. 30.

Underhill Star Lathing Hatchets are made of solid Crucible Steel. Perfectly Tempered. They hold a keen edge, are light, strong and correctly balanced. Designed for Rapid Work.

Regular Pattern.

No. 20—Square Poll, Cut 2 inches, Weight including Handle, 1 pound, 3 ounces, Milled Head, **64 points,** 8 points each way.....Per Dozen, $16.00

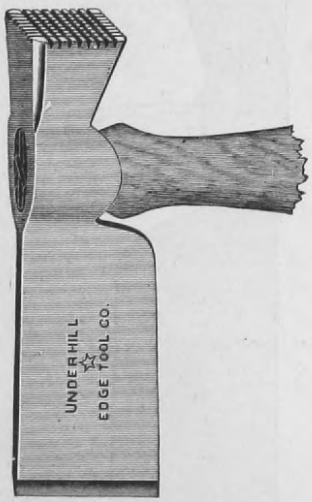
Packed—Half Dozen in a Box.

Boston Pattern.

No. 30—Bell Poll, Cut 2 inches, Weight including Handle, 1 pound, 3 ounces, Milled Head, **64 points,** 8 points each way.....Per Dozen, $16.00

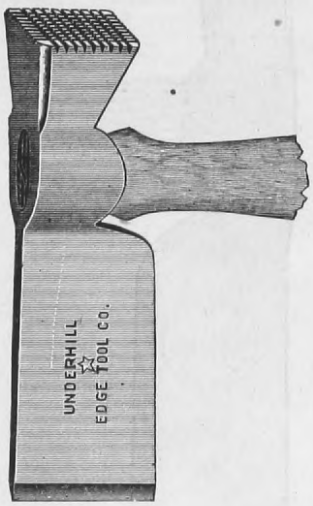
Packed—Half Dozen in a Box.

CHICAGO PATTERN.



No. 40.

ST. LOUIS PATTERN.



No. 50.

Underhill Star Lathing Hatchets are made of solid Crucible Steel. Perfectly Tempered. They hold a keen edge, are light, strong and correctly balanced. Designed for Rapid Work.

Chicago Pattern.

No. 40—Square Poll, Cut 2 inches, Weight including Handle, 1 pound, 4 ounces, Milled Head, **81 points,** 9 points each way.....Per Dozen, $16.50

Packed—Half Dozen in a Box.

St. Louis Pattern.

No. 50—Square Poll, Cut 2 inches, Weight including Handle, 1 pound, 5 ounces, Milled Head, **100 points,** 10 points each way.....Per Dozen, $17.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PRODUCE HATCHETS

No. 3005.

Plumb's Pattern Produce Hatchets

With Slot in Bit, Solid Cast Steel, Painted Red, Polished Blade and Poll.

No. 3005—Weight without Handle 12 ounces, 2⅛ inch Bit....Per Dozen, $10.00

Packed—Half Dozen in a Box.

COOPER'S ADZES

No. 80.

Applewood Handles, bolted through Handle. Sizes 1 and 1½ are for use on tight barrels, and size 2 is for use on flour barrels.

No. 80—

Size Nos.	1	1½	2
Cut, inches.	3¼	3	2¾
Per Dozen.	$30.00	28.50	27.00

Packed—One-Twelfth Dozen in a Package.

BARREL HATCHETS

No. 634.

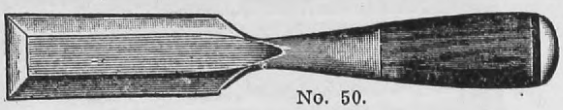
Plumb's Improved Pattern Barrel Hatchets

With Slot in Bit. Solid Cast Steel, Painted Blue, Polished Blades and Poll.

No. 634—Size No. 2-0, Weight without Handle 10 ounces, 2⅛ inch Bit .....Per Dozen, $9.50

Packed—Half Dozen in a Box.

STANLEY EVERLASTING BUTT CHISELS



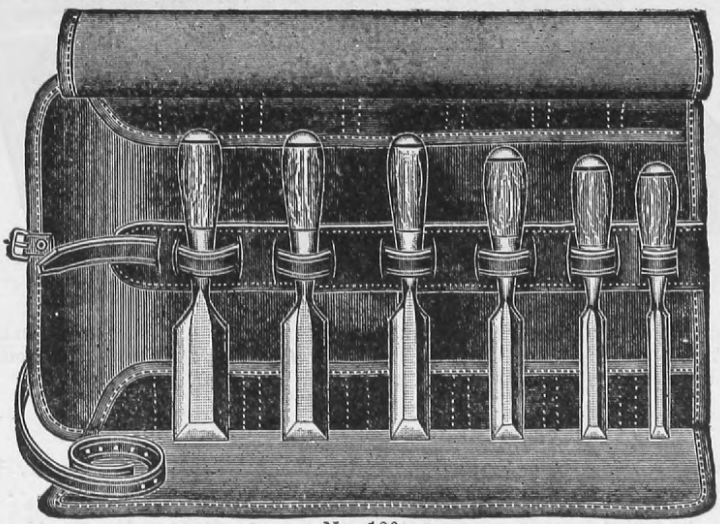
No. 50.

The Blade, Shank and Head are one piece of Solid Steel. Handles are made of selected hickory, strongly ferruled. A leather washer is placed between the head and the handle which acts as a cushion, relieving the handle from shock and preventing same from splitting. Blade has bevel edges.

Width, Blade, inches.....	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Length, Blade, inches.....	3	3	3	3	3	3	3	3	3	3	3	3
Length over all, inches.....	8	8	8	8	8	8	8	8	9	9	9	9
No. 50—Per Dozen.....	$7.50	7.75	8.20	8.65	9.35	9.80	10.75	11.30	12.45	13.60	14.80	16.25

Packed—Half Dozen in a Box.

EVERLASTING BUTT CHISEL SETS



No. 120.

Rolls are made of a good grade of canvas, edges trimmed with leather and strongly sewed. Weight per set 3¼ lbs.

No. 120—Set contains 6 Bevel Edge Butt Chisels, one each ¼, ½, ¾, 1, 1¼ and 1½"....Per Set, $6.40

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SOCKET FIRMER CHISELS

PLAIN EDGE

Buhl Plain Edge Socket Firmer Chisels, Solid Bar Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, 6½ inch Blades. High Grade, **Leather Tip,** Rosewood Stained, Polished Hickory Handles. Each tool sharpened ready for use.

No. 100—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen.....	$14.00	14.00	14.00	14.00	15.50	16.00	18.00	18.50	20.50	22.00	24.00	25.00

Packed—Half Dozen in a Box.

BEVEL EDGE

Buhl Bevel Edge Socket Firmer Chisels, Solid Bar, Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, 6½ inch Blades. High Grade, **Leather Tip,** Rosewood Stained, Polished Hickory Handles. Each tool sharpened ready for use.

No. 101—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen.....	$18.00	18.00	18.00	18.00	19.50	20.00	22.00	22.50	24.50	26.00	28.00	29.00

Packed—Half Dozen in a Box.

PLAIN AND BEVEL EDGE SETS IN FANCY BOX

Buhl Plain and Bevel Edge Socket Firmer Chisels, Solid Bar Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, 6½ inch Blades. High Grade, **Leather Tip,** Rosewood Stained, Polished Hickory Handles. Each tool sharpened ready for use.

In Fancy Hardwood Hinged Cover Boxes

No. 140—Plain Edge, Sets of 12, Assorted ⅛ to 2 inch, one each, ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inch.....Per Set, $22.50

No. 141—Bevel Edge, Sets of 12, Assorted ⅛ to 2 inch, one each, ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inch.....Per Set, 26.50

Packed—Each Set in a Fancy Hardwood Hinged Cover Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SOCKET FIRMER CHISELS

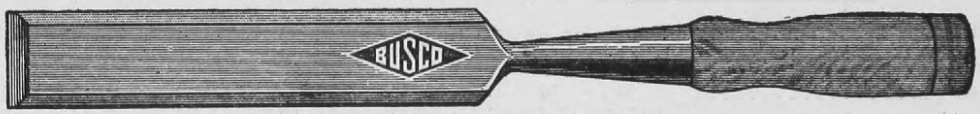
PLAIN EDGE

Busco Plain Edge Socket Firmer Chisels, Solid Bar Extra Crucible Cast Steel, Polished, 6½ inch Blades.
Selected, **Leather Tip,** Polished Hickory Handles.

No. 300—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen.....	$14.00	14.00	14.00	14.00	15.50	16.00	18.00	18.50	20.50	22.00	24.00	25.00

Packed—Half Dozen in a Box.

BEVEL EDGE

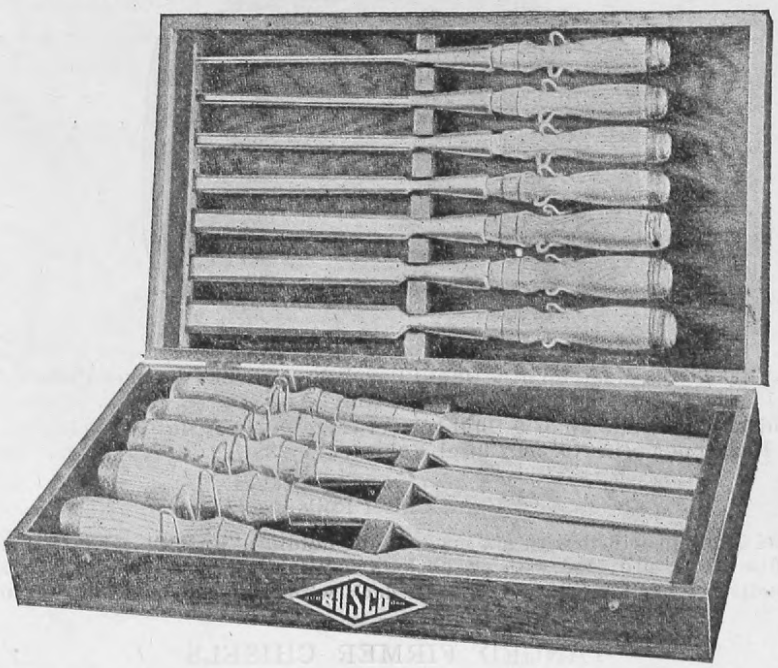


Busco Bevel Edge Socket Firmer Chisels, Solid Bar Extra Crucible Cast Steel, Polished, 6½ inch Blades.
Selected, **Leather Tip,** Polished Hickory Handles.

No. 301—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen.....	$18.00	18.00	18.00	18.00	19.50	20.00	22.00	22.50	24.50	26.00	28.00	29.00

Packed—Half Dozen in a Box.

PLAIN AND BEVEL EDGE SETS IN FANCY BOX



Busco Plain and Bevel Edge Socket Firmer Chisels, Solid Bar Extra Crucible Cast Steel, Polished, 6½ inch Blades.
Selected, **Leather Tip,** Polished Hickory Handles.

In Fancy Hardwood Hinged Cover Boxes.

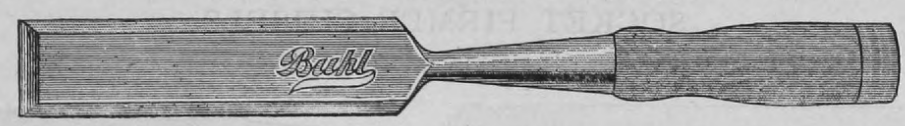
No. 340—Plain Edge, Sets of 12, Assorted ⅛ to 2 inch, one each, ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inch.....Per Set, $22.50

No. 341—Bevel Edge, Sets of 12, Assorted ⅛ to 2 inch, one each, ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inch.....Per Set, 26.50

Packed—Each Set in a Fancy Hardwood Hinged Cover Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SOCKET POCKET CHISELS

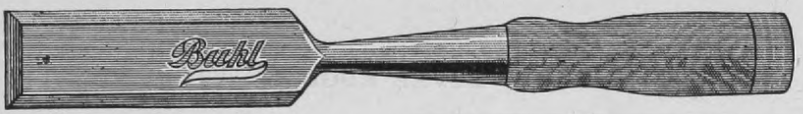


Buhl "Bevel Edge" Socket Pocket Chisels, Solid Bar Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, **5 inch Blades.** High Grade, **Leather Tip,** Rosewood Stained, Polished Hickory Handles. Each Tool sharpened ready for use.

No. 103—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$17.50	17.50	17.50	17.50	19.00	19.50	21.50	22.00	24.00	25.50	27.50	28.50

Packed—Half Dozen in a Box.

SOCKET BUTT CHISELS

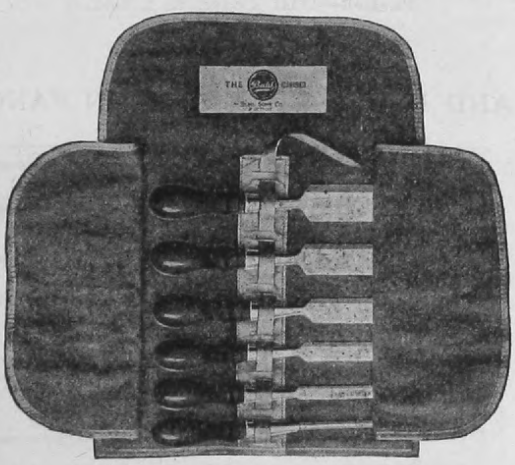


Buhl "Bevel Edge" Socket Butt Chisels, Solid Bar Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, **3½ inch Blades.** High Grade, **Leather Tip,** Rosewood Stained, Polished Hardwood Handles. Each Tool sharpened ready for use.

No. 105—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$17.50	17.50	17.50	17.50	19.00	19.50	21.50	22.00	24.00	25.50	27.50	28.50

Packed—Half Dozen in a Box.

POCKET AND BUTT CHISEL SETS IN ROLLS



Nos. 1036 and 1056.

No. 1036—Buhl **Pocket** Chisel Sets, Made up of 6 Buhl "Bevel Edge" Socket Pocket Chisels No. 103, Size ¼, ½, ¾, 1, 1¼ and 1½ Inch, put up in No. 36 Chisel Roll ..... Per Set, $14.00

No. 1056—Buhl **Butt** Chisel Sets, Made up of 6 Buhl "Bevel Edge" Socket Butt Chisels No. 105, Size ¼, ½, ¾, 1, 1¼ and 1½ Inch, put up in No. 56 Chisel Roll ..... Per Set, 12.70

Extra Chisel Rolls

No. 56—Buhl **Butt** Chisel Rolls provided with six pockets for holding "Butt Chisels" ..... Each, $2.20

No. 36—Buhl **Pocket** Chisel Rolls provided with six pockets for holding "Pocket Chisels" ..... Each, 3.50

Note.—These Chisel Rolls are made from heavy brown duck with tan leather binding around edges and good grade leather strap.

TANGED FIRMER CHISELS

Busco Tanged Firmer Chisels, Solid Bar Extra Crucible Cast Steel Blades, Polished. Selected, **Leather Tip,** Polished Hickory Handles. **Length** of 1 inch Blade 4½ inches.

No. 310—Inches	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$4.25	4.25	4.25	4.50	4.75	5.00	6.00	6.25	7.75	9.25	10.75	12.25

Packed—Half Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SOCKET FRAMING CHISELS

Buhl "Plain Edge" Socket Framing Chisels, Solid Bar **Extra** Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, **8 inch Blades,** High Grade Rosewood Stained Polished Hickory Handles with **Iron Rings.** These Chisels are stiff and strong, fast cutters and well adapted to light or heavy work. Each Tool sharpened ready for use.

No. 106—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$13.00	13.00	13.00	13.50	14.00	16.00	17.00	18.00	19.00	20.50	22.00

Packed—Half Dozen in a Box.

Buhl "Bevel Edge" Socket Framing Chisels, Solid Bar Extra Crucible Cast Steel, Extra Fine Quality, Highly Polished and Distinctly Attractive, **8 inch Blades,** High Grade Rosewood Stained Polished Hickory Handles with **Iron Rings.** These Chisels are stiff and strong, fast cutters and well adapted to light or heavy work. Each Tool sharpened ready for use.

No. 107—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$15.50	15.50	15.50	16.00	16.50	18.50	19.50	20.50	21.50	23.00	24.50

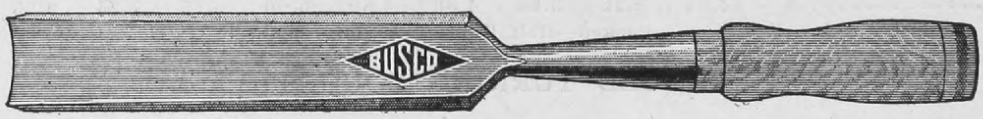
Packed—Half Dozen in a Box.

Busco Plain Edge Socket Framing Chisels, Solid Bar Extra Crucible Cast Steel, Polished, **8 inch Blades,** Selected Polished Hickory Handles with **Iron Rings.** These Chisels are stiff and strong, fast cutters and well adapted to light or heavy work.

No. 306—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$9.00	9.00	9.00	9.50	10.00	10.50	11.00	12.00	13.00	14.50	16.00

Packed—Half Dozen in a Box.

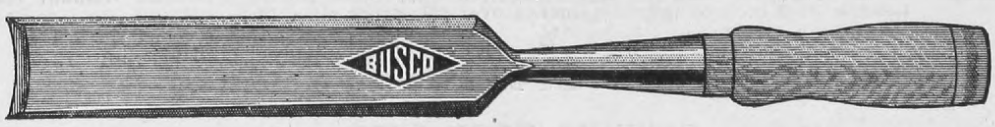
SOCKET FIRMER GOUGES



Busco Socket Firmer Gouges, **"Outside Bevel,"** Solid Bar Extra Crucible Cast Steel Blades, Polished, Selected **Leather Tip** Polished Hickory Handles. **Length** of 1 inch Blade 6¼ inches.

No. 316—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$10.50	10.50	11.00	11.50	12.25	13.25	14.00	15.50	17.25	18.75	21.25

Packed—Half Dozen in a Box.



Busco Socket Firmer Gouges, **"Inside Bevel,"** Solid Bar Extra Crucible Cast Steel Blades, Polished, Selected **Leather Tip** Polished Hickory Handles. **Length** of 1 inch Blade 4½ inches.

No. 318—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$10.50	10.50	11.00	11.50	12.25	13.25	14.00	15.50	17.25	18.75	21.25

Packed—Half Dozen in a Box.

TANGED FIRMER GOUGES

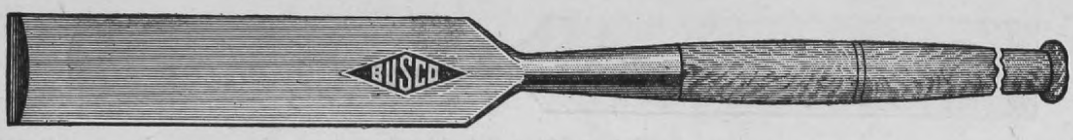
Busco Tanged Firmer Gouges, **"Outside Bevel,"** Solid Bar Extra Crucible Cast Steel Blades, Polished, Selected **Leather Tip** Polished Hickory Handles. **Length** of 1 inch Blade 4½ inches.

No. 320—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$4.50	4.50	5.00	5.25	5.75	6.75	7.00	8.75	10.25	12.00	14.25

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTERS' SOCKET SLICKS



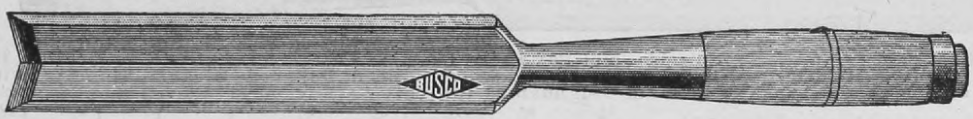
No. 322.

Busco Carpenters' Socket Slicks, Solid Bar Extra Crucible Cast Steel Blades, Polished, Selected Polished Hickory Handles. **Length** of 3 inch Blade 10 inches.

No. 322—Inches	2½	2¾	3	3¼	3½
Per Dozen	$21.00	23.50	23.50	25.50	27.50

Packed—One-Sixth Dozen in a Package.

SOCKET CORNER CHISELS



Busco Socket Corner Chisels, Solid Bar Extra Crucible Cast Steel Blades, Polished, Selected Polished Hickory Handles with **Iron Rings. Length** of 1 inch blade 8¼ inches.

No. 308—Inches	¾	⅞	1	1⅛	1¼
Per Dozen	$16.00	17.00	18.25	19.00	20.25

Packed—Half Dozen in a Box.

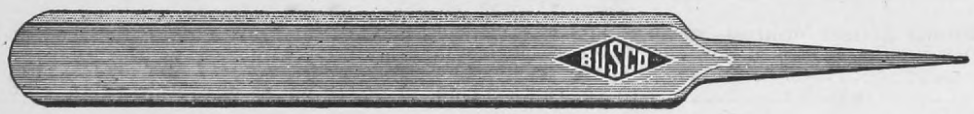
TANGED TURNING CHISELS

Busco Tanged Turning Chisels, Solid Bar Extra Crucible Cast Steel Blades, Polished, **without** Handles. **Length** of 1 inch Chisel, 11½ inches over all; other sizes in proportion.

No. 312—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$3.25	3.25	3.60	4.00	4.50	5.00	5.75	7.25	9.25	11.25	13.25

Packed—Half Dozen in a Box.

TANGED TURNING GOUGES



Busco Tanged Turning Gouges, Solid Bar Extra Crucible Cast Steel Blades, Polished, **without** Handles. **Length** of 1 inch Gouge, 11½ inches over all; other sizes in proportion.

No. 314—Inches	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen	$4.25	4.25	4.75	5.25	6.00	7.00	8.00	10.00	13.00	15.50	19.00

Packed—Half Dozen in a Box.

CARVING TOOL SETS

No. 1.

These Tools are forged from the best quality of Steel and fully warranted. They have Rosewood Handles and are sharpened ready for use.

No. 1—Carving Tool Sets. Six Tools in a Wooden Box.....Per Dozen Sets, $24.00

Packed—One Set in a Box. Each Box in a Separate Package.

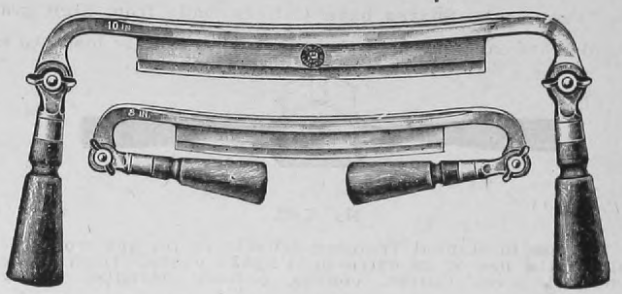
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTERS' DRAWING KNIVES

Perfect Handle Carpenters' Razor Blade Drawing Knives, Solid Crucible Steel Blade, Inlaid Wood Handles.

No. 619—Inches	8	10	12
Per Dozen	$16.00	18.00	20.00

Packed—Half Dozen in a Box.



P. S. & W. Co. Folding Handle Carpenters' Drawing Knives. Best Cast Steel and Norway Iron, Polished.

No. 10—Inches	8	9	10
Per Dozen	$28.50	30.00	32.25

Packed—Half Dozen in a Box.

No. 330.

"Busco" Carpenters' Razor Blade Drawing Knives, Best Cast Steel, Handles Capped and Ferruled.

No. 330—Inches	6	7	8	9	10	12	14
Per Dozen	$13.50	13.50	13.50	14.40	15.60	18.00	21.00

Packed—Half Dozen in a Box.

PONY DRAWING KNIFE

No. 4.

The Pony Drawing Knife is especially adapted for Manual Training work. Made from special Crucible Steel and Norway Iron, full polished Blade with round ebonized handles fitted with heavy ferrules.

No. 4—Pony Drawing Knife, length over all 10¼ inches, Blade 4 inches long, ¾ inch wide.....Per Dozen, $5.00

Packed—Half Dozen in a Box.

HOOP AND HEADING SHAVES

No. 82.

Heavy Blades, Polished Walnut Handles; 8 inch Blades are 1¾ inches wide; 9 to 12 inch Blades are 2¼ inches wide and beveled on face side; 14 inch Blades are 2½ inches wide and flat on face side.

No. 82—Heading Shaves—Net List	Length, inches	8	9	10	12	14
	Width of Blade, inches.....	1¾	2¼	2¼	2¼	2½
	Per Dozen	$16.00	17.50	18.50	22.50	26.50

Packed—Quarter Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IRON SPOKE SHAVES

These Spoke Shaves have Cutters made from high grade Steel, well tempered and sharpened ready for use. The Handles are japanned and through each a hole is made to enable the owner to hang the tool up out of the way.

No. X-63.

For use in Manual Training Schools, or for any work requiring the use of an extra light spoke shave. High grade tempered Steel Cutter, convex bottom. Handles neatly japanned.

No. X-63—9 inch, 1½ inch Cutter, Straight Handles ..... Per Dozen $3.00

Packed—Half Dozen in a Box.

No. 52.

No. 52—10 inch, Double Iron, 2⅛ inch Cutter, Straight Handles ..... Per Dozen $3.50

Extra Cutters ..... Per Dozen 1.00

Packed—Half Dozen in a Box.

No. 54.

No. 54—10 inch, Adjustable Cap, 2⅛ inch Cutter, Straight Handles ..... Per Dozen $4.50

Extra Cutters ..... Per Dozen 1.00

Packed—Half Dozen in a Box.

No. 68.

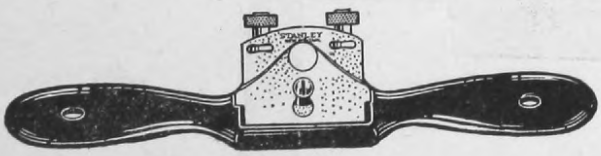
For workmen on Automobile and Coach bodies, Carriage Makers, Car Builders and Cabinet Makers.

No. 68—10¾ inch, 2⅛ inch Cutter, Straight Handles ..... Per Dozen $12.00

Extra Cutters ..... Per Dozen .....

Packed—One-twelfth Dozen in a Box.

STANLEY ADJUSTABLE SPOKE SHAVES



No. 152.

Made so that the cutter can be quickly adjusted both sidewise and endwise by means of adjusting screws.

No. 152—10 inch, 2⅛ inch cutter, straight Handles ..... Per Dozen, $6.00

Extra Cutters ..... Per Dozen, ...

Packed—Half Dozen in a Box.

No. 58.

No. 58—10 inch, 2⅛ inch Cutter, Straight Handles ..... Per Dozen, $3.00

Extra Cutters ..... Per Dozen 1.00

Packed—Half Dozen in a Box.

No. 53.

No. 53—10 inch, Adjustable Cap, 2⅛ inch Cutter, Raised Handles ..... Per Dozen $4.50

Extra Cutters ..... Per Dozen 1.00

Packed—Half Dozen in a Box.

No. 60.

No. 60—10 inch, 1½ inch Double Cutter, Straight and Hollow, Straight Handles, ... Per Dozen $4.50

Extra Cutters ..... Per Dozen 1.00

Packed—Half Dozen in a Box.

No. 82.

Razor Edge, Hollow Ground Cutters, cuts coarse or fine shavings. Adjustable Front can be moved up or down, giving the same effect as if the Cutter was raised or lowered. Cutters are also adjustable.

No. 82—12 inches long, 2½ inch Cutter, Raised Rosewood Handles ..... Per Dozen $18.00

Extra Cutters ..... Per Dozen 6.00

Packed—One-twelfth Dozen in a Box.

HARGRAVE SPOKE SHAVES

No. 5.

Hargrave Spoke Shaves

Gray Iron, Japanned and Polished, Hardwood Handles. Nickel Ferrules, Solid Cap and Throat.

No. 5—With 2 inch "Convex" Cutters ..... Per Dozen $8.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GOODELL'S SPOKE SHAVES

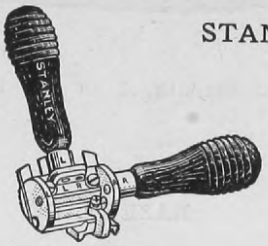
No. 1.

The circular shape of this Tool enables it to work in smaller circles than other Shaves. The angle of the knife is such that it cuts instead of scraping the grain of the wood. Either handle can be removed to work in cramped places.

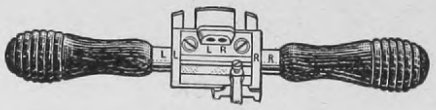
No. 1—Polished and Nickel Plated Metal Parts, Cocobola Handles.....Per Dozen, $9.00

Packed—Half Dozen in a Box.

STANLEY UNIVERSAL SPOKE SHAVES



No. 67.



No. 67.

One Handle has a right and the other a left hand thread, and the proper Sockets to receive them are threaded accordingly, thus preventing any possibility of the Handles working loose when the Tool is in use. The Handles as well as the Sockets in which they belong are lettered to avoid mistakes. Both Handles are detachable and either one can be screwed into the top of the Stock, thus enabling the user to work into corners or panels. Two detachable Bottoms are furnished, one for straight and the other for circular work. A movable Width Gauge allows the Tool to be used in rabbeting.

No. 67—9¼ inches, 1⅞ inch Cutter, Nickel Plated, Rose wood Handles.....Per Dozen, $18.00

Packed—One-twelfth Dozen in a Box.

CEDAR SPUDS

No. 41.

For peeling cedar poles or posts quickly and easily. The blade is forged from special tool steel and has a finely ground and tempered cutting edge.

No. 41—With 4 foot Maple Handles, Cutting Edge, 5½ inches wide.....Per Dozen, $22.50

Packed—One-twelfth Dozen in a Box.

BARK SPUDS

No. 53.

No. 53—Best Cast Steel, Hickory Handles.....Per Dozen, $12.00

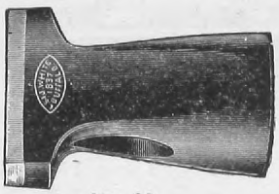
Packed—One Twelfth Dozen in a Box.

COOPERS' DRIVERS

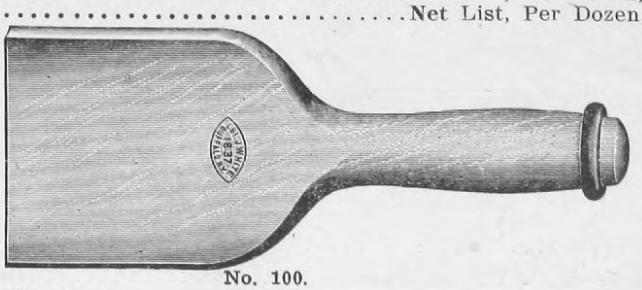
No. 97.

No. 97—Coopers' Socket Drivers, Superior Quality Steel, highly tempered, Hickory Handles.....
.....Net List, Per Dozen, $11.25

Extra Handles for above.....Net List, Per Dozen, 2.00



No. 99.



No. 100.

Net List

No. 99—Cooper's Short Oval Drivers, Superior Quality Steel, highly tempered, **without** Handles..Per Dozen, $11.25

Extra Handles for No. 99 Drivers.....Per Dozen, 2.00

No. 100—Coopers' Hickory Drivers, not Finished, with Wrought Iron Rings.....Per Dozen, 3.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WOOD BENCH PLANES

SMOOTH

No. 3.

Extra Cast Steel Cutters, with Lignum-Vitæ Starts.

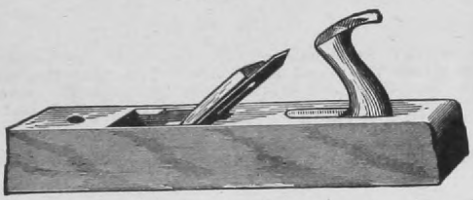
HANDLED SMOOTH

No. 5.

No. 3—Smooth, 1¾ to 2 inch Double Iron..Each, $0.90

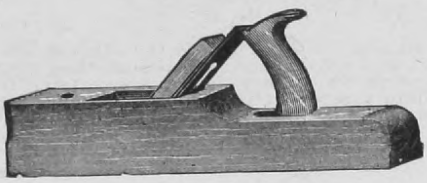
No. 5—Handled Smooth, 2 to 2¼ inch Double Iron .....Each, $1.75

JACK



No. 13.

RAZEE JACK

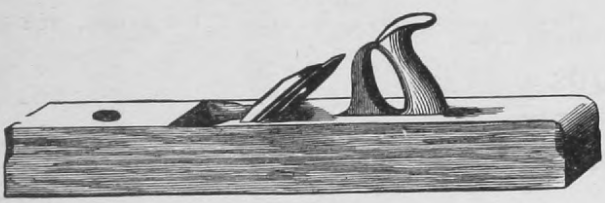


No. 15.

No. 13—Jack, 2 to 2¼ inch Double Iron...Each, $1.00

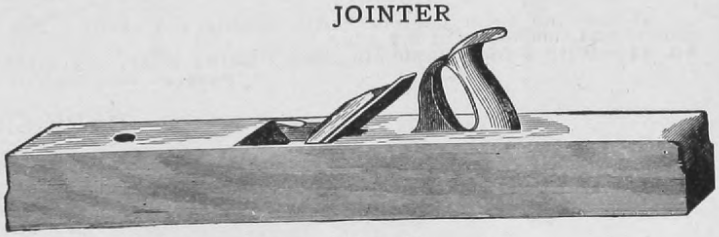
No. 15—Razee Jack, 2 to 2¼ inch Double Iron ..... Each, $1.20

FORE



No. 19.

JOINTER



No. 25.

Fore Planes, with 2⅜ and 2½ inch Double Irons.

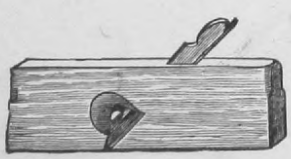
No. 19	Inches	22	
	Each	$1.70	

Jointer Planes, with 2½ and 2¾ inch Double Irons.

No. 25	Inches	26	28	30
	Each	$1.80	1.90	2.15

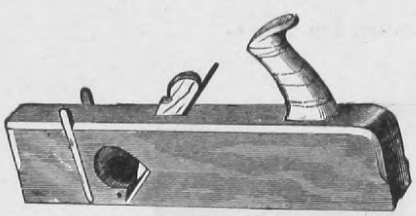
FANCY WOOD PLANES

SKEW RABBET



No. 146.

JACK RABBET



No. 149.

Inches	½	¾	1	1¼	1½	1¾	2
No. 146 —Skew Rabbet Planes.....Each,	$0.60	.60	.60	.65	.70	.80	.90
No. 149 —Jack Rabbet, Skew, Two Cutters, Handled.....Each,	....	....	....	1.70	1.70	1.70	1.70
No. 149½—Jack Rabbet, Skew, Two Cutters, Side Handle..Each,	....	....	....	1.90	1.90	1.90	1.90

Packed—Entire Page—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FANCY WOOD PLANES

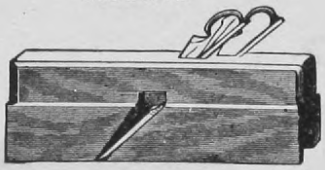
BOARD MATCH

No. 100.

No. 100—Board Match Planes, Twin or Separate, Plated { 7/8 inch.....Per Pair, $1.75
1 inch.....Per Pair, 1.75

Packed—One Pair in a Package.

NOSING



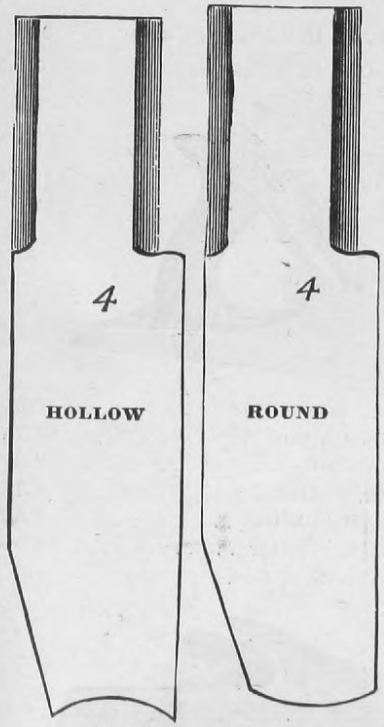
No. 113.

With Two Irons

No. 113	Inches	¾	⅞	1	1⅛	1¼
	Each	$1.10	1.10	1.10	1.10	1.10

Packed—Each Separately.

HOLLOWS AND ROUNDS

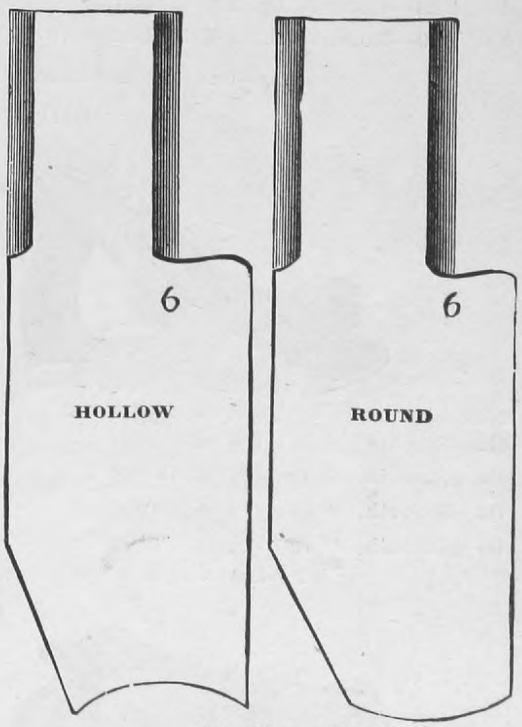


One Pair. No. 4.

One Set. No. 92.

In ordering Separate Planes, state plainly whether the Hollow or Round Plane is wanted.

The Round Plane cuts the hollow.
The Hollow Plane cuts the round.



One Pair. No. 6.

No. 92—Size Nos.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**9**
Inches	¼	⅜	½	⅝	¾	⅞	1	1¼
Per Pair	$1.00	1.00	1.00	1.00	1.00	1.00	1.15	1.15

No. 94—Size No.	**11**
Inches	1½
Per Pair	$1.35

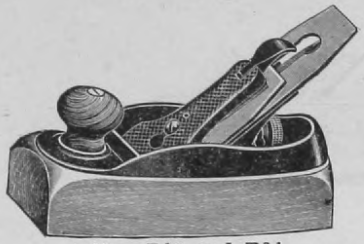
No. 92—In Sets of Nine Pairs, Assorted from Nos. 1 to 9 inclusive .....Per Set, $9.45

Packed—One Pair or One Set in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL ADJUSTABLE WOOD PLANES

SMOOTH

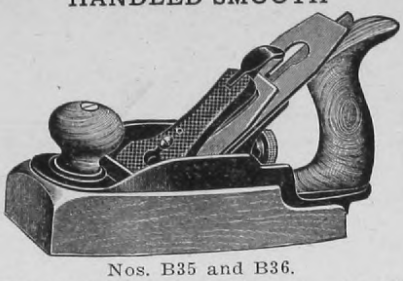


Nos. B22 and B24.

	Each
No. B22—Smooth, 8 in., 1¾ in. Cutter	$2.00
No. B24—Smooth, 8 in., 2 in. Cutter	2.00

Packed—One in a Box.

HANDLED SMOOTH

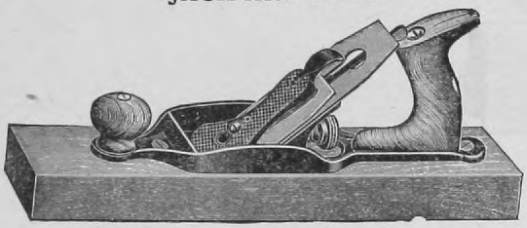


Nos. B35 and B36.

	Each
No. B35—Handled Smooth, 9 in., 2 in. Cutter	$2.50
No. B36—Handled Smooth, 10 in., 2⅜ in. Cutter	2.75

Packed—One in a Box.

JACK AND FORE

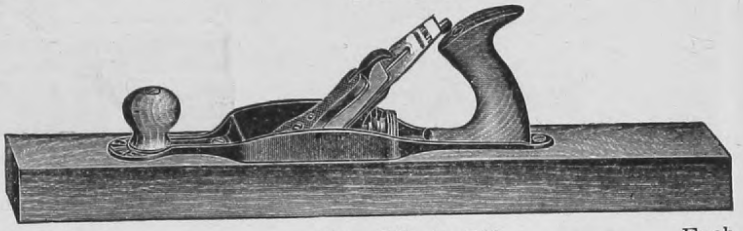


Nos. B26 to B29.

	Each
No. B26—Jack, 15 in., 2 in. Cutter	$2.25
No. B27—Jack, 15 in., 2⅛ in. Cutter	2.50
No. B27½ Jack, 15 in., 2¼ in. Cutter	2.50
No. B28—Fore, 18 in., 2⅜ in. Cutter	2.75
No. B29—Fore, 20 in., 2⅜ in. Cutter	2.75

Packed—One in a Package.

JOINTER



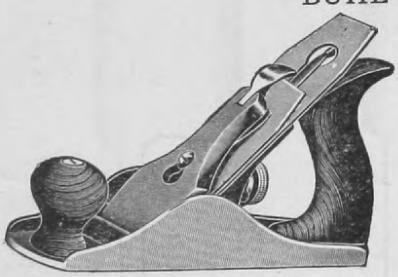
Nos. B30 to B33.

	Each
No. B30—Jointer Plane, 22 in., 2⅜ in. Cutter	$3.00
No. B31—Jointer Plane, 24 in., 2⅜ in. Cutter	3.00
No. B32—Jointer Plane, 26 in., 2⅝ in. Cutter	3.25
No. B33—Jointer Plane, 28 in., 2⅝ in. Cutter	3.25

Packed—One in a Package.

BUHL ADJUSTABLE IRON PLANES

FLAT BOTTOM



Nos. B2 to B4½.

Nos.	Each
B2—Smooth, 7 in., 1⅝ in. Cutter	$2.75
B3—Smooth, 8 in., 1¾ in. Cutter	3.00
B4—Smooth, 9 in., 2 in. Cutter	3.25
B4½ Smooth, 10 in., 2⅜ in. Cutter	3.75

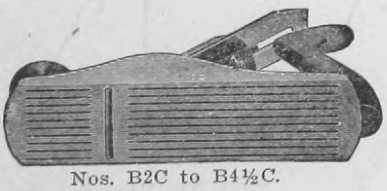
Packed—One in a Box.

Nos. B5 to B8.

Nos.	Each
B5—Jack, 14 in., 2 in. Cutter	$3.75
B5½ Jack, 15 in., 2¼ in. Cutter	4.25
B6—Fore, 18 in., 2⅜ in. Cutter	4.75
B7—Jointer, 22 in., 2⅜ in. Cutter	5.50
B8—Jointer, 24 in., 2⅝ in. Cutter	6.50

Packed—One in a Box.

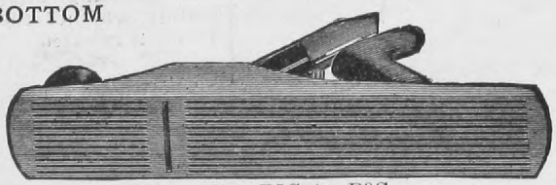
CORRUGATED BOTTOM



Nos. B2C to B4½C.

Nos.	Each
B2C—Smooth, 7 in., 1⅝ in. Cutter	$2.75
B3C—Smooth, 8 in., 1¾ in. Cutter	3.00
B4C—Smooth, 9 in., 2 in. Cutter	3.25
B4½C Smooth, 10 in., 2⅜ in. Cutter	3.75

Packed—One in a Box.



Nos. B5C to B8C.

Nos.	Each
B5C—Jack, 14 in., 2 in. Cutter	$3.75
B5½C Jack, 15 in., 2¼ in. Cutter	4.25
B6C—Fore, 18 in., 2⅜ in. Cutter	4.75
B7C—Jointer, 22 in., 2⅜ in. Cutter	5.50
B8C—Jointer, 24 in., 2⅝ in. Cutter	6.50

Packed—One in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BUHL BLOCK PLANES

No. B101.

Non-Adjustable, Japanned Trimmings.

	Each
No. B101—3½ inches long, 1 inch Cutter.....	$0.25

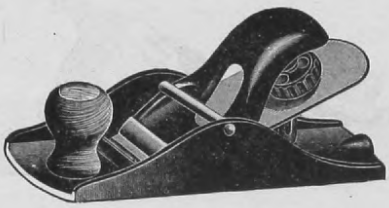
Packed—One in a Box.

No. B102.

Non-Adjustable, Japanned Trimmings.

	Each
No. B102—5½ inches long, 1¼ inch Cutter.....	$0.55

Packed—One in a Box.

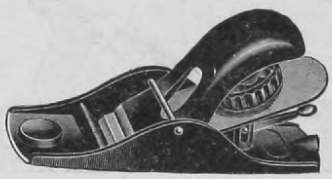


No. B110.

Non-Adjustable, Japanned Trimmings, Black Wood Knob.

	Each
No. B110—7½ inches long, 1¾ inch Cutter.....	$0.70

Packed—One in a Box.

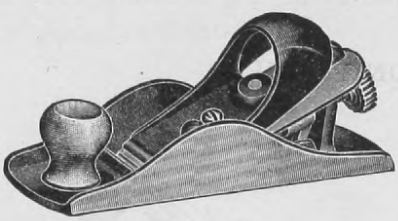


No. B103.

Lever Adjustment, Japanned Trimmings. For light work.

	Each
No. B103—5½ inches long, 1¼ inch Cutter....	$0.70

Packed—One in a Box.

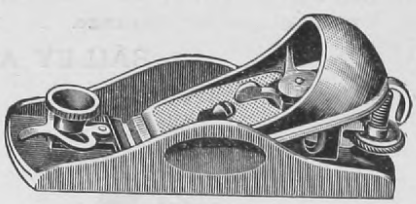


No. B220.

Screw Adjustment, Japanned Trimmings, Rosewood Knob. The Cutter is fastened by a Lever and Cam and is adjustable lengthwise.

	Each
No. B220—7½ inches long, 1¾ inch Cutter.....$0.95

Packed—One in a Box.



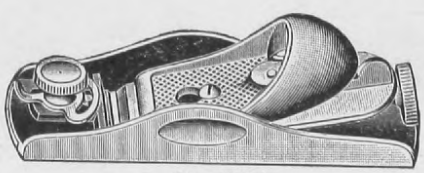
Nos. B9½ and B15.

Adjustable, Japanned Trimmings, and as otherwise described below.

	Each
No. B9½—6 inches long, 1¾ inch Cutter.....$1.60	
No. B15 —7 inches long, 1¾ inch Cutter..... 1.70	

Packed—One in a Box.

Note.—Nos. B9½, B1500, B6500 and B1800 Planes have Cutters adjustable both lengthwise and laterally, as well as Adjustable Throats. The "Handy" feature on the sides form a convenient grip for the hand and gives a feeling of security to the workman.

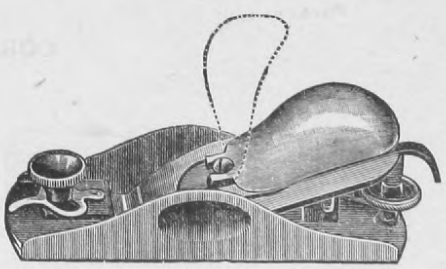


No. B65.

Adjustable Low Angle Block Plane, Nickel Trimmings. The Cutter in this Plane is set at a very low angle, which is a great advantage in working across the grain.

	Each
No. B65—7 inches long, 1¾ inch Cutter.....$1.85

Packed—One in a Box.



No. B18.

Knuckle Joint, Nickel Trimmings. The Knuckle Joint in the cap of this Plane makes it a lever, too; and, placing the cap in position, will also clamp the Cutter in its seat.

	Each
No. B18—6 inches long, 1¾ inch Cutter.....$1.85

Packed—One in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BAILEY ADJUSTABLE WOOD PLANES

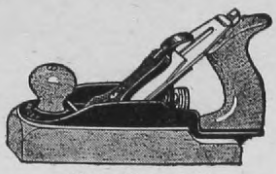
SMOOTH

Nos. 22 and 24.

Nos.		Each
22	—Smooth, 8 inch, 1¾ inch Cutter	$1.50
24	—Smooth, 8 inch, 2 inch Cutter	1.50

Packed—One in a Box.

HANDLED SMOOTH

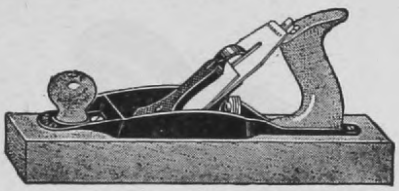


Nos. 35 and 36.

Nos.		Each
35	—Handled Smooth, 9 in., 2 in. Cutter	$1.90
36	—Handled Smooth, 10 in., 2⅜ in. Cutter	2.05

Packed—One in a Box.

JACK AND FORE

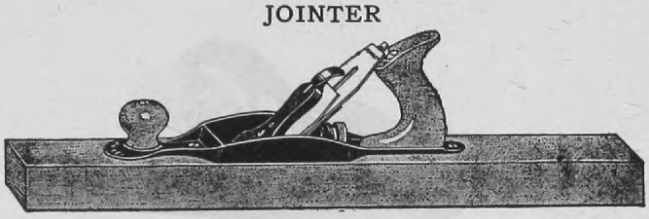


Nos. 26 to 29.

Nos.		Each
26	—Jack, 15 in., 2 in. Cutter	$1.65
27	—Jack, 15 in., 2⅛ in. Cutter	1.90
27½	Jack, 15 in., 2¼ in. Cutter	1.95
28	—Fore, 18 in., 2⅜ in. Cutter	2.05
29	—Fore, 20 in., 2⅜ in. Cutter	2.10

Packed—One in a Package.

JOINTER



Nos. 30 to 33.

Nos.		Each
30	—Jointer, 22 in., 2⅜ in. Cutter	$2.20
31	—Jointer, 24 in., 2⅜ in. Cutter	2.25
32	—Jointer, 26 in., 2⅝ in. Cutter	2.40
33	—Jointer, 28 in., 2⅝ in. Cutter	2.45

Packed—One in a Package.

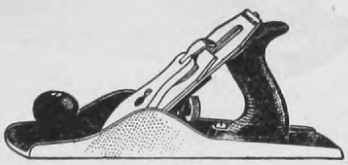
BAILEY ADJUSTABLE IRON PLANES

FLAT BOTTOM

Nos. 2 to 4½.

Nos.		Each
2	— Smooth, 7 in., 1⅝ in. Cutter	$2.00
3	— Smooth, 8 in., 1¾ in. Cutter	2.10
4	— Smooth, 9 in., 2 in. Cutter	2.20
4½	. Smooth, 10 in., 2⅜ in. Cutter	2.50

Packed—One in a Box.

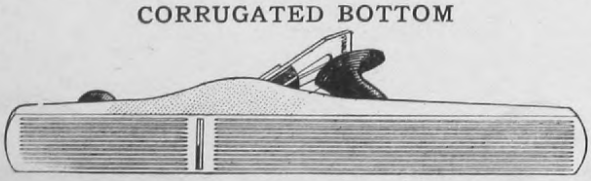


Nos. 5 to 8.

Nos.		Each
5	— Jack, 14 in., 2 in. Cutter	$2.50
5½	. Jack, 15 in., 2¼ in. Cutter	3.00
6	— Fore, 18 in., 2⅜ in. Cutter	3.25
7	— Jointer, 22 in., 2⅜ in. Cutter	3.75
8	— Jointer, 24 in., 2⅝ in. Cutter	4.50

Packed—One in a Box.

CORRUGATED BOTTOM



Nos.		Each
2C	— Smooth, 7 in., 1⅝ in. Cutter	$2.00
3C	— Smooth, 8 in., 1¾ in. Cutter	2.10
4C	— Smooth, 9 in., 2 in. Cutter	2.20
4½C	. Smooth, 10 in., 2⅜ in. Cutter	2.50

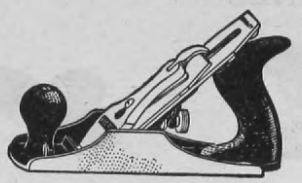
Packed—One in a Box.

Nos.		Each
5C	— Jack, 14 in., 2 in. Cutter	$2.50
5½C	. Jack, 15 in., 2¼ in. Cutter	3.00
6C	— Fore, 18 in., 2⅜ in. Cutter	3.25
7C	— Jointer, 22 in., 2⅜ in. Cutter	3.75
8C	— Jointer, 24 in., 2⅝ in. Cutter	4.50

Packed—One in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STANLEY "BED ROCK" PLANES



Nos. 602 to 604½.

Nos. 605 to 608.

Nos.	Flat Bottom.	Each
602	— Smooth, 7 in., 1⅝ in. Cutter	$2.20
603	— Smooth, 8 in., 1¾ in. Cutter	2.30
604	— Smooth, 9 in., 2 in. Cutter	2.50
604½.	Smooth, 10 in., 2⅜ in. Cutter	3.00

Packed—One in a Box.

Nos.	Corrugated Bottom.	Each
602C	— Smooth, 7 in., 1⅝ in. Cutter	$2.20
603C	— Smooth, 8 in., 1¾ in. Cutter	2.30
604C	— Smooth, 9 in., 2 in. Cutter	2.50
604½C.	Smooth, 10 in., 2⅜ in. Cutter	3.00

Packed—One in a Box.

Nos.	Flat Bottom.	Each
605	— Jack, 14 in., 2 in. Cutter	$3.00
605½.	Jack, 15 in., 2¼ in. Cutter	3.50
606	— Fore, 18 in., 2⅜ in. Cutter	3.75
607	— Jointer, 22 in., 2⅜ in. Cutter	4.40
608	— Jointer. 24 in., 2⅝ in. Cutter	5.25

Nos.	Corrugated Bottom.	Each
605C	— Jack, 14 in., 2 in. Cutter	$3.00
605½C.	Jack, 15 in., 2¼ in. Cutter	3.50
606C	— Fore, 18 in., 2⅜ in. Cutter	3.75
607C	— Jointer, 22 in., 2⅜ in. Cutter	4.40
608C	— Jointer, 24 in., 2⅝ in. Cutter	5.25

STANLEY ADJUSTABLE PLANES

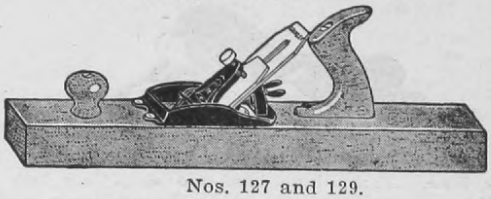
WOOD HANDLED SMOOTH

No. 135.

No. 135—Handled Smooth, 10 inches long, 2⅛ inch Cutter..... Each $1.50

Packed—One in a Box.

WOOD JACK AND FORE



Nos. 127 and 129.

		Each
No. 127—Jack, 15 in., 2⅛ in. Cutter		$1.50
No. 129—Fore, 20 in., 2⅜ in. Cutter		1.65

Packed—One in a Package.

STEEL SMOOTH

No. 104

No. 104—9 in. long, 2⅛ in. Cutter..... Each $2.05

Packed—One in a Box.

These Planes are adjusted by a lever and are especially adapted for working on soft woods.

STEEL JACK

No. 105

No. 105—14 in. long, 2⅛ in. Cutter..... Each $2.60

Packed—One in a Box.

IMPROVED SCRUB PLANES

Nos. 40 and 40½.

These Planes have a single iron, with the cutting edge rounded; are particularly adapted for roughing down work before using a Jack or other Plane.

		Each
No. 40	— 9½ in., 1⅛ in. Cutter	$1.10
No. 40½.	10½ in., 1½ in. Cutter	1.50

Packed—One in a Box.

LOW ANGLE JACK

No. 62

Especially adapted for use in cutting across the grain on heavy work where more power is required than can be obtained by use of the ordinary Block Plane. Fitted with patent adjustable throat, enabling the user to work equally well on hard or soft wood.

No. 62—14 in. long, 2 in. Cutter..... Each $2.85

Packed—Original Box.

Digitized by UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STANLEY BLOCK PLANES

No. 100.

No. 101.

No. 102.

No. 110.

No. 110 has Applewood Knob, Stained Black.

No. 100—Non-Adjustable, Japanned Trimmings, 3½ inches long, 1 inch Cutter.....Each, $0.25
No. 101—Non-Adjustable, Japanned Trimmings, 3½ inches long, 1 inch Cutter.....Each, .20
No. 102—Non-Adjustable, Japanned Trimmings, 5½ inches long, 1⅜ inch Cutter.....Each, .40
No. 110—Non-Adjustable, Japanned Trimmings, 7½ inches long, 1⅝ inch Cutter.....Each, .55

Packed—No. 101, Six; Nos. 100, 102 and 110, One in a Package.

No. 103.

No. 120.

No. 203.

No. 220.

Adjustable, with Japanned Trimmings and Rosewood Knobs.

No. 103—Lever Adjustment, Japanned Trimmings, 5½ inches long, 1⅜ inch Cutter.....Each, $0.55
No. 120—Lever Adjustment, 7½ inches long, 1⅝ inch Cutter.....Each, .75
No. 220—Screw Adjustment, 7½ inches long, 1⅝ inch Cutter.....Each, .75
No. 203—Screw Adjustment, "Handy" Feature, 5½ inches long, 1⅜ inch Cutter.....Each, .85

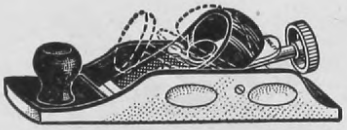
Packed—One in a Box.

No. 130.

Double End. This Plane has two slots and two Cutter Seats. Use center slot and seat for Block Plane work, and other slot and seat when it is desired to work same as a Bull Nose Plane. Japanned Trimmings, Hardwood Knob.

No. 130—8 inches long, 1⅝ inch Cutter. . . . Each $0.75

Packed—One in a Box.



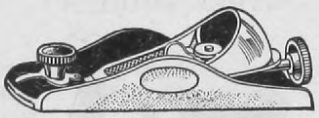
No. 131.

Adjustable Double End. This Plane has two slots and a movable Cutter seat. When it is desired to use it as a Bull Nose Plane, the cap and cutter can be removed and the adjustable Cutter seat reversed, as shown in cut. Japanned Trimmings, Rosewood Knob, "Handy" Feature.

No. 131—8 inches long, 1⅝ inch Cutter.....Each $1.50

Packed—One in a Box.

Nos. 60 and 60½.



Nos. 65 and 65½.

Low Angle. In these Planes the Cutter is set at a very low angle, which is of great advantage when working across the grain. They have the "Handy" feature and Adjustable Throats. Cutters are adjustable endwise by means of the Adjusting Wheel at the rear of the plane.

Japanned Trimmings.

No. 60½—6 in. long, 1⅜ in. Cutter.....Each $1.10
No. 65½—7 in. long, 1⅝ in. Cutter.....Each 1.20

Packed—One in a Box.

Nickel Trimmings.

No. 60—6 inches long, 1⅜ in. Cutter.....Each $1.25
No. 65—7 inches long, 1⅝ in. Cutter.....Each 1.35

Packed—One in a Box.

No. 61.

Low Angle. This Plane is similar to the No. 60½, listed above, as regards size and trim, except it has a Rosewood Knob and the Throat is not adjustable. The cutter is adjustable endwise and the Plane is fitted with the "Handy" feature. Invaluable for Manual Training teachers.

No. 61—6 inches long, 1⅜ inch Cutter.....Each $1.10

Packed—One in a Box.

No. 140.

Rabbet and Block Plane. A detachable side will easily change this Tool from a Block to a Rabbet Plane or vice versa. The Cutter is adjustable endwise and is set on a skew. Japanned Trimmings, Rosewood Knob.

No. 140—7 inches long, 1¾ inch Cutter.....Each $1.40

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BAILEY ADJUSTABLE BLOCK PLANES

Nos. 9½ and 15.

Adjustable, with Japanned Trimmings.

No. 9½—6 inches long, 1⅝ inch Cutter..... Each $1.10
No. 15—7 inches long, 1⅝ inch Cutter..... Each 1.20

Packed—One in a Box.

Each Bailey Block Plane has an Adjustable Throat Opening, a Lateral Adjustment, and the "Handy" feature, which gives the workman a more secure grip on the Tool.

Nos. 18 and 19.

Knuckle Joint. The Knuckle Joint in the Cap of this Plane acts as a lever. Placing the Cap in position, clamps the Cutter securely to its seat. Has Bailey and Lateral Adjustments, "Handy" feature, Adjustable Throat and Nickel Trimmings.

No. 18—6 inches long, 1⅝ inch Cutter..... Each $1.30
No. 19—7 inches long, 1⅝ inch Cutter..... Each 1.40

Packed—One in a Box.

STANLEY ADJUSTABLE PLANES

BELT MAKER'S PLANE

No. 11.

Designed for chamfering down the ends or laps of a Belt before fastening them together; also for repairing Belts. Has Adjustable Throat, Double Hardwood Handle and Japanned Trimmings. Cutter is adjustable endwise by screw.

No. 11—5¾ inches long, 2⅜ in. Cutter,..... Each $2.20

Packed—One in a Box.

CARRIAGE MAKERS' RABBET PLANE

Nos. 10½ and 10.

Especially adapted for the heavy framing required in mining work, carriage and wagon building, or in any work of similar nature. Double Cutter adjustable both endwise and sidewise. Rosewood Handles and Knobs.

No. 10½— 9 in. long, 2⅛ in. Cutter..... Each $2.50
No. 10 —13 in. long, 2⅛ in. Cutter..... Each 3.00

Packed—One in a Box.

BULL NOSE RABBET PLANE

No. 75.

This Plane will be found very useful for working close up into corners or other difficult places. The mouth can be adjusted for different widths by means of the set screw on top of the Plane, which holds the two sections together. Japanned Trimmings.

No. 75—4 inches long, 1 inch Cutter..... Each $0.40

Packed—One in a Box.

SIDE RABBET PLANE

No. 98.

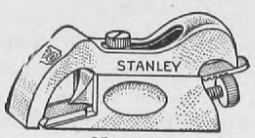
No. 99.

Very convenient for side-rabbeting and trimming dados, mouldings and grooves of all sorts. A reversible nose-piece will give the Tool a form by which it will work close up into corners when required; 4 inches long; ½ inch Cutter; Nickel Trimmings; Rosewood Knobs.

No. 98—Right Hand ..... Each $1.00
No. 99—Left Hand ..... Each 1.00

Packed—One in a Box.

CABINET MAKERS' RABBET PLANE

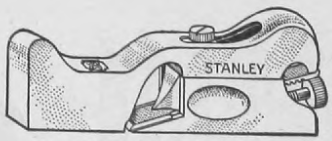


No. 90.

For fine cabinet or other work where extreme accuracy is required. The sides and bottom being square with each other, the Plane will lie perfectly flat on either side, and can be used right or left. Cutters adjustable endwise. Has Adjustable Throat, Nickel Trimmings and "Handy" feature.

No. 90—Bull Nose Pattern, 4 inches long, 1 inch Cutter ..... Each $2.20

Packed—One in a Box.

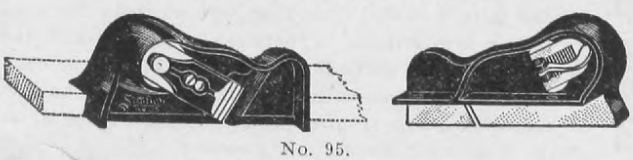


Nos. 92 and 93.

No. 92—5½ inches long, ¾ in. Cutter..... Each $2.20
No. 93—6½ inches long, 1 in. Cutter..... Each 2.60

Packed—One in a Box.

EDGE TRIMMING PLANE



No. 95.

For trimming or smoothing the ends of boards, for a square or close fit. Has a right angle rest or guide from the cutter edge, and the Cutter works on a skew, giving an easy shaving cut. The rest or guide has two screw holes for attaching wood blocks of various bevels to enable the user to make a slanting cut. Japanned Trimmings.

No. 95—6 inches long, ⅞ inch Cutter..... Each $1.15

Packed—One in a Box.

CABINET MAKERS' EDGE PLANE

No. 97.

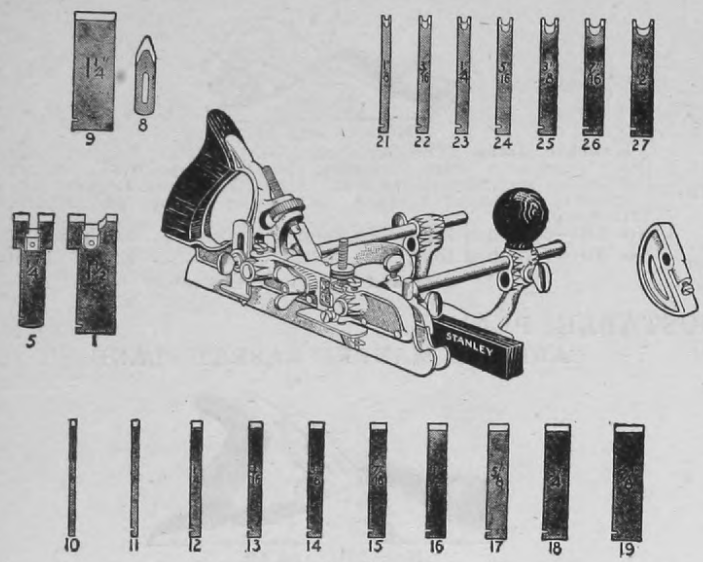
A useful Tool for piano makers and all cabinet workers, for trimming inside work where space prevents the use of any other Plane. The Cutter rests on a solid bed practically its entire length and as the cutting edge is at the extreme end it gives the Tool the form of a Chisel. Cutter is adjustable endwise. Has Japanned Trimmings and Rosewood Knob.

No. 97—10 inches long, 2¼ in. Cutter..... Each $2.20

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY "FORTY-FIVE" PLANE



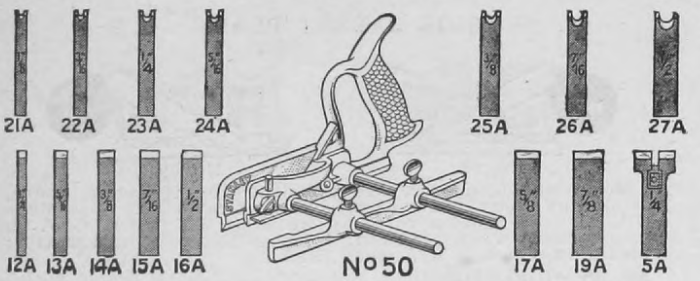
No. 45

This Plane combines seven tools in one, as follows: (1) Beading and Center Beading Plane; (2) Plow; (3) Dado; (4) Rabbet and Filletster; (5) Match Plane; (6) Sash Plane; and (7) A Slitting Plane. It has two principal parts, a Main Stock and a Sliding Section. The Main Stock carries the handle, cutter adjustment, a slitting tool, depth gauge, and forms a bearing for one edge of the cutter. The Sliding Section slides on two arms secured in the stock and has a bearing for the other edge, allowing cutters of different widths to be used. A Fence also slides on these arms for use when working as a plow, beader or filletster, to gauge the distance from the cutter to the edge of the board, and to keep the cutter at right angles to same. When used as a filletster, the fence slides under the bottom of the plane and determines the width of cutter exposed to the work. The plane is fitted with spurs for use across the grain, etc., and can be used either right or left hand. Furnished with a Patent Cam Rest for attaching to the front arm between the sliding section and the fence to prevent the fence from sagging when beading at a distance from the edge of the board. In certain work the Cam Rest should be attached to the rear arm to prevent plane from rocking. Nickel Plated Metal Parts, Rosewood Handle, Knob and Fence.

No. 45—With 21 Cutters as per cut .... Each $7.00

Packed—One in a Box, with Cutters.

STANLEY PLOW BEADING AND MATCHING PLANE

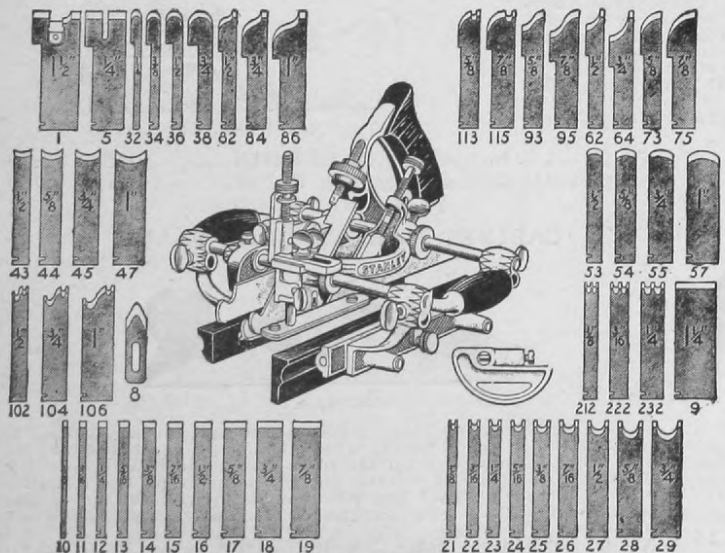


This is a very handy tool for light work. It consists of a Main Stock, carrying a spur and a depth gauge, and forming a support for one side of the cutter; a Sliding Section carrying a spur and forming a support for the other side of the Cutter, and a fence with a five inch adjustment. The Cutters comprise 7 plow and dado bits, ¼, 5/16, ⅜, 7/16, ½, ⅝ and ⅞ inch; 7 beading tools, ⅛, 3/16, ¼, 5/16, ⅜, 7/16 and ½ inch; and a ¼ inch tonguing tool. Made entirely of Metal Nickel Plated.

No. 50—9¼ inches long, with 15 Cutters as per cut ..... Each $5.00

Packed—One in a Box, with Cutters.

STANLEY "FIFTY-FIVE" PLANE



No. 55

This Plane combines a main stock and a sliding section so arranged that cutters of different widths may be used. The Main Stock carries the various cutters firmly clamped to it by the cutter bolt. The Sliding Section has a Patent Adjustable Bottom, vertically adjustable by means of a differential screw. The Auxiliary Center Bottom can also be used as a support when needed. With the sliding section and the auxiliary center bottom it is possible to use cutters of any shape. Furnished with a Patent Cam Rest which can be fastened to either arm outside or between the plane and the fence to keep the plane level, or when used on the back arm in combination with the auxiliary center bottom it keeps the plane from rocking. Nickel Plated Metal Parts, Rosewood Handle and Fences.

No. 55—With 52 Cutters as per cut.....

..... Each $14.00

Packed—One in a Box, with Cutters

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY ADJUSTABLE PLANES

IMPROVED RABBET PLANES

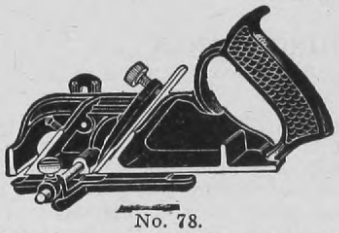
Nos. 190 to 192.

These Planes will lie perfectly flat on either side and can be used equally as well with right or left hand while planing into corners or up against perpendicular surfaces. Fitted with spur for working across the grain and detachable depth gauge. Japanned Iron Stock.

No. 190—8 inches long, 1½ inch Cutter.....Each, $1.25
No. 191—8 inches long, 1¼ inch Cutter.....Each, 1.25
No. 192—8 inches long, 1 inch Cutter.....Each, 1.25

Packed—One in a Box.

FILLETSTER AND RABBET PLANES

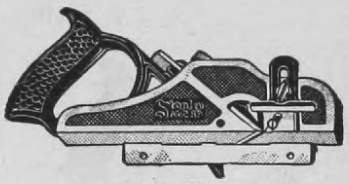


No. 78.

This Plane has two seats for the cutter, one for regular work and the other where a bull-nose is required, also a spur and removable depth gauge. The adjustable fence can be used on either side and slides under the bottom, regulating the width of the cut. By removing the fence and arms, a rabbet plane is obtained. Japanned Iron Stock and Fence.

No. 78—8½ in. long, 1½ in. Cutter.....Each, $1.65

Packed—One in a Box.



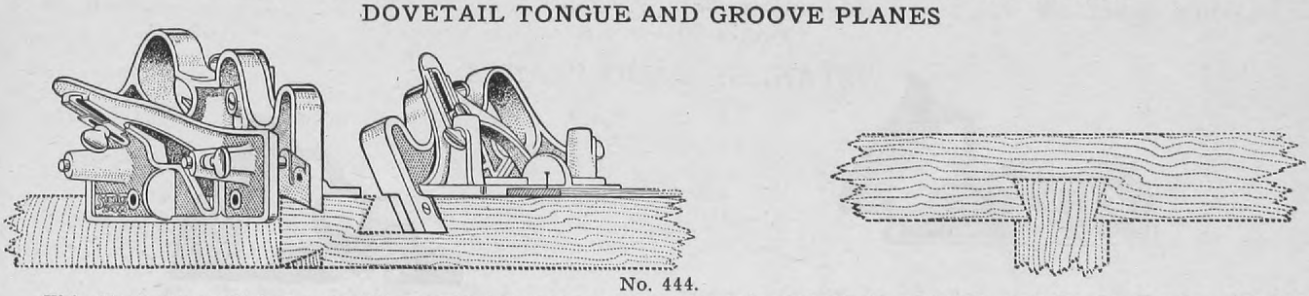
No. 289.

This Plane has an extra wide cutter set on a skew and two adjustable spurs, one on each side of stock. The fence and depth of gauge can be attached to either side so that the plane can be used equally well for right or left hand work. The fence slides under the bottom and regulates the width of cut. By removing the arms and fence a skew cutter rabbet plane is obtained. Japanned Iron Stock and Fence.

No. 289—8½ in. long, 1¾ in. Cutter.....Each, $1.75

Packed—One in a Box.

DOVETAIL TONGUE AND GROOVE PLANES



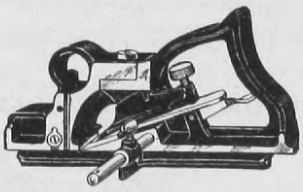
No. 444.

This Tool accomplishes a result sought for many years by wood-workers in general, namely, to form a dove-tail tongue and groove with one hand tool. It will cut any size grooves and tongues to fit with sides at flare of 20 degrees, where the width of the neck is more than ¼ inch and the depth of groove not more than ¾ inch. The tongue and groove are cut separately, and can be made with parallel or tapering sides. Simple in operation, all parts interchangeable. A circular is sent with each tool containing instructions for assembling and operating.

No. 444—Dovetail Tongue and Groove Plane, 9 inches long, Heavily Nickel Plated.....Each, $6.00

Packed—One in a Box.

RABBET PLANE



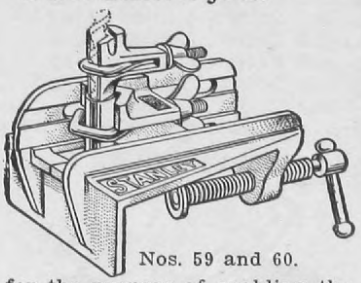
No. 278.

The sides and bottom being square with each other, the plane will lie perfectly flat on either side. Has an adjustable fence which slides under the bottom, regulating the width of the cut. Fitted with spurs, one on each side, for working across the grain, also an adjustable depth gauge suitable for either right or left hand work. The front of the plane can be easily detached, for working up into the corners. The cutter is adjustable endwise.

No. 278—Rabbet Plane, 1 in. Cutter, 6¾ in. long .....Each, $1.75

Packed—One in a Box.

DOWELING JIGS



Nos. 59 and 60.

This tool is for the purpose of enabling the user to bore dowel holes in the edge, end or surface of work with ease and accuracy. It will take any thickness of material up to three inches. It is also an excellent bit guide for mortising. With the Doweling Jig the steel guide is automatically set to guide the bit properly when the Jig is clamped to the work. A depth gauge is also furnished which can be used with or without the Jig. Made entirely of metal, the working parts being milled true. All parts are nickel plated.

No. 59—With 5 Guides, 1 each, ¼, 5/16, ⅜, 7/16 and ½ inch.....Each, $1.75

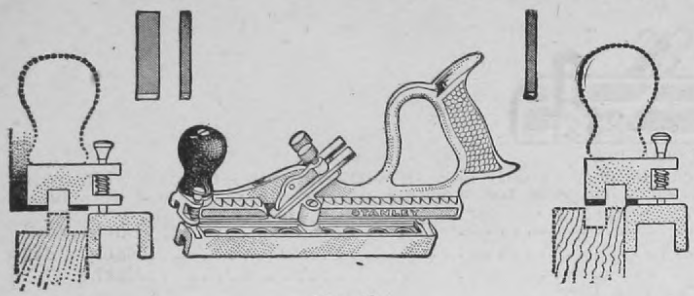
No. 60—With 9 Guides, 1 each ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16 and ¾ inch.....Each, $2.50

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY ADJUSTABLE PLANES

SWINGING FENCE MATCHING PLANES



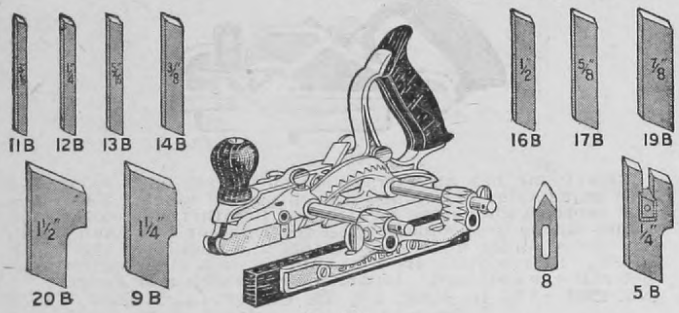
No. 48.

This tool has two plow cutters of the same width, and one extra wide cutter. The fence in one setting exposes two cutters for cutting the tongue, and, when reversed, leaves only one exposed for cutting the groove. On thicker boards than the plane works on center, the extra wide cutter is substituted for groove cutter when cutting tongue. Nickel plated Stock and Fence, with Rosewood Knobs.

No. 48—Cuts 5/16 inch Groove, on boards 3/4 to 1 1/4 inches, centers on 7/8 inch.....Each, $2.75

Packed—One in a Box.

PLOW, DADO, FILLETSTER AND MATCHING PLANES



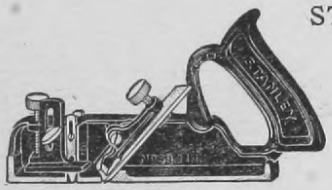
No. 46.

Skew cutters are the feature of this plane. It consists of a Main Stock carrying a spur, depth gauge and slitting cutter; a Sliding Section carrying a spur and forming an extra sole for the plane, and a fence which can be set for either plow or filletster work. The metal parts are nickel plated and the face of fence, handles and knobs are rosewood. The cutters comprise 8 plow and dado bits, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 7/8 and 1 1/4 inch; a 1 1/2 inch filletster cutter; a 1/4 inch tonguing tool and a slitting cutter.

No. 46—10 1/2 inches long, with 11 Cutters as illustrated.....Each, $5.00

Packed—One in a Box.

STANLEY DADO PLANES

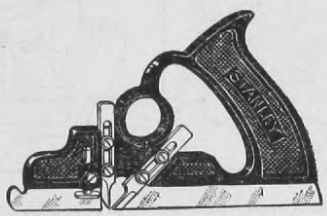


No. 39.

The great advantage of this Dado Plane over those made of wood is that it will keep true under all conditions even in the narrowest widths. Has skew cutters, and adjustable depth gauge, and two adjustable spurs, one on each side of the plane. This adjustable feature permits of the spurs being adjusted to take up wear, as well as for the depth of the cut. Made in seven sizes, Japanned.

No. 39— 1/4 inch Cutter, 8 inches long.....Each, $1.65
No. 39— 3/8 inch Cutter, 8 inches long.....Each, 1.65
No. 39— 1/2 inch Cutter, 8 inches long.....Each, 1.65
No. 39— 5/8 inch Cutter, 8 inches long.....Each, 1.65
No. 39— 3/4 inch Cutter, 8 inches long.....Each, 1.65
No. 39— 7/8 inch Cutter, 8 inches long.....Each, 1.65
No. 39—1 inch Cutter, 8 inches long.....Each, 1.65

Note—In Ordering State Number and Width of Cutter.

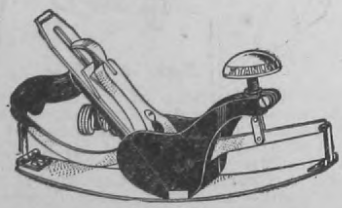


No. 239.

This Plane has an extra narrow cut, only 1/8 of an inch wide, making it an ideal tool for blind wire grooving and is of special interest to electricians. It is fitted with a double spur, whch prevents splintering when working across the grain and insures a smooth, clean cut. A depth gauge is also attached allowing a groove to be cut of any desired depth up to the limit of the plane—1/2 of an inch.

No. 239—Dado Plane, 7 1/2 inches long, 1/8 inch Cutter.....Each, $2.20

STANLEY CIRCULAR PLANES



No. 113.

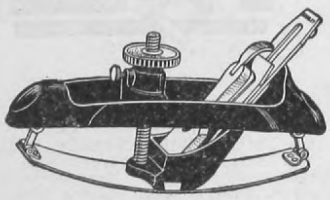
These Planes have flexible steel faces which can be accurately adjusted for planing the inside or outside of circles. Cutters are the same and have the same adjustments as those of the Bailey and Bed Rock Planes.

The face is fastened at its center to the plane body, and adjusted at the ends by means of a screw and levers. Fitted with graduated scale for setting face. Japanned Trimmings.

No. 113—10 inches long, 1 3/4 inch Cutter...Each, $3.00

Packed—One in a Box.

VICTOR CIRCULAR PLANES



No. 20 1/2.

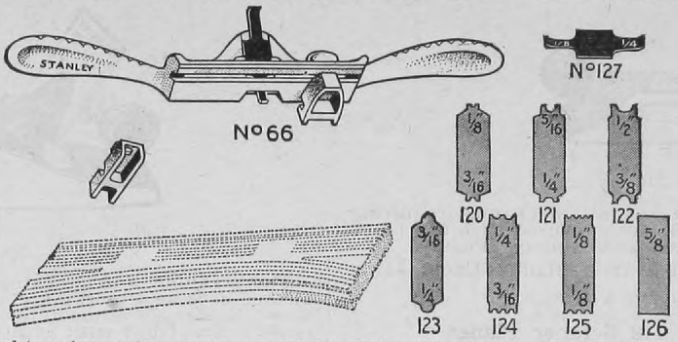
Improved design, the face is fastened at each end to the plane body, and adjusted by a screw at the center. This construction gives great strength and accuracy. Japanned Trimmings.

No. 20 1/2—10 inches long, 1 3/4 inch Cutter..Each, $3.50

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY UNIVERSAL HAND BEADERS

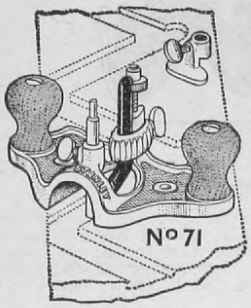


For reeding or fluting straight or irregular surfaces and for light routering. With each beader are furnished a square gauge for straight work, an oval gauge for curved work and 8 cutters sharped at both ends and embracing the following assortments, 6 single beads, ⅛, 3/16, ¼, 5/16, ⅜ and ½ inch; 2 fluting tools, 3/16 and ¼ inch; 4 reeding tools (2 beads 3/16 inch, 3 beads ¼ inch, 3 beads ⅛ inch and 4 beads ⅛ inch), 2 routers, ⅛ and ¼ inch, and a ⅝ inch blank which owner can file up to suit himself. Made entirely of metal, Nickel Plated.

No. 66—11½ inches long, with 8 Cutters as per cut..... Each $1.00
Extra Moulding Cutters..... Each .05

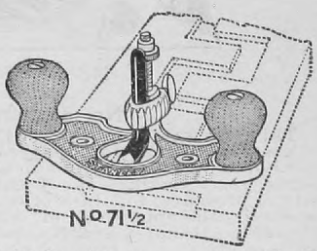
Packed—One in a Box.

STANLEY WOODWORKERS' ROUTER PLANES



These Planes are for surfacing the bottom of grooves or other depressions parallel with the general surface of the work. They are made in two styles, differing in the form of throat. The closed throat is the ordinary form of router plane, the open throat, an improved design; giving more freedom for chips and a better view of the work and cutter. The latter has an attachment for regulating the thickness of the chip, and a second attachment for closing the throat for use on narrow surfaces. The bottoms of both styles are designed so that an extra wooden bottom of any size desired can be screwed on, enabling the user to router on large openings.

A ¼ and ½ inch cutter are furnished with each Plane. Cutters have screw adjustment, and can be held as shown in illustrations, or on the back of the cutter post, for bull-nose work. Nickel Plated, with Hardwood Knobs.



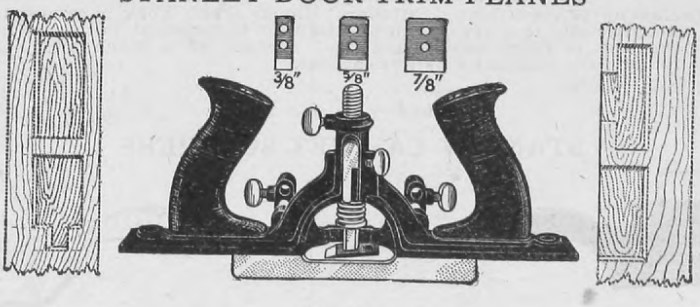
No. 71—Open Throat, 7½ inches long,..... Each $2.05

Packed—One in a Box.

No. 71½—Closed Throat, 7½ inches long,.. ..Ea. $1.65

Packed—One in a Box.

STANLEY DOOR TRIM PLANES



No. 171.

This Plane will make mortises for butts, face plates, strike plates, escutcheons, etc., up to a depth of 5/16 and a width of 3 inches. Its original feature is the method of mounting the cutter, which can be instantly set to work from either end of the plane or across it. In addition, the cutter is cushioned by a spring which prevents taking a heavier chip than can be easily carried. A fence regulates the position of the cut and insures the sides of the cut being parallel. The depth of the cut is governed by a positive stop. By removing the fence and locking the cutter post with the thumb screw instead of using the spring a very superior router plane is obtained. The bottom is designed so that an extra wooden bottom of any size desired can be screwed on enabling the user to router on large openings. Japanned, with Rosewood Handles.

No. 171—11 inches long, with 3 Forged Steel Cutters, ⅜, ⅝ and ⅞ inch wide, as per cut..... Each $2.75

Packed—One in a Box.

STANLEY BLIND NAIL TOOLS

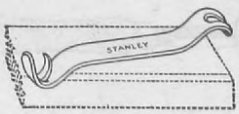
No. 96.

This Tool can be attached to a ¼ inch Chisel (beveled edge up) and permits a shaving of any desired thickness to be raised, for blind nailing or for inlaid work.

No. 96—2¼ inches long, Nickel Plated..... Each $0.20

Packed—Six in a Box.

STANLEY CORNERING TOOLS



Nos. 28 and 29.

Used by pattern makers and all woodworkers for rounding sharp edges, different size cutter at each end. No depth gauge required.

	Per Dozen
No. 28—With 1/16 and ⅛ inch Cutters.....	$3.00
No. 29—With 3/16 and ¼ inch Cutters.....	3.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY SCRAPER PLANES

No. 212.

Adapted for violin makers and all mechanics requiring a light adjustable scraper, which can be used with one hand. Japanned, with Rosewood Knob and "Handy" Feature.

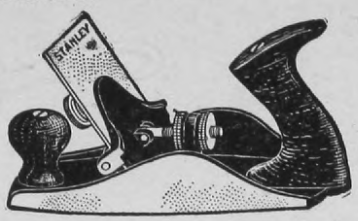
No. 212—5½ inches long, 1⅜ inch Blade..Each, $1.50

Packed—One in a Box.

Extra Cutters for No. 112 Scraper Planes

Veneer Scraper Blades..... Each, $0.20

Toothing Cutters, Nos. 22, 28 or 32, having 22, 28 or 32 teeth to the inch..... .30

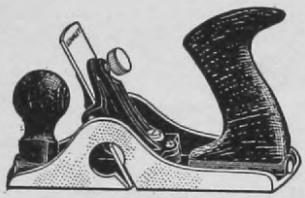


No. 112.

For scraping and finishing veneer or cabinet work, can also be used as a toothing plane for scraping off old paint or glue. Blades are adjustable endwise and for angle, a scraper blade is furnished with each tool, but we can furnish toothing cutters at an extra charge. Japanned with Rosewood Handle and Knob.

No. 112—9 inches long, 3 inch Blade..... Each, $2.10

Packed—One in a Box.



No. 85.

No. 64.

No. 12.

No. 85 Scraper Planes

This is a rabbet scraper with handle and knob pivoted, to allow for tilting, for convenience when working into corners or up against perpendicular surfaces. When in use the blade rests against the front edge of the mouth under a slight pressure, but in working the blade springs backward opening the mouth and allowing the shaving to pass through. Handles and Knobs are of Rosewood.

No. 85—8 inches long, 2 inch Blade.....Each, $2.30

Packed—One in a Box.

No. 12 Scraper Planes

For scraping and finishing veneer or cabinet work, can also be used as a toothing plane for scraping off old paint or glue. Blades are adjustable endwise and for angle, double grip handle being placed across the center of the tool, gives it a good balance. Japanned, with Iron Face and Rosewood Handle.

No. 12—6¼ inches long, 3 inch Blade.....Each, $2.40

Packed—One in a Box.

No. 64 Butcher Block Planes

Designed especially for trueing up or resurfacing Butchers' Blocks. The work is accomplished with a specially formed cutter or plane iron set at an exceptionally low angle. In addition to the special cutter mentioned, a regular Plane Iron is furnished which will enable the user to finish smooth the final surface of a block and keeping in condition the meat benches and tables ordinarily found in a Butcher's establishment.

No. 64—12½ inches long, 2 inch Blade.....Each, $2.40

Packed—One in a Box.

STANLEY CABINET SCRAPERS

No. 80.

The blade may be sprung to a slight curve by means of a thumb screw, giving ease of operation and quickness of cut. Handles are raised to protect the hands, and pierced so the tool can be hung up out of the way. Body and handles are cast in one piece and japanned.

No. 80—11 inches long, 2¾ inch Blade....Each, $1.00

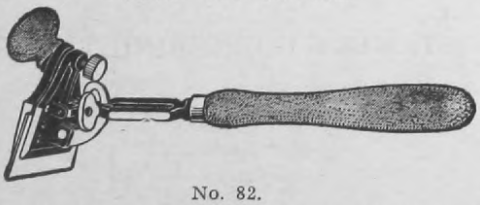
Packed—One in a Box.

No. 81.

This Scraper has a rosewood face for use in the finest cabinet work. Handles are raised to protect the hands, and pierced so the tool can be hung up out of the way. Body and handles are cast in one piece and nickel plated.

No. 81—10 inches long, 2½ inch Blade.....Each, $1.50

Packed—One in a Box.

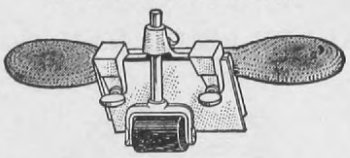


No. 82.

This Scraper has an adjustable single handle which can be tilted to give the blade any angle desired. Special blades of different forms and widths can be securely held in any position, thus permitting the tool to be worked in many places inaccessible to other scrapers. Japanned, with Hardwood Handle and Knob.

No. 82—14½ inches long, 3 inch Blade.....Each, $1.05

Packed—One in a Box.



No. 83.

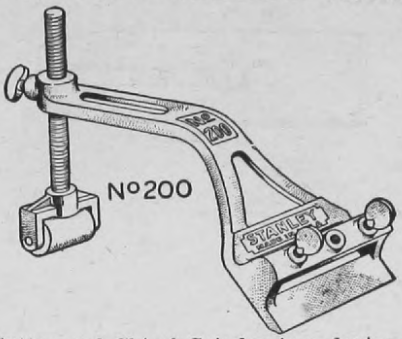
This Scraper has a roller back of the blade which acts as a support to relieve the strain on the wrists of the workman. Handle is made of beech and can be detached for working into corners. Nickel Plated.

No. 83—9½ inches long, 4 inch Blade.....Each, $1.00

Packed—One in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CUTTER AND CHISEL GRINDER

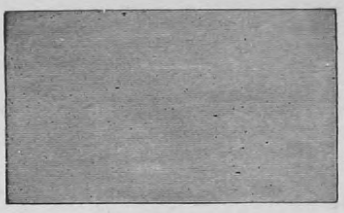


Stanley Cutter and Chisel Grinder is a device for holding Plane Irons, Chisels and other similar cutting tools that they may be ground to any desired angle or bevel. The tool to be sharpened is rigidly held in the Grinder by thumb screws, and may be given any desired angle by means of the large screw attached to the roller frame. Made entirely of metal, all parts being nickel plated.

No. 200—Cutter and Chisel Grinder.....Each, $0.90

Packed—One in a Box.

HAND CABINET SCRAPERS



Made of Good Quality Saw Steel.

Inches	3x5	3x6	3½x5	4x6
No. 2—Per Dozen	$0.70	.70	.80	.90

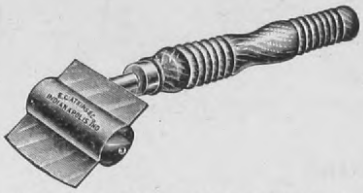
Packed—One Dozen in a Box.

Made of No. 18 Gauge Silver Steel.

Inches	3x5	3x6	3½x5	4x6
No. 0—Per Dozen	$2.65	3.00	3.05	4.00

Packed—One Dozen in a Box.

WOOD, FLOOR AND CABINET SCRAPERS



Perfection Adjustable Floor and Cabinet Scrapers, with 3x3 inch 16 Gauge Silver Steel Bevel Edge Blades .....Per Dozen, $10.00

Extra Cutters.....Per Dozen, ...

Packed—One-twelfth Dozen in a Box.

Made of Hard Maple with handles shaped to fit the hand. Blade is of Hardened Steel and can be easily removed for sharpening purposes by removing the screws. The elastic blade seat gives the tool a curved scraping surface and prevents it from jumping or chattering. Operated by pushing.

Rams Horn, Floor and Cabinet Scrapers.....
.....Per Dozen, $10.00

Extra Cutters .....Per Dozen, ...

Packed—One-twelfth Dozen in a Box.

No. 194.

Has eight sharp cutting edges, Head Piece and Ball Joint connecting Handle which may be frictionally locked or released. The neatest and best scraper for use on floors, benches, meat blocks, etc.

No. 194—Universal Scrapers.....Per Dozen, $12.00

Extra Blades.....Per Dozen, 1.80

Packed—One-twelfth Dozen in a Box.

No. 2.

The improved style slant of this scraper enables its use in out of the way places. Any style or size scraper can be held firmly with each holder. 3x3 inch Beveled Edge Blade furnished with each tool.

No. 2—Holder and Blade, complete....Per Dozen, $4.50

Extra Blades .....Per Dozen, ...

Packed—One Dozen in a Box.

CABINET MAKERS' BURNISHERS

No. 889.

For sharpening Blades of Floor Scrapers, Cabinet Scrapers, etc.

No. 10.

This Scraper is intended for use on large surfaces. The knife, which is 6 inches wide, scrapes the floor when the machine is drawn towards the operator and will therefore work up to the wall and into the corners. The knife is firmly clamped in the Scraper, which together with the weight of the machine, nearly all of which rests on the knife, prevents vibration or chatter, doing away with all wavy effects on the floor. The 5 inch wheels are rubber tired so as not to mar the floor. Length of handle and braces 38½ inches, weight, 100 pounds; finished in Aluminum.

No. 10—Stearns Floor Scrapers.....Each, $36.00

No. 889—Cabinet Makers' Burnishers, Mirror Finish, Hardwood Handles:

Blade, inches ..	3	4
Per Dozen	$4.50	5.00

Packed—Half Dozen in a Box.

Bennett.

This is a well proportioned tool. The front and back plates are of steel. The blade is held perfectly rigid, but can be instantly adjusted to suit the work. No special blades are necessary.

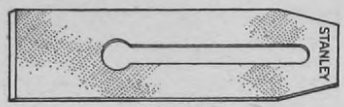
Bennett Adjustable Scrapers.....Per Dozen, $.....

Extra Blades.....Per Dozen, ...

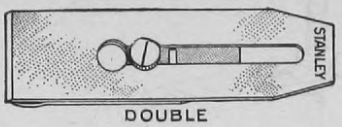
Packed—One-twelfth Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BENCH PLANE IRONS



SINGLE



DOUBLE

Bailey Bench Plane Irons

Inches	1¼	1⅝	1¾	2	2⅛	2¼	2⅜	2⅝
Single Cutting Irons....Each,	$0.18	.21	.23	.25	.27	.28	.29	.32
Double Irons....Each,	.32	.35	.38	.42	.45	.47	.48	.50

Packed—Half Dozen in a Box.

Stanley Bench Plane Irons

Inches	1¾	2⅛	2⅜	2⅝
Single Cutting Irons....Each,	$0.23	.27	.29	.32
Double Irons....Each,	.38	.45	.48	.50

Packed—Half Dozen in a Box.

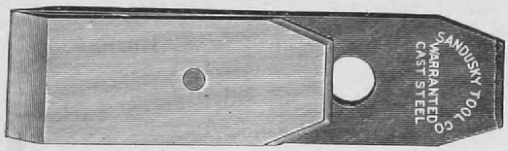
Buhl Bench Plane Irons

Inches	1⅝	1¾	2	2⅛	2¼	2⅜	2⅝
Single Cutting Irons....Each,	$0.21	.23	.25	.28	.31	.34	.41
Double Irons....Each,	.35	.50	.54	.56	.59	.62	.75

Packed—Half Dozen in a Box.

Orders for Plane Irons should designate the Number of Planes for which they are wanted.

COMMON BENCH PLANE IRONS

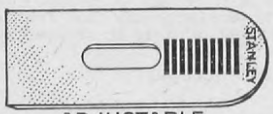


Inches	1¾	1⅞	2	2⅛	2¼	2⅜	2½	2⅝	2¾	3
Single Cutting Irons..Per Dozen,	$2.75	2.95	3.15	3.35	3.70	4.10	4.50	4.90	5.50	7.00
Double Irons....Per Dozen,	6.00	6.25	6.45	6.65	7.00	7.40	8.20	9.00	10.15	11.70

Packed—Half Dozen in a Box.

BLOCK PLANE IRONS

NON-ADJUSTABLE



ADJUSTABLE

Stanley and Bailey Block Plane Irons

Nos.	**101**	**102**	**103**	**60**				**120**	**110**	
For Planes, Nos.	101	102	103	60	60½	61	203	120	110	130
Inches	1	1⅜	1⅜	1⅜	1⅜	1⅜	1⅜	1⅝	1⅝	1⅝
Each	$0.05	.10	.10	.17	.17	.17	.17	.17	.13	.13

Nos.	**9½**								**140**	**62**
For Planes, Nos.	9½	15	18	19	65	65½	131	220	140	62
Inches	1⅝	1⅝	1⅝	1⅝	1⅝	1⅝	1⅝	1⅝	1¾	2
Each	$0.17	.17	.17	.17	.17	.17	.17	.17	.20	.45

Packed—Half Dozen in a Box.

Buhl Block Plane Irons

Nos.	**B101**	**B102**	**B103**	**B110**	**B9½**				
For Planes Nos.	B101	B102	B103	B110	B9½	B15	B18	B65	B22
Inches	1	1¼	1¼	1¾	1¾	1¾	1¾	1¾	1¾
Each	$0.05	.10	.10	.13	.17	.17	.17	.17	.17

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

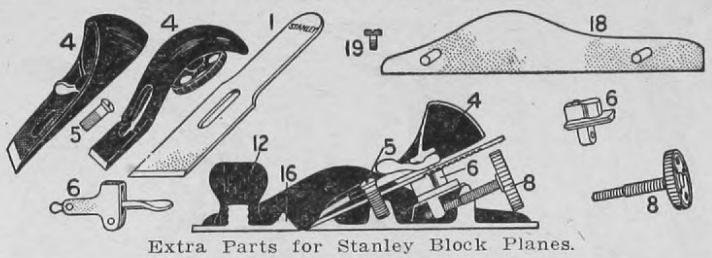
STANLEY PLANE PARTS

In several of the Planes, the Parts designated by the same name differ in form.

In these cases the corresponding Parts are given the same number; and when the Part is not shown directly opposite the number of the Plane, it will be found in another place on the plate.

Note.—Always give Plane number and Part number when ordering Cutters or Parts.

STANLEY BLOCK PLANE PARTS

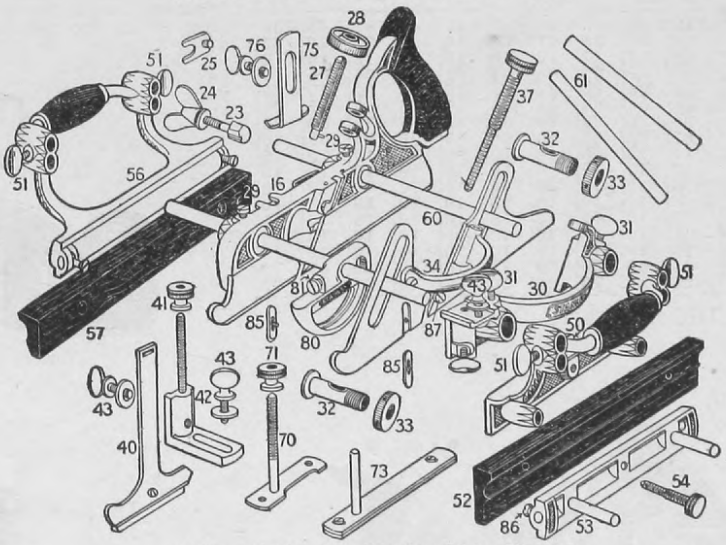


Extra Parts for Stanley Block Planes.

Stanley Block Plane Parts

Nos.	Name of Part	No. of Plane,	100-101	102	103	110	120	130	131	140	203	220
1	Single Plane Iron		$0.05	.10	.10	.13	.17	.13	.17	.20	.20	.17
4	Lever Cap		.05	.10	.10	.10	.10	.10	.10	.15	.10	.10
5	Lever Cap Screw		....	....	....	....	....	....	.05	.05	.05	.05
6	Frog Complete		....	....	....	....	.15	....	.15	.10	.10	.10
8	Adjusting Nut		....	....	....	....	....	....	.10	.10	.10	.10
12	Plane Knob		....	....	....	.10	.10	.10	.15	.15	.10	.10
16	Plane Bottom		.10	.15	.20	.25	.30	.35	.70	.75	.25	.30
18	Detachable Side		....	....	....	....	....	....	....	.25	....	....
19	Side Screw (Pair)		....	....	....	....	....	....	....	.10	....	....

COMBINATION PLANE PARTS



Extra Parts for Combination Planes.

Combination Plane Parts

Nos.	Name of Part	No. of Plane,	45	46	47	50	55	141-143	444
1	Cutters	Per Set,	$3.50	2.00	1.00	1.75	6.00	2.00	1.25
16	Main Stock or Bottom		2.50	2.50	2.50	1.25	3.00	3.00	2.50
23	Cutter Bolt		.15	.15	.15	.15	.15	....	....
24	Cutter Bolt Wing Nut		.15	.15	.15	.15	.15	....	....
25	Cutter Bolt Clip and Screws		.05	.05	.05	....	.05	....	....
27	Cutter Bolt Adjusting Screws		.10	....	....	....	.10	....	....
28	Cutter Bolt Adjusting Wheel		.10	....	....	....	.10	....	....
30	Sliding Section		1.50	1.50	1.50	.30	.75	....	....
32	Thimble		....	....	....	....	.15	....	....
33	Thimble Check Nut		....	....	....	....	.15	....	....
34	Adjustable Bottom		....	....	....	....	1.25	....	....
37	Adjustable Bottom Screw		....	....	....	....	.20	....	....
40	Auxiliary Center Bottom		....	....	....	....	.30	....	....
42	Angle Iron and Adjusting Screws		....	....	....	....	.30	....	....
50	Left Fence		.75	.75	....	.75	1.35	1.00	1.00
52	Tilting Guard Plate (Wood)		....	....	....	....	.20	....	....
53	Tilting Iron with Swivel		....	....	....	....	.40	....	....
54	Left Fence Adjusting Screw		....	....	....	....	.20	....	....
56	Right Fence		....	....	....	....	1.00	....	1.25
57	Right Fence Tilting Plate		....	....	....	....	.20	....	....
60	Long Arms	Per Pair	.50	.50	.50	.50	.50	.50	....
61	Short Arms	Per Pair	.25	.25	.25	....	.25	....	.25
70	Adjustable Depth Gauge		.20	.20	.20	.20	.20	.20	....
73	Adjustable Beading Stop		.20	....	....	....	.30	....	....
75	Slitting Cutter Stop		.10	.10	.10	.10	.10	....	....
80	Cam Stop		.40	....	....	....	.40	....	....
85	Spurs with Screws		.05	.05	.05	.05	.05	....	.05

Screws Nos. **29, 31, 41, 43, 51, 58, 71, 76, 81, 86** and **87**, $0.10 each.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BAILEY PLANE PARTS

In several of the Planes, the Parts designated by the same name differ in form.

In these cases the corresponding Parts are given the same number; and when the Part is not shown directly opposite the number of the Plane, it will be found in another place on the plate.

Note.—Always give Plane number and Part number when ordering Cutters or Parts.

Before Ordering Plane Frogs read Special Information on this page.

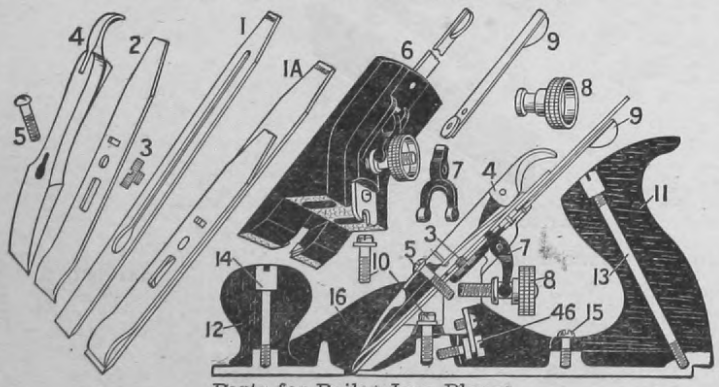
BAILEY WOOD PLANE PARTS

Parts for Bailey Wood Planes.

"BAILEY" WOOD PLANES.

NO.	NAME OF PART — NO. OF PLANE	21 22 23	24 25 35	26	27	27½	28 29	30 31	32 33 34	36	37
1A	Double Plane Iron	$0 38	0 42	0 42	0 45	0 47	0 48	0 48	0 50	0 48	0 50
1	Single " "	23	25	25	27	28	29	29	32	29	32
2	Plane Iron Cap	15	17	17	18	19	19	19	18	19	18
3	Cap Screw	05	05	05	05	05	05	05	05	05	05
4	Lever Cap	20	20	20	20	20	20	20	20	20	20
5	" " Screw	05	05	05	05	05	05	05	05	05	05
6	Frog Complete	30	30	30	30	30	30	30	30	30	30
7	"Y" Adjusting Lever	05	05	05	05	05	05	05	05	05	05
8	Adjusting Nut	10	10	10	10	10	10	10	10	10	10
9	Lateral Adj. Lever	10	10	10	10	10	10	10	10	10	10
10	Frog Screw & Bush'g	10	10	10	10	10	10	10	10	10	10
11	Plane Handle	.....	10	10	10	10	10	10	10	10	10
12	" Knob	10	10	10	10	10	10	10	10	10	10
13	Handle Bolt & Nut	.....	10	10	10	10	10	10	10	10	10
14	Knob " " "	10	10	10	10	10	10	10	10	10	10
16	Plane Bottom	40	40	50	50	50	70	80	85	50	70
17	Top Casting	20	20	20	20	20	20	20	20	20	20

BAILEY IRON PLANE PARTS



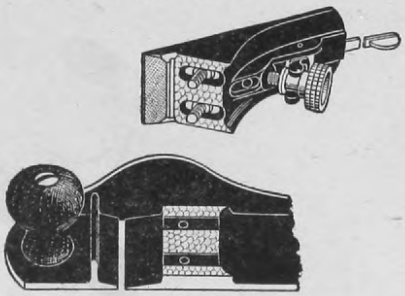
Parts for Bailey Iron Planes.

"BAILEY" IRON PLANES.

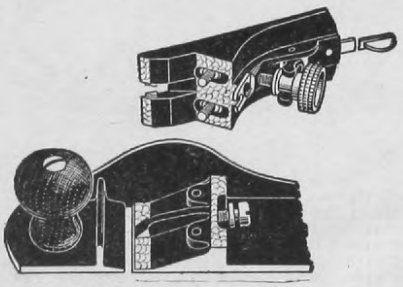
NO.	NAME OF PART — NO. OF PLANE	1	2 2C	3 3C	4 4C	4½ "C	5 5C	5½ "C	6 6C	7 7C	8 8C
1A	Double Plane Iron	$0 32	0 35	0 38	0 42	0 48	0 42	0 47	0 48	0 48	0 50
1	Single " "	18	21	23	25	29	25	28	29	29	32
2	Plane Iron Cap	14	14	15	17	19	17	19	19	19	18
3	Cap Screw	05	05	05	05	05	05	05	05	05	05
4	Lever Cap	25	25	25	25	25	25	25	25	25	25
5	" " Screw	05	05	05	05	05	05	05	05	05	05
6	Frog Complete	35	35	35	35	35	35	35	35	35	35
7	"Y" Adjusting Lever	05	05	05	05	05	05	05	05	05	05
8	Adjusting Nut	10	10	10	10	10	10	10	10	10	10
9	Lateral Adj. Lever	10	10	10	10	10	10	10	10	10	10
10	Frog Screw	05	05	05	05	05	05	05	05	05	05
11	Plane Handle	20	20	20	20	20	20	20	20	20	20
12	" Knob	15	15	15	15	15	15	15	15	15	15
13	Handle Bolt & Nut	10	10	10	10	10	10	10	10	10	10
14	Knob " " "	10	10	10	10	10	10	10	10	10	10
15	Plane Handle Screw	.....	.....	.....	.....	05	05	05	05	05	05
16	Plane Bottom	65	85	1 00	1 00	1 20	1 20	1 20	1 65	2 35	2 85
46	Frog Adj. Screw	05	05	05	05	05	05	05	05	05	05

FROGS FOR BAILEY PLANES

In order to avoid mistakes the following information should be carefully noted before ordering Frogs for "Bailey" Planes.



Bailey Old Style.



Bailey New Style.

An improvement has been made in the Bailey Iron Plane which necessitated a change in the construction of the Bottom and Frog, thereby making it impossible to use the new style Frog in an old style Bottom, or the old style Frog in a new style Bottom.

For a time an intermediate style was made having the same Frog and Bottom as the latest design, except that there was no Frog adjusting screw, consequently no clip on the Frog.

The latest design Frog or Bottom will be furnished for both the intermediate and new style Planes. If your plane is of the intermediate pattern, remove the steel clip from the Frog and the parts will fit.

The difference in construction of the Frogs and Bottoms is very clearly shown in the illustrations above.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

STANLEY AND BAILEY PLANE PARTS

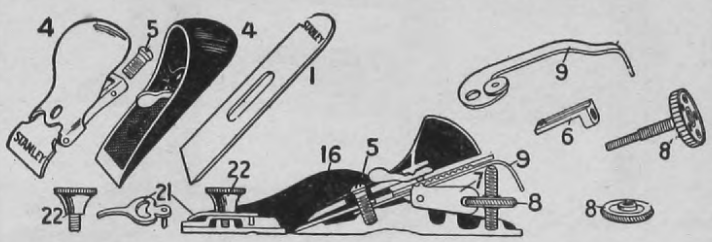
In several of the Planes, the Parts designated by the same name differ in form.

In these cases the corresponding Parts are given the same number; and when the Part is not shown directly opposite the number of the Plane, it will be found in another place on the plate.

Note.—Always give Plane number and Part number when ordering Cutters or Parts.

Before ordering Plane Frogs read Special Information on this Page.

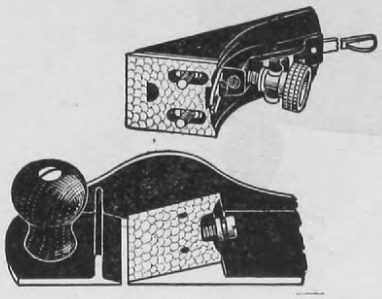
BAILEY AND STANLEY BLOCK PLANE PARTS



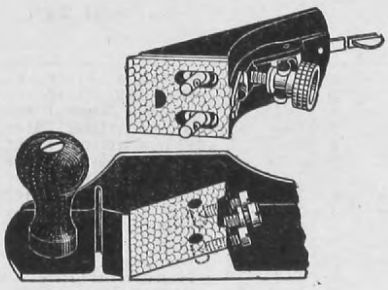
Parts for Bailey and Stanley Block Planes.

FROGS FOR BED-ROCK PLANES

In order to avoid mistakes the following information should be carefully noted before ordering Frogs for Bed-Rock Planes.



Bed-Rock Old Style.



Bed-Rock New Style.

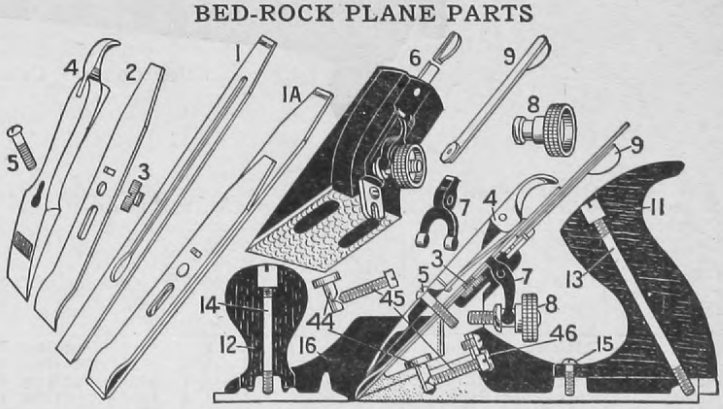
An improvement has been made in the Bed-Rock Plane which necessitated a change in the construction of the Bottom and Frog, thereby making it impossible to use the new style Frog in an old style Bottom or the old style Frog in a new style Bottom.

The difference in construction of the Frogs and Bottoms is very clearly shown in the illustrations above.

"BAILEY" AND STANLEY BLOCK PLANES.

NO.	NAME OF PART / NO. OF PLANE	9½ 9¾	15 15½	16 17	18	19	60	60½	61	65	65½
1	Single Plane Iron	$0 17	0 17	0 17	0 17	0 17	0 17	0 17	0 17	0 17	0 17
4	Lever Cap	10	10	15	20	20	15	10	15	15	10
5	" " Screw	05	05	05	05	05	05	05	05	05	05
6	Frog Complete	.....	.....	.....	.....	.....	10	10	10	10	10
7	Adjusting Lever	05	05	05	05	05	.....	.....	.....	.....	.....
8	Adjusting Nut	10	10	10	10	10	10	10	10	10	10
9	Lateral Adj. Lever	10	10	10	10	10	.....	.....	.....	.....	.....
11	Plane Handle	25	25	.....	.....	.....	.....	.....	.....	.....	.....
16	Plane Bottom	70	75	75	70	75	60	60	40	75	75
21	Eccentric Plate	10	10	10	10	10	10	10	10	10	10
22	Finger Rest Knob	10	10	10	10	10	10	10	10	10	10

BED-ROCK PLANE PARTS



Parts for Bed-Rock Planes.

"BED ROCK" PLANES.

NO.	NAME OF PART / NO. OF PLANE	602 "C	603 "C	604 "C	604½ "C	605 "C	605½ "C	606 "C	607 "C	608	608 "C
1A	Double Plane Iron	$0 35	0 38	0 42	0 48	0 42	0 47	0 48	0 48	0 50	0 50
1	Single " "	21	23	25	29	25	28	29	29	32	32
2	Plane Iron Cap	14	15	17	19	17	19	19	19	18	18
3	Cap Screw	05	05	05	05	05	05	05	05	05	05
4	Lever Cap	30	30	30	30	30	30	30	30	30	30
5	" " Screw	05	05	05	05	05	05	05	05	05	05
6	Frog Complete	50	50	50	50	50	50	50	50	50	50
7	"Y" Adjusting Lever	05	05	05	05	05	05	05	05	05	05
8	Adjusting Nut	10	10	10	10	10	10	10	10	10	10
9	Lateral Adj. Lever	10	10	10	10	10	10	10	10	10	10
11	Plane Handle	20	20	20	20	20	20	20	20	20	20
12	" Knob	15	15	15	15	15	15	15	15	15	15
13	Handle Bolt & Nut	10	10	10	10	10	10	10	10	10	10
14	Knob " " "	10	10	10	10	10	10	10	10	10	10
15	Plane Handle Screw	.....	.....	.....	05	05	05	05	05	05	05
16	Plane Bottom	1 10	1 25	1 25	1 50	1 50	1 60	2 20	3 10	3 50	3 50
44	Frog Pin	10	10	10	10	10	10	10	10	10	10
45	Frog Clamping Screw	05	05	05	05	05	05	05	05	05	05
46	Frog Adjusting Screw	05	05	05	05	05	05	05	05	05	05

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UTICA COUNTER UNIT SALES CASE

The Sales Cases and Display Board shown sell **UTICA** Nippers and Pliers while your back is turned. They contain and show various assortments of styles and sizes of the most useful line of tools known, and the cases present the opportunity of doing a full line business at a very small expense.

Progressive dealers will quickly recognize the value of this fast growing, high quality line, and the ability of these Sales Cases and Display Boards to get business and eliminate work.

Utica Counter Unit Sales Case.

The Utica Counter Unit Sales Case is 3 feet long, of Standard Show Case height. Made in Golden Oak, with Yellow Birch Sample Boards and containing the following 124 Tools.

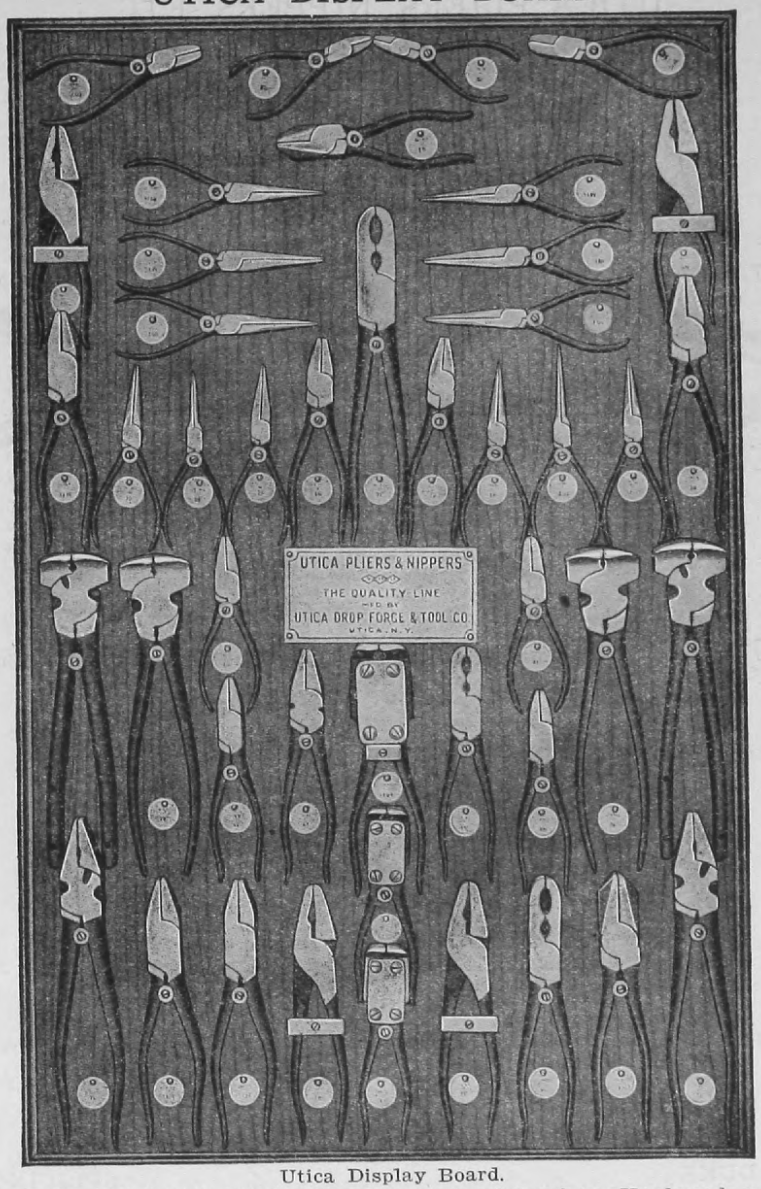
Quantity	Number of Tool	Size Inches	Name of Tool	Per Dozen.	Quantity	Number of Tool	Size Inches	Name of Tool	Per Dozen.	Quantity	Number of Tool	Size Inches	Name of Tool	Per Dozen.
1	3	4½	Cutting Nipper...	$.....	1	50	5	Side Cutting Plier	$.....	2	1000	8	Buttons Plier....	$.....
1	3	5½	Cutting Nipper...	.....	3	50	6	Side Cutting Plier	.....	2	1000	10	Buttons Plier....	.....
1	200	4	Flat Nose Plier...	.....	2	50	7	Side Cutting Plier	.....	1	1033	6½	Needle Nose Plier	.....
1	200	4½	Flat Nose Plier...	.....	3	50	8	Side Cutting Plier	.....	2	1050	4	Side Cutting Plier	.....
2	200	5	Flat Nose Plier...	.....	1	60	6	End C't'ng Nipper	.....	1	1050	5	Side Cutting Plier	.....
2	200	5½	Flat Nose Plier...	.....	1	60	7	End C't'ng Nipper	.....	2	1050	6	Side Cutting Plier	.....
1	200	6	Flat Nose Plier...	.....	1	60	8	End C't'ng Nipper	.....	1	1050	7	Side Cutting Plier	.....
1	210	4	Round Nose Plier.	.....	1	65	4	Jewellers' Nipper.	.....	2	1050	8	Side Cutting Plier	.....
1	210	4½	Round Nose Plier.	.....	1	65	5	Jewellers' Nipper.	.....	1	1300	6	Burner Plier.....	.....
2	210	5	Round Nose Plier.	.....	1	100	10	Fence Repair Plier	.....	1	1300	7	Burner Plier.....	.....
2	210	5½	Round Nose Plier.	.....	1	130	8	Burner Plier.....	.....	2	1300	8	Burner Plier.....	.....
1	210	6	Round Nose Plier.	.....	1	130	10	Burner Plier.....	.....	1	1300	10	Burner Plier.....	.....
1	220	4	Chain Nose Plier.	.....	1	142	5	Diagonal Plier...	.....	1	1431	6½	Heat Coil Plier...	.....
1	220	4½	Chain Nose Plier.	.....	1	142	5½	Diagonal Plier...	.....	1	1900	10	Staple Puller.....	.....
1	220	5	Chain Nose Plier.	.....	1	325	5	Combination Plier	.....	1	1909	10	Staple Puller.....	.....
1	220	5½	Chain Nose Plier.	.....	2	350	6	Splicing Plier....	.....	1	1950	6	Lineman's Plier..	.....
1	220	6	Chain Nose Plier.	.....	1	350	7	Splicing Plier....	.....	2	1950	8	Lineman's Plier..	.....
1	23	5½	Convex Nose Plier	.....	2	350	8	Splicing Plier....	.....	1	2050	6	Side Cutting Plier	.....
1	024	5	Milliners' Plier...	.....	1	622	5	Machinists' Plier.	.....	1	2050	7	Side Cutting Plier	.....
1	25	5	Combination Plier	.....	1	650	5½	Side Cutting Plier	.....	2	2050	8	Side Cutting Plier	.....
1	32	6½	Loomfixers' Plier.	.....	1	654	5½	Side Cutting Plier	.....	1	3050	7	Lineman's Plier..	.....
1	33	5½	Jewellers' Plier..	.....	1	654	6½	Side Cutting Plier	.....	2	3050	8	Lineman's Plier..	.....
1	41	8	Carpenters' Pin'rs	.....	1	655	5½	Side Cutting Plier	.....	2	4002	6	Slip Joint Plier..	.....
1	42	4	Diagonal Plier...	.....	1	707	7	Universal Plier...	.....	1	6006	6	Slip Joint Plier..	.....
1	42	4½	Diagonal Plier...	.....	1	708	8	Universal Plier...	.....	2	6008	8	Slip Joint Plier..	.....
2	42	5	Diagonal Plier...	.....	1	777	5½	Needle Nose Plier	.....	6	300	8	Buttons Plier....	.....
2	42	5½	Diagonal Plier...	.....	1	888	5½	Needle Nose Plier	.....	6	300	10	Buttons Plier....	.....
2	50	4	Side Cutting Plier	.....	1	1000	6	Buttons Plier....	.....	6	5002	6	Combination Plier	.....

No. 124—Utica Counter Unit Sales Case, containing 124 Tools including Case ..... $.....

Packed—Case shipped knocked down, with full instructions for setting up.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

UTICA DISPLAY BOARD



Utica Display Board.

The Utica Hardware and General Supply Display Board is made of Southern Hardwood, walnut finished, 22 inches in width and 36 inches in height, containing the following 45 Utica Tools:

Quantity	Number of Tool	Size Inches	Name of Tool	Per Dozen	Quantity	Number of Tool	Size Inches	Name of Tool	Per Dozen
2	3	5½	Cutting Nipper	$.....	1	1300	7	Burner Plier	$.....
1	3	7½	Cutting Nipper	.....	1	1300	8	Burner Plier	.....
2	42	5½	Diagonal Plier	.....	1	1950	6	Lineman's Plier	.....
1	33	5½	Jeweler's Plier	.....	1	1950	8	Lineman's Plier	.....
1	33	6½	Jeweler's Plier	.....	2	2050	6	Side Cutting Plier	.....
1	1300	10	Burner Plier	.....	1	2050	7	Side Cutting Plier	.....
1	32	6½	Loomfixer's Plier	.....	2	2050	8	Side Cutting Plier	.....
2	50	6	Side Cutting Plier	.....	2	6006	6½	Slip Joint Plier	.....
1	50	8	Side Cutting Plier	.....	2	6008	8	Slip Joint Plier	.....
1	325	5½	Combination Plier	.....	1	1033	6½	Needle Nose Plier	.....
1	650	5½	Side Cutting Plier	.....	1	700	7	Universal Plier	.....
1	650	6½	Side Cutting Plier	.....	2	42	4½	Diagonal Plier	.....
2	655	5½	Side Cutting Plier	.....	1	25	5½	Combination Plier	.....
2	655	6½	Side Cutting Plier	.....	2	100	10	Fence Repair Plier	.....
1	777	5½	Needle Nose Plier	.....	2	1909	10	Staple Puller	.....
1	777	6½	Needle Nose Plier	.....	2	1900	10	Staple Puller	.....

No. 45—Utica Display Board, including 45 Tools mounted ..... $.....

Packed—Weight of Display Board for Shipment, 54 lbs.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UTICA PLIERS, NIPPERS, ETC.

Only the Genuine Utica Pliers Bear this

U TI CA

TRADE MARK

Which Means Quality Guaranteed

SIDE CUTTING PLIERS

STANDARD

No. 50.

U TI CA **Standard** Side Cutting Plier. The Lineman's Choice. Forged from a fine quality of steel and carefully tempered. Nothing has been left undone to make it an ideal tool. In cutting qualities it is perfection.

Inches	4	5	6	7	8
No. 50—Utica Finish.....Per Dozen, $	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

BOX JOINT

No. 2050.

U TI CA **Box Joint** Side Cutting Plier. The Standard of Perfection.

Inches	5	6	7	8
No. 2050—Utica Finish...Per Dozen, $	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

"PEXTO"

No. 30.

Box Joint Star Rivet Side Cutting Plier. Forged from a fine quality of steel and carefully tempered.

Inches	6	7	8
No. 30—Gun Barrel Handles, Knurled.....Per Dozen,	$13.50	17.00	20.00

Packed—Each in a Separate Carton, Half Dozen in a Box.

DUKE

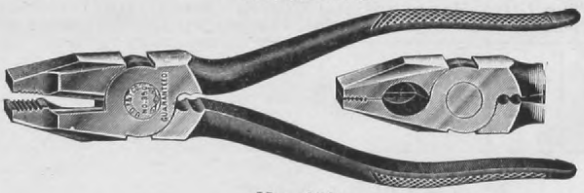
No. 1050 and 1250.

U TI CA **Duke** Side Cutting Plier. Forged from a special grade of steel, carefully tempered. An ideal tool at a low price.

Inches	4	5	6	7	8
No. 1050—Black Handles, Polished Jaws.....Per Dozen, $	.....	.....	.....	.....	.....
No. 1250—Polished and **Nickel Plated**.....Per Dozen,	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

SPLICING



No. 350.

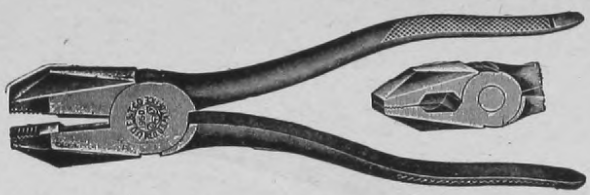
U TI CA **Splicing** Side Cutting Plier. Toughness and hardness for cutting edges unequaled. Takes the place of two tools. Always handy for splicing and tying.

Inches	6	7	8
No. 350—Utica Finish.....Per Dozen, $	.....	.....	.....

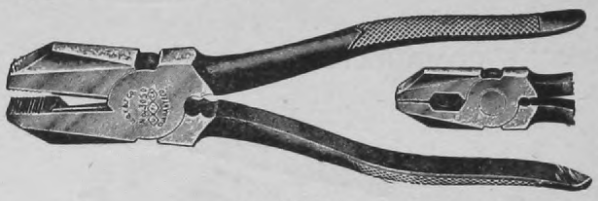
Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LINEMEN'S SIDE CUTTING PLIERS



No. 1950.



No. 3050.

U TI CA **Klein Pattern** Side Cutting Plier. The strongest and best Side Cutting Plier made. Used by linemen everywhere. In quality and finish it is unequaled. Every tool is tested and inspected before leaving the factory, and is fully guaranteed against defects in material and workmanship. Checkered Handles.

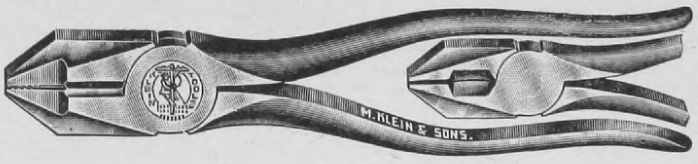
Inches	6	7	8	9
No. 1950—Utica Finish.....Per Dozen,	$.....	.....	.....	.....

No. 3050—With Wire **Splicing Clamp** between Handles. Otherwise same as No. 1950.

Inches	6	7	8
No. 3050—Utica Finish.....Per Dozen,	$.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

DIAMOND SPECIAL SIDE CUTTING PLIERS

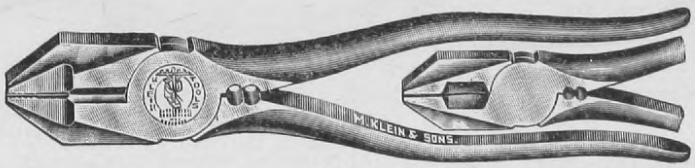


No. 201.

"Klein" Diamond Special Side Cutting Plier. Made from special bar steel, forged, machined and carefully tempered.

Inches	6	7	8	9
No. 201—Black Finish, Polished Head.....Per Dozen,	$20.85	25.00	30.00	33.35

Packed—Each in a Separate Carton, Half Dozen in a Box.



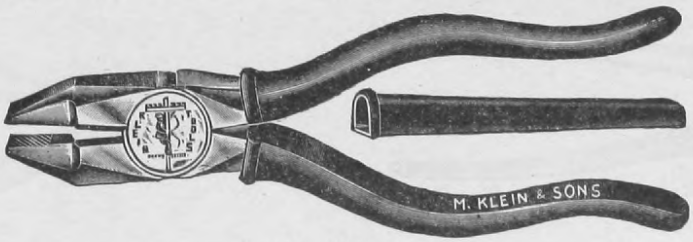
No. 212.

"Klein" Diamond Special Side Cutting Plier, with **Sleeve Twister.** Made from special bar steel, carefully tempered.

Inches	7	8	9
No. 212—Black Finish, Polished Head.....Per Dozen,	$28.00	32.00	36.00

Packed—Each in a Separate Carton, Half Dozen in a Box.

RUBBER SLEEVES FOR INSULATING PLIERS



No. 2400.

Rubber Sleeves. For insulating Pliers. Made from special molds. Walls are heavier than the old type, thus making the sleeve better than the brittle molded-on type.

For Pliers—Size, inches	6	7	8
No. 2400—Sleeves only.....Per Dozen,	$5.10	5.80	6.50

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUTTON PLIERS

COMBINATION SIDE CUTTING

No. 700.

Combination Gas Pipe Side Cutting Button Plier. **Six** tools in one. The handles are specially designed, so that in cutting large as well as small wire they are close enough to enable one to span them with the hand and exert his greatest pressure to the best advantage, making it an easy cutting tool. The oval or buckshot throat enables cutting heavily insulated wire without clogging the plier.

No. 700—7 inch, Utica Finish.....Per Dozen, $.....

GIANT

No. 1000.

"Giant" Button Plier with Four Wire Cutters. The best and most useful Wire Cutter and Plier made. Forged from a fine quality of Steel. Every tool guaranteed . The only Button Plier with four (4) wire cutters. The two cutters between the jaws are so designed that the wire after it is cut is held between the jaws. This feature adds to the utility of the tool and the advantage of handling the wire with less trouble is evident.

Inches	4½	6	8	10
No. 1000—Utica Finish.....Per Dozen, $.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

IMCO BUTTON PLIERS

No. 010.

Imco Combination Button Plier. Made of Forged Steel, polished head, low gun metal handles.

Inches	6	8	10
No. 010—Black Finish.....	$4.40	5.50	6.90

Packed—Half Dozen in a Box.

CRONK PLIERS

No. 1.

Cronk Flat Nose Plier, Wire Cutter and Bender. The concave and convex circles between the handles are used for bending wire any desired shape. Well adapted for Farmers' use in building wire fences, etc. The cupping in the nose is used for pulling tacks, brads or nails, and can be used in place of Hill's Hog Ringer. Best Tool Steel, nicely finished, polished head.

Inches	8	10
No. 1—Black Handles...Per Dozen, $.....	.....	.....

Packed—Half Dozen in a Box.

STOP JOINT

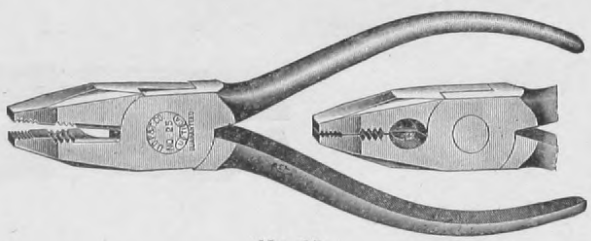
No. 3000.

Stop Joint Button Plier. Black Finish. A moderate priced Button Plier for persons desiring a limiting stop on the joint.

Inches	4½	6	8	10
No. 3000—Per Dozen $.....	.....	.....	.....	.....

Packed—Each in a Separate Carton; Half Dozen in a Box.

COMBINATION FLAT NOSE



No. 25.

Combination Flat Nose **Side Cutting Burner** Pliers. Forged from a fine grade of steel and carefully tempered.

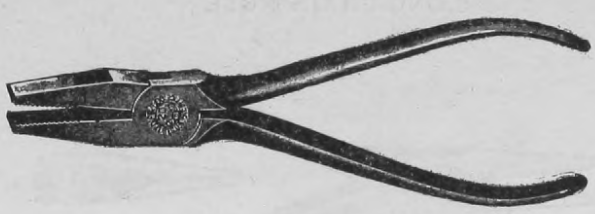
No. 25—5½ inches. Utica Finish. Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

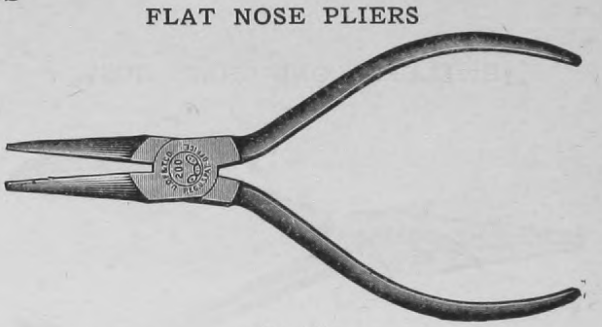
PLIERS

FLAT NOSE PLIERS



No. 20.

FLAT NOSE PLIERS



No. 200.

U TI CA High Grade **Flat Nose** Plier. Forged from a fine grade of steel and carefully tempered.

Inches	3½	4	4½	5	5½	6
No. 20—Utica Finish....Per Dozen, $	.....	.....	.....	.....	.....	.....

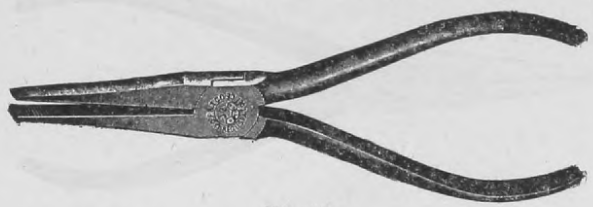
Packed—Each in a Separate Carton, Half Dozen in a Box.

U TI CA High Grade **Short Flat Nose** Plier. Forged from a fine grade of steel and carefully tempered.

Inches	3½	4	4½	5	5½	6
No. 200—Black Finish..Per Dozen, $	.....	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

LONG REACH FLAT NOSE



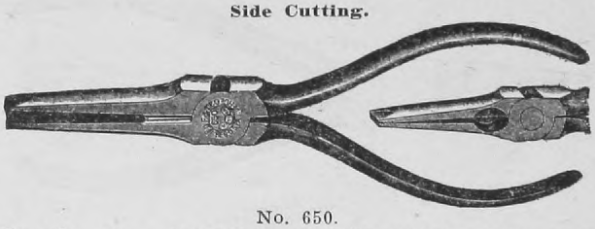
No. 32.

U TI CA **Long Reach Flat Nose** Plier. A strong long nose plier, indispensable for working in deep and narrow places.

No. 32—5½ inches, Utica Finish..Per Dozen, $.....
Packed—Each in a Separate Carton, Half Dozen in a Box.

LONG REACH FLAT NOSE

Side Cutting.

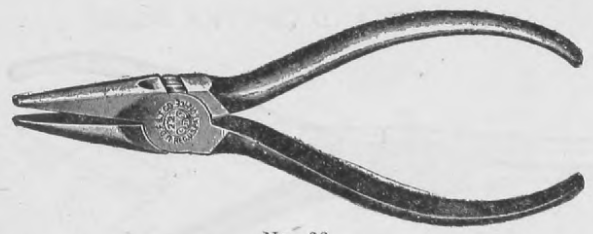


No. 650.

U TI CA **Long Reach Flat Nose "Side Cutting" Plier.** A strong long nose plier, indispensable for working in deep and narrow places. Useful for telephone and switchboard builders.

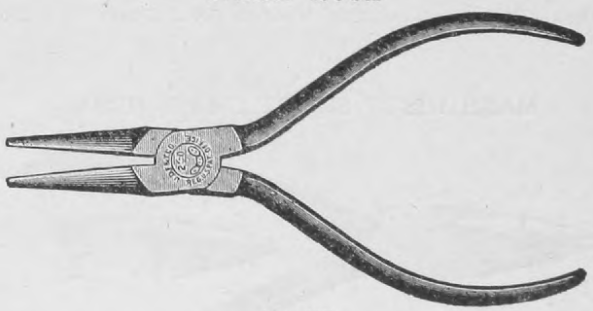
No. 650—5½ inches, Utica Finish..Per Dozen, $.....
Packed—Each in a Separate Carton, Half Dozen in a Box.

CHAIN NOSE



No. 22.

CHAIN NOSE



No. 220.

U TI CA **Chain Nose** Plier. Forged from a fine grade of steel. Carefully tempered and tested.

Inches	3½	4	4½	5	5½	6
No. 22—Utica Finish....Per Dozen, $	.....	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

U TI CA **Chain Nose** Plier. Forged from a fine grade of steel and carefully tempered.

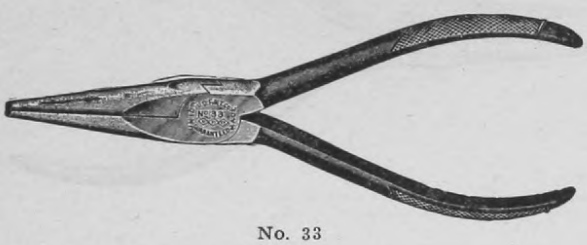
Inches	3½	4	4½	5	5½	6
No. 220—Black Finish...Per Dozen, $	.....	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

PLIERS

JEWELERS' LONG CHAIN NOSE



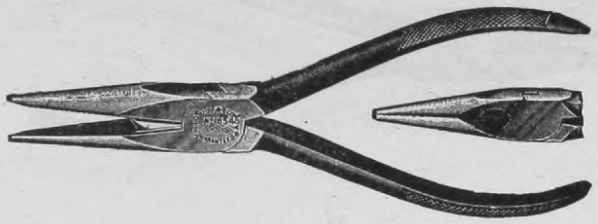
No. 33

U TI CA **Jewelers'** Long Chain Nose Plier. Forged from high grade Steel and carefully tempered.

No. 33—5½ inches, Utica finish..Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

LONG CHAIN NOSE



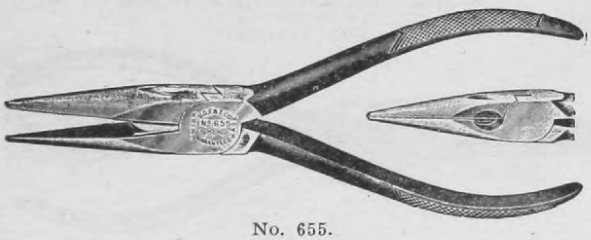
No. 654.

U TI CA **Long Chain Nose "Side Cutting"** Plier. An extra fine plier forged from a select quality of steel. Used by telephone men, machinists, jewelers, opticians, electricians, etc.

No. 654—5½ inches, Utica finish.Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

LONG NEEDLE NOSE



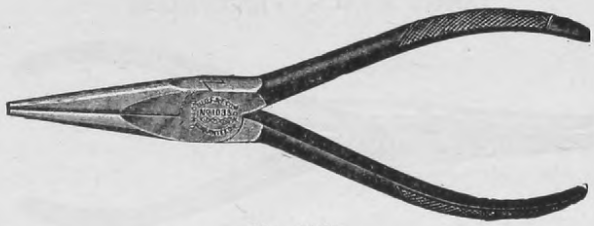
No. 655.

U TI CA **Long Needle Nose "Side Cutting"** Plier. Specially adapted for extra fine work. Forged from an extra quality of steel and carefully tempered. Used by telephone manufacturers, machinists, jewelers, opticians, electricians, etc.

No. 655—5½ inches, Utica finish.Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

LONG NEEDLE NOSE



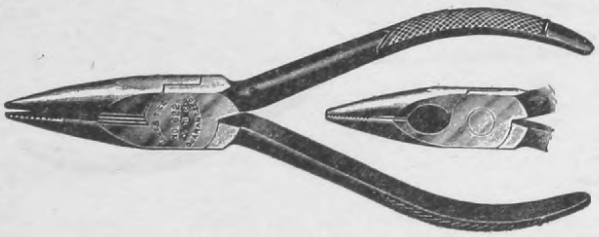
No. 1033.

U TI CA **Long Needle Nose** or **Bicycle Tire Plugging** Plier. Special steel, tempered. Well adapted for handling rubber and metal plugs.

No. 1033—5½ inches, Utica finish.Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

MACHINISTS' SHORT CHAIN NOSE



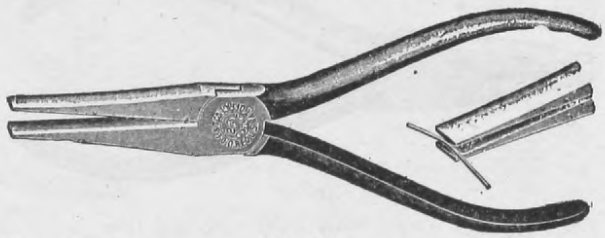
No. 622

U TI CA **Machinists'** Short Nose Plier. Forged from high grade steel and carefully tempered.

No. 622—5 inches, Utica finish...Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

CONCAVE AND CONVEX NOSE



No. 23

U TI CA **Concave** and **Convex Nose Weaver** Plier. Can be used the same as the old style Weaver Plier, which necessitates twisting the band, or by the new method which consists of placing the bent part of the reed between the convex and concave surfaces and pressing the jaws together and thus straightening the reed.

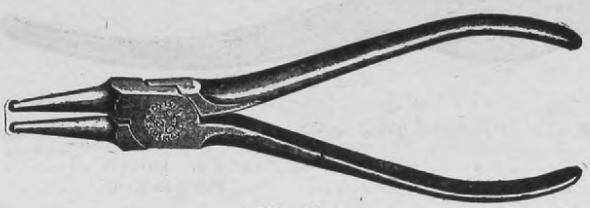
No. 23—5½ inches, Utica finish..Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

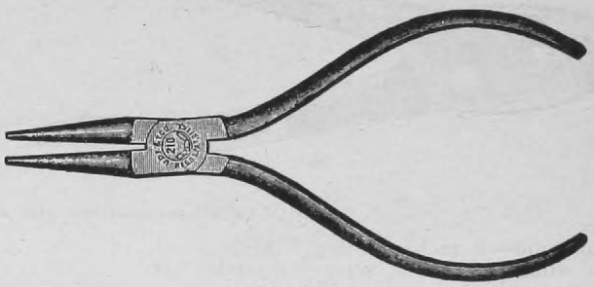
PLIERS

ROUND NOSE



No. 21.

ROUND NOSE



No. 210

U TI CA High Grade **Round Nose** Plier. Forged from a fine grade of steel and carefully tempered.

Inches	3½	4	4½	5	5½	6
No. 21—Utica Finish...Per Dozen, $						

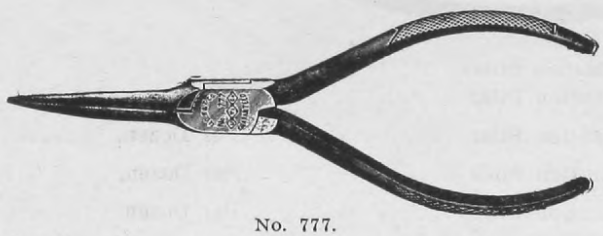
Packed—Each in a Separate Carton. Half Dozen in a Box.

U TI CA High Grade **Round Nose** Light Pattern Plier. Forged from a fine grade of steel and carefully tempered.

Inches	3½	4	4½	5	5½	6
No. 210—Black Finish..Per Dozen, $						

Packed—Each in a Separate Carton. Half Dozen in a Box.

LONG NEEDLE NOSE



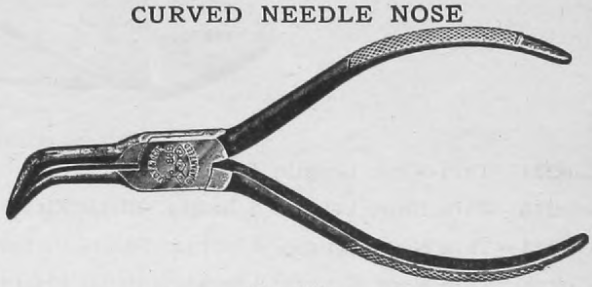
No. 777.

U TI CA **Long Needle Nose** Plier. Forged from a fine grade of steel, spring tempered. Especially adapted for fine work. On switchboard work and in assembling small electrical apparatus it is indispensable.

No. 777—5½ inches, Utica Finish..Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

CURVED NEEDLE NOSE



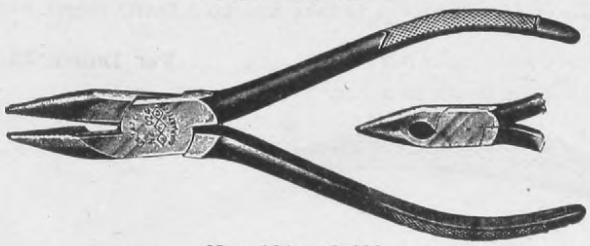
No. 888.

U TI CA **Curved Needle Nose** Plier. The curved Nose enables one to use the plier without twisting the hand. An ideal plier for the watchmaker, optician and electrician.

No. 888—5½ inches over all, Utica Finish....
.....Per Dozen, $.....

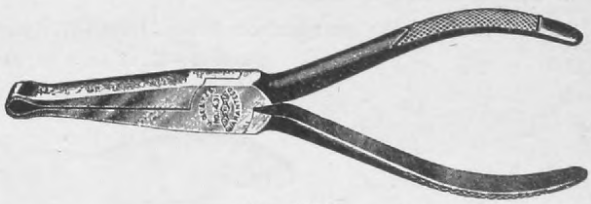
Packed—Each in a Separate Carton, Half Dozen in a Box.

MILLINERS'



Nos. 024 and 026.

HEAT COIL



No. 1431.

U TI CA **Milliner's** Plier. Forged from High Grade Steel, carefully tempered.

No. 024—5 inch, Utica Finish.....Per Dozen, $.....

No. 026—5 inch, Nickel Plated.....Per Dozen, ...

Packed—Each in Separate Carton, Half Dozen in a Box.

U TI CA **Heat Coil** Plier. Specially shaped jaws for holding cylindrical objects and inserting heat coils. Used by electricians, telephone men, chemists, opticians and jewelers.

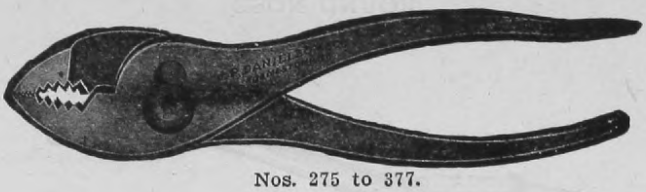
No. 1431—5½ inches Utica Finish.....Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COMBINATION PLIERS

Nos. 4000 and 4002.



Nos. 275 to 377.

U TI CA **Combination Slip Joint Plier.** Drop Forged Tool Steel.

No. 4000—6 inches, Utica Finish ..... Per Dozen, $.....
No. 4002—6 inches, Nickel Plated ..... Per Dozen, ...

Packed—Each in a Separate Carton, Half Dozen in a Box.

Buhl Sons Co. Combination Slip Joint "Auto" Pliers. Drop Forged from high grade tool steel, especially adapted for Automobile Repair Tool Kits and for the use of Gas Fitters, Machinists, Tool Makers, Electricians, etc. This tool is a Gas Plier, Wire Cutter, Wrench and Screw Driver combined. By a quarter turn of the handle and sliding from one hole to the other the 6 inch Plier is changed to hold 3/16 to 1 inch round and the 10 inch to hold from 1/4 to 1 1/4 inch round.

	Black Finish			Nickel Plated		
Nos.	275	276	277	375	376	377
Inches	6	8	10	6	8	10
Per Dozen	$7.00	9.50	10.00	$7.65	10.50	11.80

No. 475—Regular Nose 6 inch Black Combination Plier. Forge Finish ..... Per Dozen, $.....

Packed—In Open Stock.

Nos. 0274 to 0375.

Thin Bent Jaw Combination Pliers.

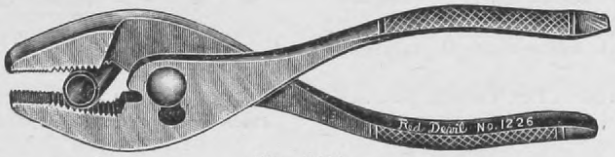
No. 0274—Thin Nose, Length, 4 inches; Black Finish Combination Plier ..... Per Dozen, $.....

No. 0275—Thin Nose, Length, 6 inches; Black Finish Combination Plier ..... Per Dozen, ...

No. 0374—Thin Nose, Length, 4 inches; Nickel Plated Combination Plier ..... Per Dozen, ...

No. 0375—Thin Nose, Length, 6 inches; Nickel Plated Combination Plier ..... Per Dozen, ...

Packed—One-Twelfth Dozen in a Box.

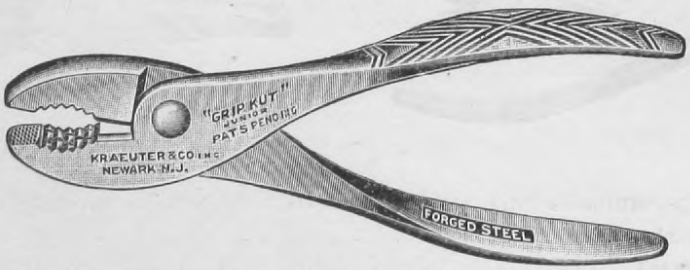


No. 1226.

Made of high grade Steel, Nickel Plated, Dentyne Handles. Lower Jaw is curved to take and hold firmly round, hexagon or square, or any irregular shape.

No. 1226—Red Devil Combination Plier, Length, 7 inches .. .. Per Dozen, $9.60

Packed—Each in a Separate Carton, Half Dozen in a Box.



No. 1973.

The most complete all around Plier for the home, the electrician, the plumber, the auto man, in fact, for all kinds of mechanics. The scored teeth in Jaws insure a firm hold on a piece of steel or pipe with little pressure.

No. 1973—Gripkut Combination Plier, Length 7 inches ..... Per Dozen, $.....

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMBINATION SLIP JOINT PLIERS

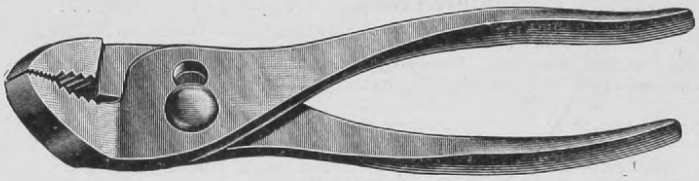
No. 646.

A very handy tool. Will do the work of all ordinary Pliers and go into many out-of-the-way places where others will not. Can also be used as a wire cutter.

No. 646—Combination Slip Joint Plier. Entire Length 7 inches.....Per Dozen, $5.50

Packed—One-Half Dozen in a Box.

BENT NOSE PLIERS



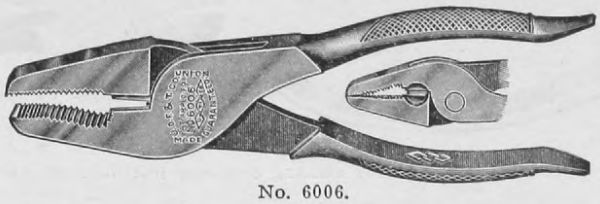
No. 1357.

Wm. Hjorth, Bent Nose Pliers, made from drop forged Tool Steel, nicely fitted and properly tempered. Especially adapted for Electricians, Plumbers and Automobilists as they have an angle of 45° at the nose, which enables the operator to use them in places where a straight nose plier could not be used.

No. 1357—8 inches, Nickel Plated.....Per Dozen, $.....

Packed—One-sixth Dozen in a Box.

"AMERICAN BEAUTY"



No. 6006.

U TI CA Box Joint, Slip Joint, Side Cutting Button Plier. Forged from high quality steel, carefully tempered, Jaws are so constructed that they will adjust themselves to any taper, half-round, round, three-square or parallel. The flat side always lays itself to the lower jaw, which is straight, this construction gives great gripping power and strength. Handles are checkered, giving a firm grip, and the ends are made so that they can be used as a screwdriver or tire tool.

No. 6006—6½ inches, Utica Finish.....Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

NEW AUTO PLIERS

Nos. 025 and 30.

Wm. Hjorth New Auto-Pliers. Made of high grade tool Steel, drop forged and fully guaranteed. Beveled Jaws and Thin Nose. Especially adapted for use in Close Places. Formed on Neat Lines and made with Knurled Handles.

No. 30—6 inches, Black Finish, **Regular** Model.....Per Dozen, $13.50
No. 025—6 inches, Nickel Plated, **Regular** Model.....Per Dozen, 15.00

Packed—One Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

END CUTTING NIPPERS

BULL DOG

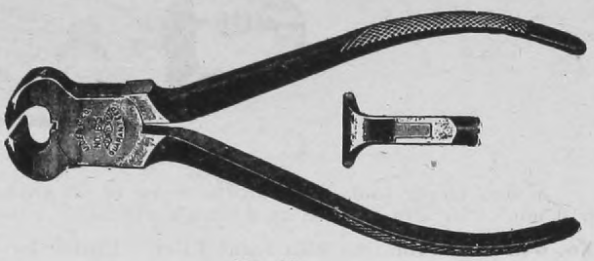
No. 60.

U TI CA **Bull Dog** End Cutting Nippers. Forged from a fine grade of steel, carefully tempered. A strong and easy cutting tool. Used by the carpenter, shoemaker, machinist, etc.

Inches	5	6	7	8
No. 60—Utica Finish.....Per Dozen,	$.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

JEWELERS'



No. 65.

U TI CA **Jewelers'** End Cutting Nippers. Forged from a fine grade of steel and carefully tempered, making it a strong and durable tool for the jeweler, optician, electrician and machinist.

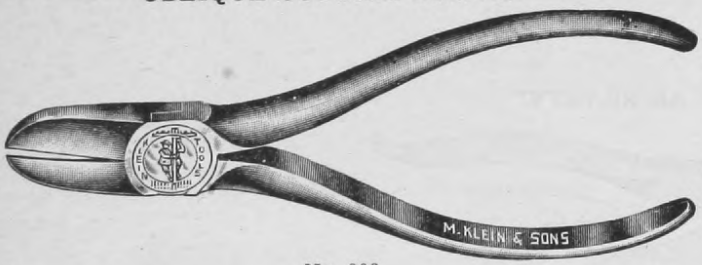
Inches	3½	4	4½	5
No. 65—Utica Finish.....Per Dozen,	$.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Inches	4	5	6
No. 60½—Imported, Extra Cast Steel, Polished Jaws.....Per Dozen,	$.....	.....	.....

Packed—Half Dozen in a Box.

OBLIQUE CUTTING PLIERS



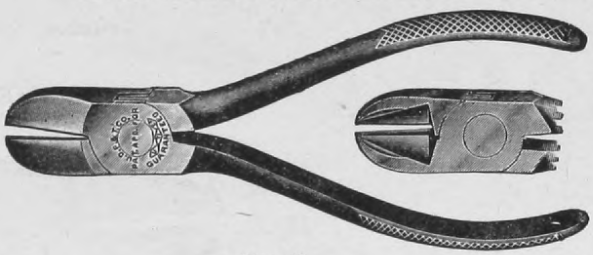
No. 202.

"Klein" Oblique Cutting Pliers. Used by shoemen for cutting out shoe buttons. The cutting edges are designed so they will cut silk insulation.

Inches	5	6
No. 202—Black Finish.....Per Dozen,	$16.25	17.50

Packed—Each in a Separate Carton, Half Dozen in a Box.

DIAGONAL CUTTING PLIERS



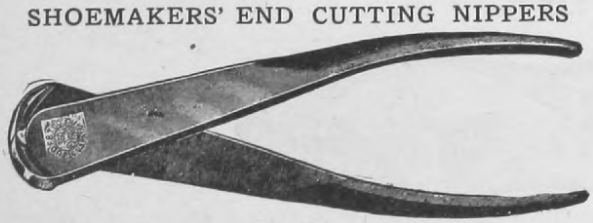
No. 42

U TI CA **Diagonal** Cutting Pliers. Used by telephone men, switchboard builders and electricians in assembling all kinds of electrical apparatus. The cutting edges are designed so they will cut silk covered wire without injuring the covering or bruising the Wire. Checkered Handles.

Inches	3½	4	4½	5	5½	6
No. 42—Utica Finish. Per Doz.,	$.....	.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

SHOEMAKERS' END CUTTING NIPPERS



No. 360.

U TI CA **Shoemakers'** End Cutting Nippers, unexcelled for shoemakers' use. Nearly as powerful as a compound lever nipper.

Inches	5	6	7	8
No. 360—Utica Finish Per Dozen..... $.....	.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

EXPANDING PLIERS

No. 19.

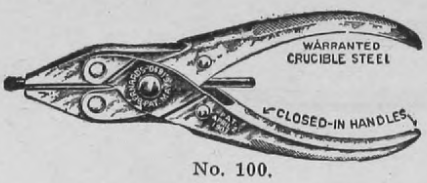
Very useful in turning out collars on lead traps and pipes, also for expanding the ends of lead pipe.

No. 19—Length, 11 inches.....Each, $.....

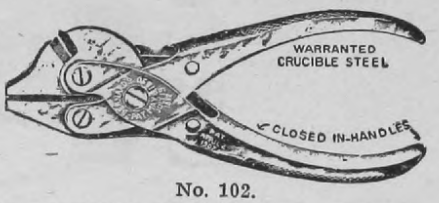
Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PLIERS AND NIPPERS



No. 100.



No. 102.

Bernard Flat Nose Pliers, Parallel Jaws, Open Throat, Crucible Steel, Closed-in Handles.

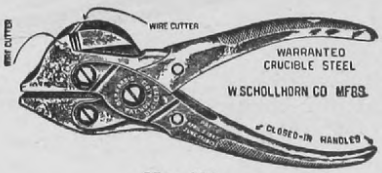
Inches	4½	5½	6½	8
No. 100—Nickel Plated....Per Dozen,	$6.00	8.00	10.00	15.00

Packed—Half Dozen in a Box.

Bernard Flat Nose **Cutting** Pliers, Parallel Jaws, Open Throat, Crucible Steel, Closed-in Handles.

Inches	4½	5½	6½	8
No. 102—Nickel Plated....Per Dozen,	$11.50	14.50	17.50	25.00

Packed—Half Dozen in a Box.

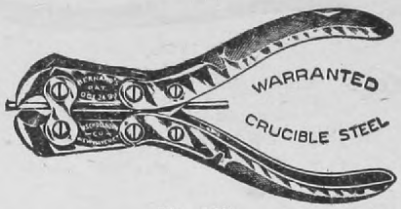


No. 122.

Bernard Flat Nose **Cutting** Pliers, Parallel Jaws, Open Throat, Crucible Steel, Closed-in Handles.

Inches	5	6
No. 122—Nickel Plated..Per Dozen,	$21.00	26.00

Packed—Half Dozen in a Box.



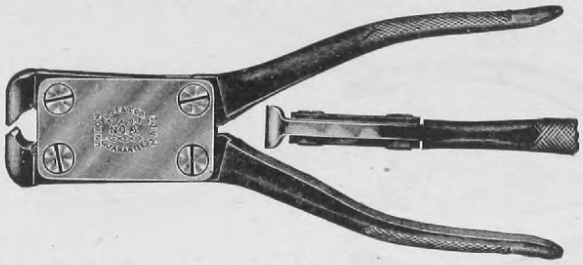
No. 125.

Bernard Compound Lever End Cutting Nippers. Open Throat Jaws, Crucible Steel, Spring in Handle, Interchangeable Parts.

Inches	4	5	6	7
To Cut Wires up to	1/16	3/32	1/8	5/32
No. 125—Nickel plated, Doz.,	$12.00	15.00	18.00	21.00

Packed—Half Dozen in a Box.

COMPOUND END CUTTING NIPPERS



No. 3.

U TI CA

Compound End Cutting Nippers. Will cut 3/32 inch wire any length by sliding the wire between the jaws. Jaws for cutting music wire can be furnished on request.

Inches	5½	7½	9
Leverage	20 to 1	21 to 1	22 to 1
Will Cut between Plates	3/32	5/32	7/32
Will Cut Wire up to	1/8	3/16	1/4
No. 3—Utica Finish, Dozen, $			

Packed—Each in Separate Carton, Half Dozen in a Box.

CARPENTERS' PINCERS

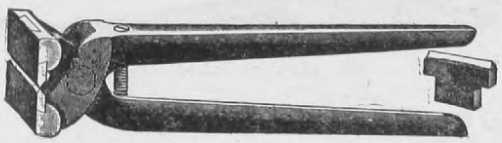
No. 80.

Wrought Steel, Extra Quality, Polished Face.

Inches	6	8	10	12
No. 80—Black Finish..Dozen,	$3.00	4.00	5.00	6.00

Packed—Half Dozen in a Box.

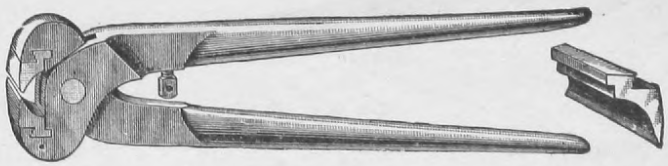
CUTTING NIPPERS



Acme Cutting Nippers, with Removable Steel Jaws dovetailed into the head.

Nos.	1	2	3	4	5
Length, inches	12	11	10	8	7
Each	$2.25	2.00	1.75	1.50	1.25
Extra Jaws, Pair	.55	.55	.55	.50	.50

Packed—One Pair in a Package.



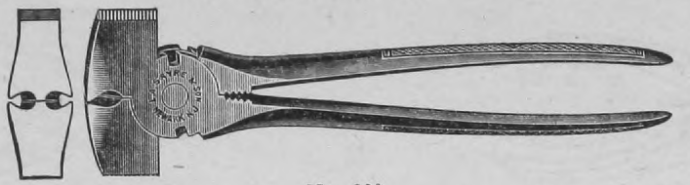
Carew Patent Cutting Nippers, made of Forged Steel, with Removable Tool Steel Jaws, finely tempered.

Length, inches	8	10	12	14
Each	$2.00	2.25	2.60	3.00
Extra Jaws, Pair	.55	.60	.65	.70

Packed—One Pair in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAMPION FENCE PLIERS



No. 660.

Champion Staple Puller and Fence Plier. Drop Forged from Special Steel.

No. 660—Full Nickel Plated.....Per Dozen, $20.00

Packed—Each in a Separate Carton, Half Dozen in a Box.

BLACK BULL FENCE PLIERS

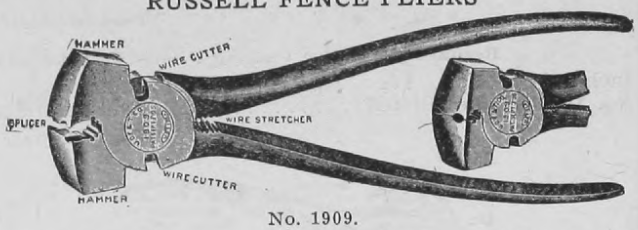
No. 1900.

U TI CA **Black Bull** Staple Puller and Fence Plier. The strongest, the handiest and the most useful fence tool made. It's the best. The only staple puller with three pulling points. Pulls bottom wires equally as well as the top wires, and the center grip pulls the staple straight.

No. 1900—10 inch, Utica Finish.....Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

RUSSELL FENCE PLIERS



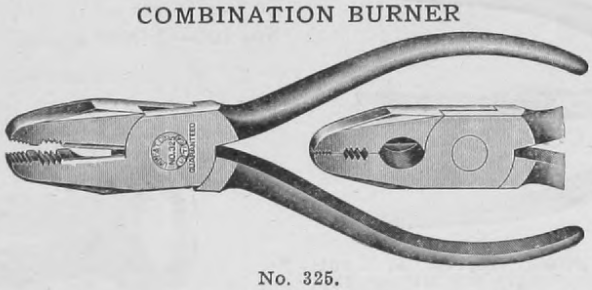
No. 1909.

U TI CA **Original Russell** Staple Puller and Fence Plier. The best two-prong Staple Puller on the market. Forged from high-grade steel and carefully tempered.

No. 1909—10 inch, Utica Finish.....Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

COMBINATION BURNER



No. 325.

U TI CA **Combination "Side Cutting" Burner** Plier. A high-grade tool, forged from a fine quality of steel. Used by plumbers, electricians, machinists and jewelers. As a general household tool it has no superior.

No. 325—5½ inches, Utica Finish.....Per Dozen, $.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

GAS AND BURNER PLIERS

No. 1300. Single Grip.

No. 1300. Double Grip.

U TI CA **Gas and Burner Plier.** Drop forged steel.

Single Grip, inches	5	6
No. 1300—Utica Finish.....Per Dozen, $.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

U TI CA **Gas and Burner Plier.** Drop forged steel.

Double Grip, inches	7	8	10
No. 1300—Utica Finish.....Per Dozen, $.....	.....	.....	.....

Packed—Each in a Separate Carton, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LINEMENS' TOOLS

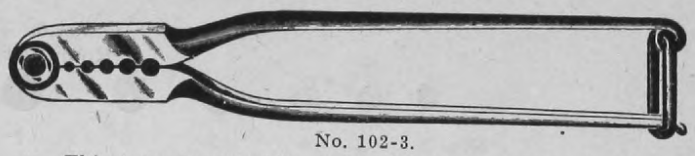
SPLICING CLAMPS

No. 102-1.

A handy vest pocket size, just the thing for Telephone Trouble-Men.

No. 102-1—7 inch, polished Head and black Handles. For wires: 10, 12, 14 and 16 copper; 12, 14, 16 and 18 iron.....Per Dozen, $20.00

Packed—One in a Carton.



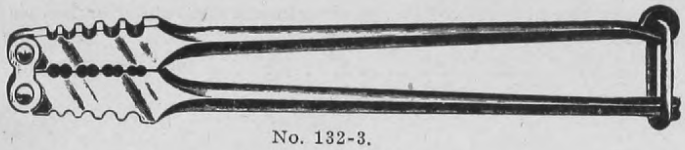
No. 102-3.

This type is generally used in Telephone Line Work and covers the range of bare wires a lineman will meet in this work. The large hole can also be used in serving guy wire.

No. 102-3—10½ inch, polished Head and black Handle. For Wires: 6, 8, 10, 12 and 14 Iron; 4, 6, 8, 10 and 12 Copper.....Per Dozen, $27.25

Packed—One in a Carton.

COMBINATION WIRE AND SLEEVE CLAMPS



No. 132-3.

As shown the clamp is set for holding Sleeves. When the Handles are reversed it is converted into a four-round-hole clamp for holding wire.

No. 132-3—10¾ inch, polished Head and black Handle. For Wires: 6, 8, 10, 12, 14 Iron, 4, 8, 10, 12, 14 Sleeves, B. & S. Gauge. Per Dozen, $29.00

Packed—One in a Carton.

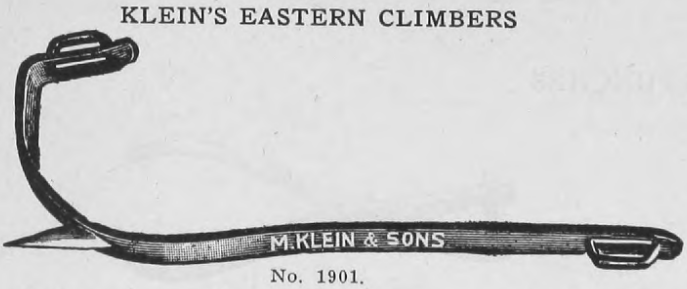
WIRE GRIPS OR COMEALONGS

Nos. 1613-20 to 1613-40.

Chicago Grip. made entirely of Steel. Will work equally well on Iron or Steel Wires. Pulls straight without leaving kinks in the wire. It is easy to put on and holds itself in place by a Spring actuating on the compressing lever.

No. 1613-20—For No. 10 Wire and smaller..Each, $4.50
No. 1613-30—For No. 6 Wire and smaller..Each, 5.00
No. 1613-40—For No. 0 Wire and smaller..Each, 8.00

KLEIN'S EASTERN CLIMBERS



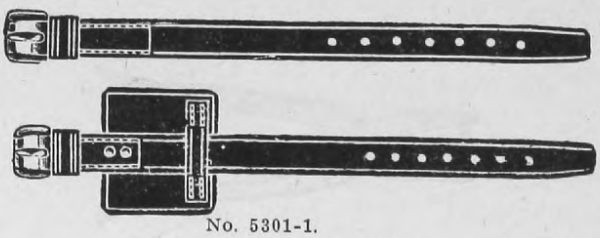
No. 1901.

Will give firm foothold while climbing. The Shank possesses flexibility to yield to the pressure of the leg; the Gaff is set high up in the Shank and can therefore be made longer. The Strap Loop is punched out of the metal of the Shank.

No. 1901—Inches.....15½, 16, 16½, 17, 17½
Per Dozen Pair.....All Sizes.....$32.00

Packed—Each Pair in a Separate Carton.

STRAPS FOR EASTERN CLIMBERS



No. 5301-1.

The Set consists of two upper and two lower Straps, made of select Oak Tanned Harness Leather. Heel Straps 22 inches long by 1¼ inches wide; calf strap 22 inches long by 1¼ inches wide.

No. 5301-1—Straps for Eastern climbers.....Per Dozen Sets, $16.00

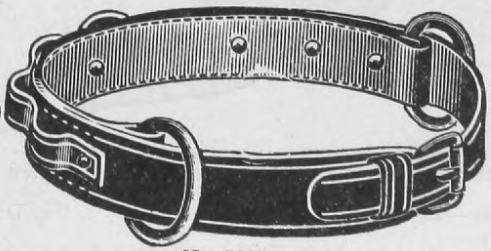
SAFETY STRAPS

No. 5250.

Made of select Harness Leather and provided with Imperial Snaps as shown on above cut.

No. 5250—Safety Strap, 1¾ inches wide and six feet long.....Per Dozen, $23.20

TOOL BELTS



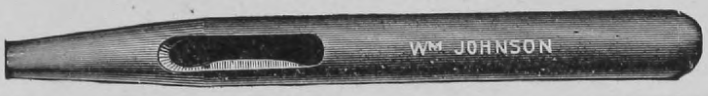
No. 5205.

Made of select Harness Leather with 6 loops. The inner layer carrying the "D" Rings is stitched and riveted to the outer layer. Provided with a strong buckle.

No. 5205—Tool Belt, 2¼ inches wide. Per Dozen, $26.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SADDLERS' PUNCHES



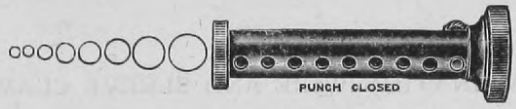
No. 245. Full Size Cut of Size **No. 6.** Full Size Cuts of other sizes below.

Round Shank

	Nos.	2	3	4	5	6	7	8	9	10
No. 245	Size, Nos.	1	2	3	4	5	6	7	8	9	10	12	14	16
	Size of Hole	5/64	3/32	1/8	5/32	11/64	3/16	7/32	15/64	1/4	9/32	11/32	13/32	15/32
	Per Dozen	$1.65	1.65	1.65	1.65	1.65	1.65	2.25	2.25	2.25	2.90	3.20	5.50	6.50

Packed—One Dozen in a Box.

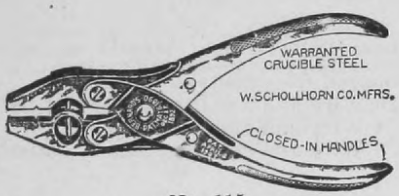
ROGERS BELT PUNCHES



This Punch is easily sharpened if it ever gets dull. When not in use the Punch is drawn back into the Handle which protects it. It is easily carried in the vest pocket, and will cut any size hole from 1/16 to 3/8 inch in canvas, rubber or leather belting. The most convenient and ingenious Tool for the purpose on the market.

Rogers Belt Punches ..... Per Dozen $9.00

Packed—Each Punch in a Separate Carton, One Dozen in a Box.



No. 115.

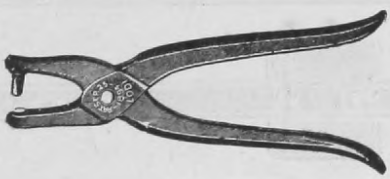
BERNARD BELT PUNCH AND PLIERS

A combination Tool for cutting and piercing **Round** Leather Belting at one operation. Crucible Steel, Parallel Jaws, Closed-in Handles, Full Nickel Plated.

No. 115—Inches	5	6
For Belt, inch	1/4	3/8
Per Dozen	$12.00	14.00

Packed—Half Dozen in a Box.

SPRING PUNCHES



No. 361.

Lodi, Steel, Bright Finish, Assorted Tubes.

No. 361—Single Spring Punches..... Per Doz. $2.75

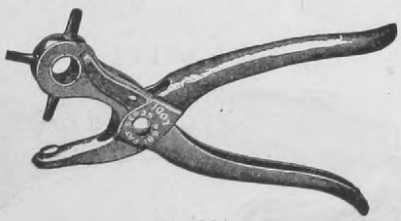
Packed—Half Dozen in a Box.

No. 1.

Extra Cast Steel, Box Joints, Assorted Tubes.

No. 1—Single Spring Punches..... Per Doz. $5.00

Packed—Half Dozen in a Box.

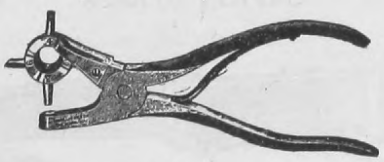


No. 384.

Lodi, Steel, Bright Finish, **Four** Tubes, Assorted Sizes.

No. 384—Revolving Spring Punches..... Per Doz. $9.00

Packed—Half Dozen in a Box.



No. 4.

Extra Cast Steel, Malleable Iron Handles, Four Tubes, Assorted Sizes.

No. 4—Revolving Spring Punches..... Per Doz. $13.00

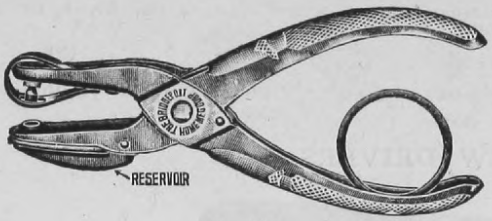
Packed—Half Dozen in a Box.

Extra Tubes for Single and Revolving Spring Punches

To Drive ..... Per Doz. $1.60 | **To Screw** ..... Per Doz. $1.60

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

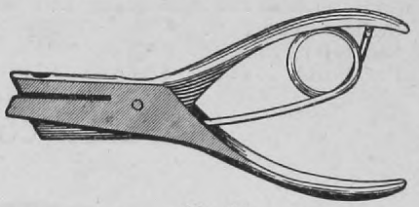
TICKET PUNCHES



No. 32.

No. 32—Club, with Reservoir to catch punchings Heavily Nickel Plated and Highly Buffed, Assorted Dies.....Per Dozen, $4.00

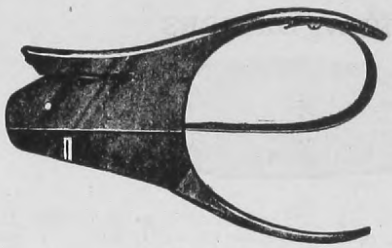
Packed—Half Dozen in a Box.



No. 31.

No. 31—Cast Steel, Full Polished and Nickel Plated, Plain Designs, Assorted.....Per Dozen, $6.00

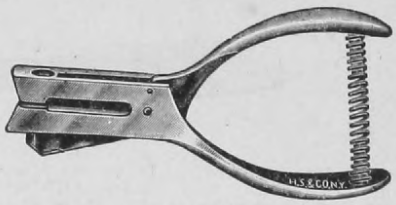
Packed—Half Dozen in a Box.



No. 1½.

No. 1½—Best Cast Steel, Full Polished and Nickel Plated, Fancy Designs, Assorted.....
.....Per Dozen, $24.00

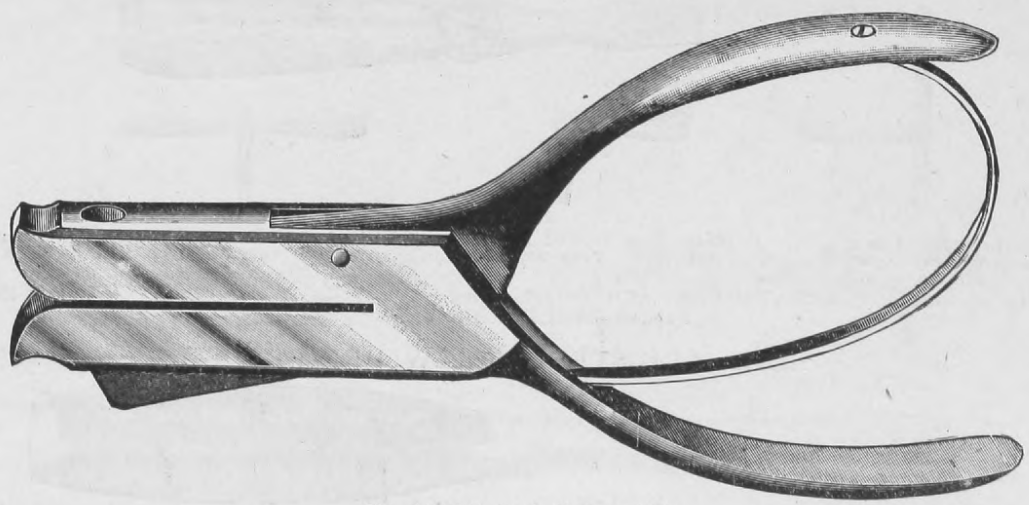
Packed—Half Dozen in a Box.



No. 11½.

No. 11½—Ticket Punch, Cast Steel, Full Polished and Nickel Plated. With Spiral Spring, Assorted
.....Per Dozen, $9.00

Packed—Half Dozen in a Box.



No. 14—1½ inch Slot or Cut.

No. 14—Ticket Punch. A Strong Punch with an Extra Deep Slot. Cast Steel, Full Polished and Nickel Plated, Assorted ..... Per Dozen, $18.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PERFECT HANDLE SCREW DRIVERS

No. 609.

Drop forged from one piece of steel with inlaid handles which are impervious to water and cannot break or become loose in any way. Handles are finished in their natural color, a rich red.

No. 609	Inches	2	2½	3	4	5	6	7	8	10	12
	Diameter, ins.	¼	¼	¼	¼	¼	5/16	5/16	3/8	3/8	3/8
	Per Dozen	$3.50	3.70	4.00	4.25	5.00	6.00	7.00	8.00	10.00	12.00

Packed—Half Dozen in a Box.

RUBBER COVERED SCREW DRIVERS

No. 613.

Especially adapted for Automobiles, Gas and Electric Motors and general use. The rubber extending continuously over the handle and shank meets the blade flush, so that there is no shoulder or other obstruction from end to end that can possibly prevent free manipulation at all times, and particularly in out-of-the-way places.

No. 613—Insulated Screw Drivers	Length of Blade, inches	3	6
	Length over all, inches	6¾	11¼
	Per Dozen	$6.00	9.00

Packed—Half Dozen in a Box.

PERFECT HANDLE MACHINISTS' SCREW DRIVERS

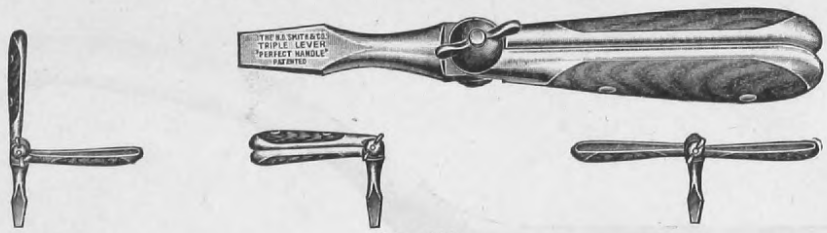
No. 610.

For Heavy Service, drop forged from one piece of steel with inlaid handles which are impervious to water and cannot break or become loose in any way. Made with a square shank for using a wrench to tighten or loosen cap screws, set screws, etc. The Handles are finished in their natural color, a rich red.

No. 610—Machinists' Screw Drivers	Length Over All, inches	9½	10½
	Length of Blade, inches	4½	5
	Size of Square, inches	7/16	9/16
	Width of point, inches	½	¾
	Thickness of Point, inches	5/64	5/64
	Per Dozen	$12.00	13.00

Packed—Half Dozen in a Box.

TRIPLE LEVER SCREW DRIVERS



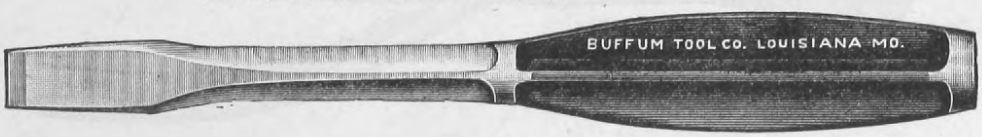
No. 611.

Perfect Handle Triple Lever Screw Drivers, drop forged from selected steel with inlaid handles which are impervious to water and cannot break or come loose in any way. Very useful to mechanics and automobilists ,can be used in three different positions as shown in cut.

No. 611—Width of Point, ½ inch, Thickness of Point, 5/64 inch.....Per Dozen, $18.00

Packed—Half Dozen in a Box.

BUHL ALL STEEL SCREW DRIVERS



No. 405.

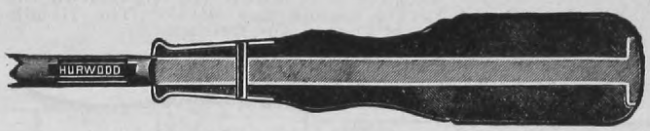
Drop forged from one piece of high grade steel, with grooved handles which enables the user to obtain a good grip. Made with a square shank for using a wrench to tighten or loosen cap screws, set screws, etc. Handles are the natural finish, Blades, shanks and ends are polished.

No. 405—5 inch Blade, 7/16 inch Shank.....Per Dozen, $9.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY HURWOOD SCREW DRIVERS



Sectional view showing construction.

These Screw Drivers are unsurpassed for strength and durability, the blade shank and head are formed of one piece of special steel. Two patented projecting wings under the head, together with a rivet which passes through the ferrule, handle and shank, securely fastens the blade in the handle, preventing its turning. The blades run clear through handle and are finely tempered. Handles are fluted and stained black.

REGULAR STYLE

No. 20.

No. 20.									
Blade, inches.....	2½	3	4	5	6	7	8	10	12
Diam. of Shank, in..	7/32	7/32	¼	5/16	5/16	11/32	3/8	3/8	3/8
Size of Tip, in.....	5/32	3/16	7/32	7/32	¼	9/32	5/16	3/8	3/8
Per Dozen	$2.40	3.00	3.60	4.20	4.80	5.40	6.00	7.20	8.40

Packed—Half Dozen in a Box.

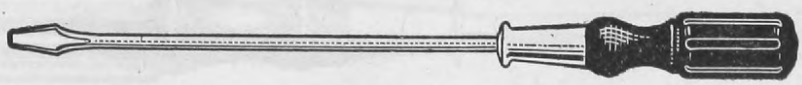
CABINET MAKERS'

No. 40.

No. 40.									
Blade, inches	2½	3½	4½	5½	6½	7½	8½	10½	12½
Diam. of Shank, in....	7/32	7/32	7/32	7/32	¼	¼	¼	¼	¼
Size of Tip, in.....	7/32	7/32	7/32	7/32	¼	¼	¼	¼	¼
Per Dozen	$2.40	3.00	3.60	4.20	4.80	5.40	6.00	7.20	8.40

Packed—Half Dozen in a Box.

ELECTRICIAN'S



No. 55.

Hurwood "Electrician's" Small Shank **Screw Drivers.** **Insulated** and Particularly adapted for light Electrical work as the tip fits the counter sink in the porcelain fittings.

No. 55.										
Blade, inches.....	2½	3	4	5	6	7	8	9	10	12
Diam. of Shank, in..	5/32	5/32	5/32	5/32	5/32	5/32	5/32	5/32	5/32	5/32
Size of Tip, in.....	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
Per Dozen.....	$2.40	3.00	3.60	4.20	4.80	5.40	6.00	6.60	7.20	8.40

Packed—Half Dozen in a Box.

HURWOOD SPECIAL SCREW DRIVERS

BABY

No. 21.

Handy little tools for the vest pocket, same design as the regular Hurwood, will work a good size screw.

HANDY

No. 60.

MACHINISTS

No. 51.

No. 52.

Especialy adapted for heavy work where a long driver cannot be conveniently used.

No. 21—1½ inch Blade, 7/32 inch Shank, 5/32 inch Tip, Length over all 4 inches.....Per Dozen $2.40
No. 60—1⅝ inch Blade, 5/16 inch Shank, 9/32 inch Tip, Length over all 5½ inches.....Per Dozen 4.20
No. 51—1¾ inch Blade, 3/8 inch Shank, 9/32 inch Tip, Length over all 5¼ inches.....Per Dozen 4.20
No. 52—3 inch Blade, 7/16 inch Shank, 15/32 inch Tip, Length over all 7¼ inches.....Per Dozen 6.60

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY "DEFIANCE" SCREW DRIVERS

These Screw Drivers have round steel blades, with the ends which are engaged in the handles squared, thus securely fastening them, and a pin is riveted through the ferrule, handle and shank. The Handles are of Hardwood, fluted and stained Red, with Steel Ferrules. Superior in strength, quality and finish.

REGULAR STYLE

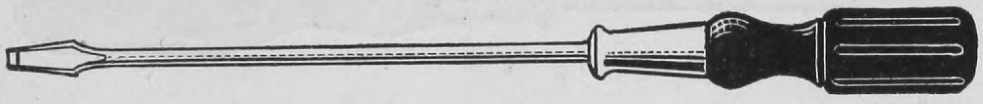
No. 70.

Standard Shape Tip.

No. 70.	Inches	2½	3	4	5	6	7	8	10
	Per Dozen	$1.92	2.04	2.16	2.52	2.88	3.24	3.72	4.80

Packed—Half Dozen in a Box.

ELECTRICIANS'



No. 77.

Small Shank, Handle and Tip.

No. 77.	Inches	2	3	4	5	6	7	8
	Per Dozen	$1.92	2.04	2.16	2.52	2.88	3.24	3.72

Packed—Half Dozen in a Box.

BUHL SONS CO.

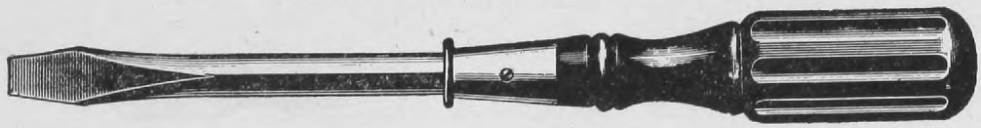
No. 33.

Round Tempered Tool Steel Blades, Polished; Fluted Hard wood Handles, Stained Black; heavy drawn Steel Ferrules.

No. 33—Buhl Sons Co., Screw Drivers	Inches	3	4	5	6	8
	Per Dozen	$2.00	2.50	3.00	3.50	4.75

Packed—Half Dozen in a Box.

BUHL SQUARE SHANK SCREW DRIVERS



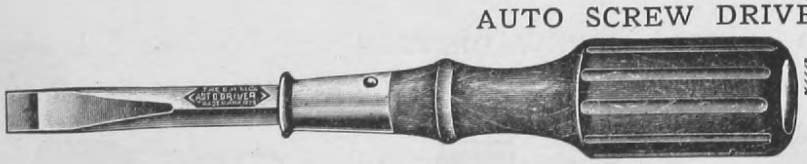
No. 402.

Especially adapted for Automobilists' and Machinists' use or wherever heavy service is required, the square blade is 50 per cent stronger than a round blade and will not bend when roughly used to pry, etc. Square Steel Blade, Black Fluted Handle, Rubberoid Finish. Blade, ferrule and handle fastened together with a heavy steel pin.

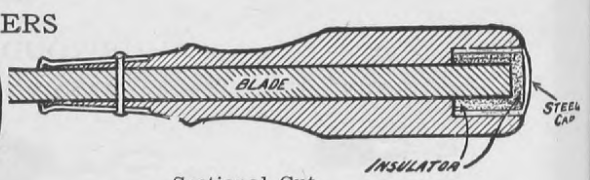
No. 402—Buhl Square Shank Screw Drivers, 5/16 inch	Inches	3	5
	Per Dozen	$2.50	3.00

Packed—Half Dozen in a Box or in Bulk.

AUTO SCREW DRIVERS



No. 1910.



Sectional Cut.

A perfect tool designed especially for automobile work, embodying some good features found in no other screw driver. The Square Forged Steel Blade permits the use of a wrench in starting large or rusty screws, etc. An Insulator in the butt end of handle, made of "Protal," the best non-conductor yet discovered; absolutely protects the user from shock. Has Black finish blade with flat sides of point highly polished, Weathered Oak finish Handle and Heavy Steel Ferrule, nickel plated and buffed. Blade, ferrule and handle fastened together with a heavy steel pin. A heavy steel cap protects the blade and insulator, it can be hammered without injuring the handle.

No. 1910—Auto Screw Driver, 5/16 inch Shank	Inches	3	5
	Per Dozen	$4.20	7.20

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAMPION SCREW DRIVERS

REGULAR

No. 10.

Round Blades, forged from toughest steel. Solid bolster and Fluted Handles. Intended for and will stand harder work than any other. They combine stronger construction, tougher temper, and finer finish.

No. 10—Inches	2½	3	4	5	6	8	10	12
Per Dozen	$3.00	3.50	4.25	5.00	6.00	8.00	10.00	12.00

Packed—Half Dozen in a Box.

CHAMPION CABINET SCREW DRIVERS

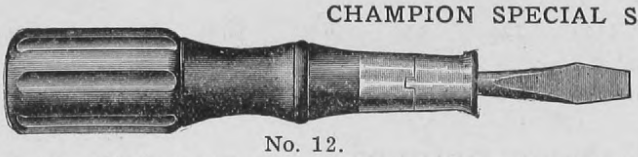
No. 011.

For Electricians, Cabinet Makers and light machine work. Same general construction as above except lighter.

No. 011—Inches	2½	3½	4½	5½	6½	8½
Per Dozen	$3.00	3.50	4.50	5.50	6.50	8.00

Packed—Half Dozen in a Box.

CHAMPION SPECIAL STYLE SCREW DRIVERS



No. 12.

No. 12—1¾ inch Blades.....Per Dozen $5.00

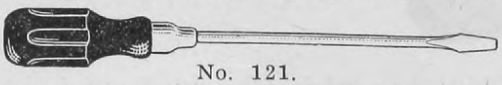
Packed—Half Dozen in a Box.

No. 13.

No. 13—1½ inch Blades.....Per Dozen $3.00

Packed—Half Dozen in a Box.

"LITTLE MASCOT" SCREW DRIVERS



No. 121.

Little Mascot is a small light screw driver, the blade is made of steel and carefully tempered.

No. 121—Inches	1½	3
Per Dozen	$2.40	3.00

Packed—One Dozen in a Box.

"PEERLESS" MINIATURE SCREW DRIVERS

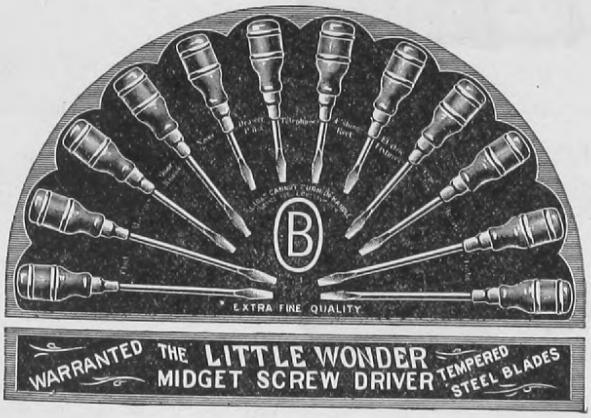
No 8.

The **Peerless** is a "Two-in-One" Screw Driver, the small one in the handle for Eye Glasses, the large one for watches, clocks, etc.

No. 8—Peerless Screw Driver.....Per Dozen $1.50

Packed—One Dozen on a Display Card.

SCREW DRIVER ASSORTMENTS



No. 42.

Comprising Four Drivers of each size, 1¼ inch, 2 inch and 3 inch, mounted on a very attractive red and gold display card.

No. 42—Screw Driver Assortment.....Each, $2.00

Packed—One Assortment in a Box.

"YANKEE" MAGAZINE POCKET SCREW DRIVER

No. 60.

A small and convenient tool to carry in the pocket. Made with Four Detachable Blades of varying widths and thicknesses; when closed 3 inches in length and ⅝ inch in diameter.

No. 60—Pocket Screw Driver.....Per Dozen $13.40

Packed—One Dozen in a Box.

SEWING MACHINE SCREW DRIVERS

No. 0.

Flat Steel Blade, case hardened; Black Enameled Handles, Nickel Plated Ferrules, 1½ inches in length.

No. 0—Sewing Machine Screw Driver..Per Dozen, $0.70

Packed—One Dozen in a Box.

BUHL OFFSET SCREW DRIVERS

No. 408.

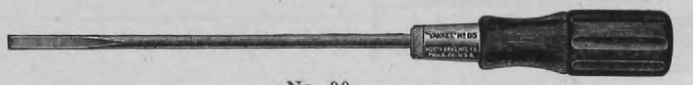
Made of good quality Steel, a very handy tool for automobilists' use and in place where it is not convenient to use an ordinary Screw Driver. Octagon Body, Length over all, 5 inches.

No. 408—Offset Screw Driver.....Per Dozen, $2.70

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YANKEE PLAIN SCREW DRIVERS



No. 90.

Standard Style, Strong, durable, well balanced. The fastenings of blade and handle are such that they cannot be loosened in use. Blades and ferrules are highly polished, and handle is of hard wood finished in dull black.

No. 90—Yankee Screw Drivers	Inches	2	3	4	5	6	7	8
	Per Dozen ..	$.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Box.

No. 95.

Yankee Screw Drivers, **Cabinet Style,** Slim Blade, strong, durable, well balanced. Blade and ferrules are highly polished, and handle is of hardwood, finished in dull black.

Inches	2½	3½	4½	5½	6½	7½	8½	9½	10½	12½	15½
No. 95.....Per Dozen, $.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Box.

YANKEE RATCHET SCREW DRIVERS

No. 12.

Short Ratchet, for Gunsmiths, Fitters, Electricians and Mechanics requiring a strong screw driver with a short stub handle. Operates either right or left hand or rigid.

No. 12—Nickel plated, blades 5/16 inch in diameter, 1⅛ inches long. Entire length, 5¾ inches. Per Dozen, $.....

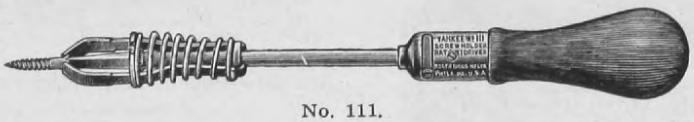
Packed—Half Dozen in a Box.

No. 11.

Operates either right or left hand or rigid. The adjustment for this operation is made by a small slide which moves across the case. Nickel plated and finely finished.

No. 11—Yankee Screw Drivers	Inches	2	3	4	5	6	8	10
	Per Dozen ..	$.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Box.

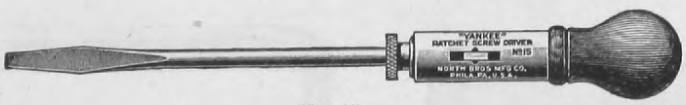


No. 111.

This is the No. 11 Screw Driver fitted with a screw holder attachment which is a small inexpensive affair to hold the screw, put it in place and drive it in; especially useful in places difficult to reach and where only one hand can be used. Screw Holder releases automatically and can be pushed back on blade when not in use.

No. 111—Yankee Screw Drivers.....	Inches	3	4	5	6
	Per Dozen	$.....	.....	.....	.....

Packed—Half Dozen in a Box.



No. 15.

Made to meet the demand for a light screw driver for small screws in electric work, etc. A knurled washer enables the user to turn the blade with the finger and thumb. Operates right or left hand or rigid.

No. 15—Yankee Screw Drivers.....	Inches	2	3	4	5
	Per Dozen.....	$.....	.....	.....	.....

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YANKEE SPIRAL RATCHET SCREW DRIVERS

No. 020.

Designed especially for driving of screws, operated right hand or rigid only. Entire length extended including Bit 17 inches, Length of stroke, 5 inches. Nickel Plated and finely finished.

No. 020—No. 20, Size 2, with 3 Bits of different widths.....Per Dozen, $.....
Extra Sets of 3 Bits.....Per Set, ...

Packed—One-twelfth Dozen in a Box.

No. 30.

Operates either right or left hand or rigid in any part of its length. Each tool is guaranteed to be perfect. Nickel Plated and finely finished.

No. 30—Entire Length extended including Bit 19¼ inches, Length of Stroke, 5¾ inches. With 3 Bits of different widths.....Per Dozen, $.....
No. 31—Entire Length extended including Bit 26¼ inches, Length of Stroke, 8¾ inches. With 3 Bits of different widths.....Per Dozen, $.....
Extra Sets of 3 Bits.....Per Set, ...

Packed—One-twelfth Dozen in a Box.

No. 130.

Quick Return—This is the No. 35 Driver with a spring added in the handle which causes the handle to come back for the next push, in driving screws in or out. Operates Right or Left Hand or Rigid. Nickel Plated and finely finished.

No. 130—Entire Length extended including Bit 20½ inches, Length of Stroke, 5½ inches. With 3 Bits of different widths.....Per Dozen, $.....
No. 131—Entire Length extended including Bit 28 inches, Length of Stroke, 8⅝ inches. With 3 Bits of different widths.....Per Dozen, $.....
Extra Set of 3 Bits.....Per Set, ...

Packed—One-twelfth Dozen in a Box.

No. 35.

For driving small screws only, very useful to electrical workers, cabinet makers, carpenters and mechanics who have a large number of small screws to drive. Bits are straight, so they can be driven through holes in insulators, etc. Operates Right or Left Hand or Rigid. Entire Length extended including bit 12⅜ inches. Length of Stroke 3⅜ inches. Nickel Plated and nicely finished.

No. 35—With 3 Bits of different widths.....Per Dozen, $.....
Extra Set of 3 Bits.....Per Set, ...

Packed—One-twelfth Dozen in a Box.

No. 135.

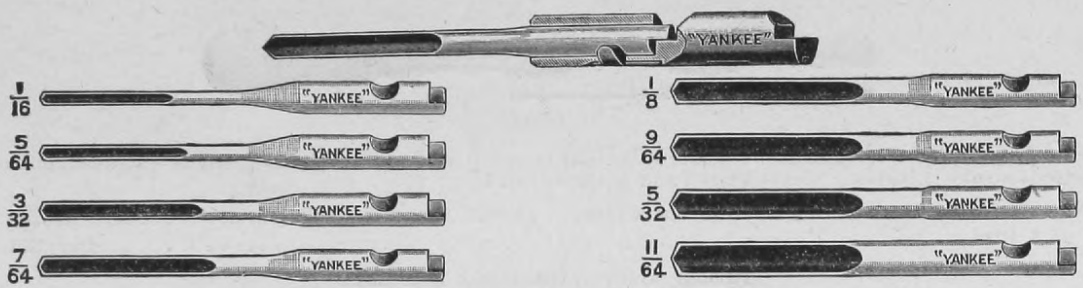
Quick Return—This is the No. 35 Driver with a spring added in the handle which causes the handle to come back for the next push, in driving screws in or out. Operates Right or Left Hand or Rigid. Nickel Plated and finely finished.

No. 135. Entire Length extended including Bit 13¼ inches, Length of Stroke, 3¼ inches. With 3 Bits of different widths.....Per Dozen, $.....
Extra Set of 3 Bits.....Per Set, ...

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YANKEE CHUCK AND DRILL POINTS



Yankee Chuck and Drill Points, for use with Yankee Ratchet Screw Drivers.

No. 30—With 8 Points, Chuck 9/32 inch diameter, for Nos. 020 and 30 Screw Drivers.....Per Set, $.....
No. 31—With 8 Points, Chuck 5/16 inch diameter, for No. 31 Screw Driver .....Per Set, ...
No. 35—With 3 Points 1/16, 5/64, 3/32, Chuck 7/32 inch diameter, for No. 35 Screw Driver.....Per Set, ...

Packed—Each Set in a Round Wooden Box, Twelve Sets in a Large Box.

YANKEE COUNTERSINKS

For use with Yankee Spiral Ratchet Screw Drivers.

No. 30—For No. 30 and No. 020 Screw Drivers.....Per Dozen, $.....
No. 31—For No. 31 Screw Drivers .....Per Dozen, ...
No. 35—For No. 35 Screw Drivers .....Per Dozen, ...

REID'S LIGHTNING BRACES

No. 1.

No. 2.

Reid's Lightning Brace and Screw Driver, can be used for running the bit both backward and forward, or to turn the bit one way only. Can also be used for drilling wood and metal and for driving screws.

No. 1—Large Size, Nickel Plated, with **One** Screw Driver Bit .....Per Dozen, $30.00
No. 2—Small Size, Nickel Plated, with **Two** Screw Driver Bits and **One** Boring Bit.....Per Dozen, 24.00

Packed—One-twelfth Dozen in a Box.

YANKEE PUSH BRACES

No. 75.

This Tool will hold all the small tools used in a bit brace but is operated by pushing the handle to revolve the tools in the same manner as a Yankee Spiral Ratchet Screw Driver. It excels the bit brace in its greater rapidity and convenience in the lighter work ordinarily done by the brace. The spiral rod is of steel, grooved for both right and left hand with extra long and hard bronze nuts to secure durability. All working parts are protected by sleeves so no parts are exposed to dirt and grit. Chuck is of malleable iron, polished and nickel plated; Jaws are of steel, drop forged and hardened. Handle is of Hardwood. Entire length without bit is 16¼ inches when closed, 23½ inches when extended.

No. 75—For Drilling Wood and Metal, no drill points furnished with this tool.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.

YANKEE RECIPROCATING DRILLS

No. 50.

The movement or traverse of the Driver is 8½ inches. The entire length of Tool is 16 inches. Any style straight Shank Drill 3-16 inch in diameter or less can be held in Chuck.

No. 50—For Drilling Wood and Metal, no drill points furnished with this tool.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTOMATIC DRILLS

No. 41.

Yankee. With new and improved Chuck which holds drill points tight and absolutely rigid. Full Nickel Plated, with Knurled Handle. Magazine in handle for holding drill points. Entire length with drill point 11⅜ inches.

No. 41—Automatic Drill with 8 Drill Points, 1/16 to 11/64 inch inclusive.....Per Dozen, $.....

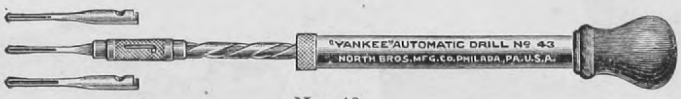
Packed—One-twelfth Dozen in a Box.

No. 42.

Yankee. With new and improved Chuck which holds drill points tight and absolutely rigid. Full Nickel Plated, with Hardwood Handle. Drill points are packed separately in a wooden box. Entire length with drill points 11⅜ inches.

No. 42—Automatic Drill with 8 Drill Points, 1/16 to 11/64 inch inclusive.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.



No. 43.

Yankee. This tool is a modification of the No. 42 Drill for use where the smallest sizes of drill points are required. Full Nickel Plated, with Hardwood Handle. Entire length with drill points 10¾ inches.

No. 43—Automatic Drill with 3 Drill Points, 1/16, 5/64 and 3/32 inch.....Per Dozen, $.....

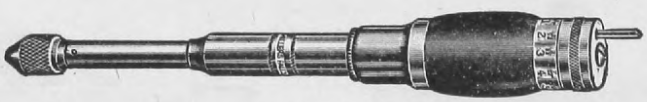
Packed—One-twelfth Dozen in a Box.

No. 44.

Yankee. This Drill contains a new device to adjust the **tension** spring making it weaker or stronger according to the character of the wood to be drilled and the size of drill to be used. Full Nickel Plated, with Metal Handle. Magazine in handle for holding drill points. Entire length with drill point, 11¼ inches.

No. 44—Automatic Drill with 8 Drill Points, 1/16 to 11/64 inch inclusive.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.

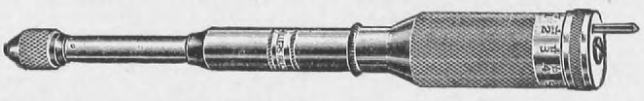


No. 79.

Millers Falls. Stained **Hardwood Handle,** metal parts Nickeled. Handle of peculiarly convenient grip for the hand; Chuck with Positive Grip. Eight drill points from 1/16 to 11/64 inch in diameter, each in a separate cell in handle and released without disturbing others; number and size of each point stamped on the handle over the corresponding cell. Entire Length 10½ inches.

No. 79—Automatic Drill with **Hardwood Handle** and Eight Drill Points, 1/16 to 11/64 inch inclusive. Per Dozen, $16.00

Packed—One-twelfth Dozen in a Box.



No. 180.

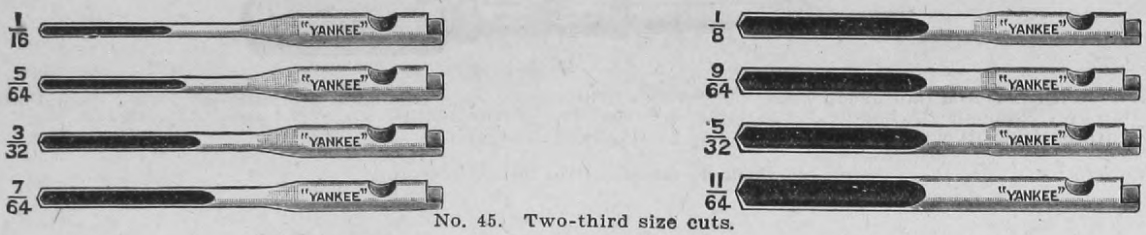
Millers Falls. All Steel with handsomely knurled and nickeled handle of peculiarly convenient grip for the hand; Chuck with Positive Grip. Eight drill points from 1/16 to 11/64 inch in diameter, each in a separate cell in handle and released without disturbing others; number and size of each point stamped on the handle over the corresponding cell. Entire Length 10½ inches.

No. 180—Automatic Drill, **All Steel** with Eight Drill Points, 1/16 to 11/64 inch inclusive.....Per Dozen, $19.75

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YANKEE DRILL POINTS

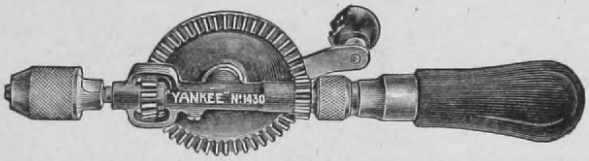


No. 45. Two-third size cuts.

No. 45—Yankee Drill Points. { In Sets of 8, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32 and 11/64 inch.....Per Set, $..... / Solid Sizes—1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32 or 11/64 inch.....Per Dozen, ...

Packed—One Set in a Box. Solid Sizes packed as wanted.

HAND DRILLS



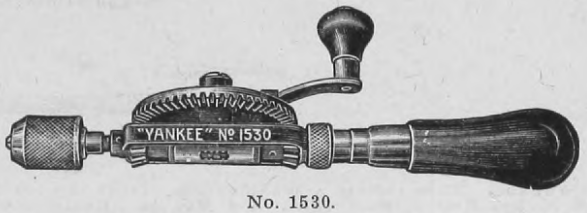
No. 1430.

Yankee, Single Speed, Plain Bearing, with **Three**-Jawed Chuck. Thrust on spindle is taken up by hardened steel bearing in lower end of frame so arranged that any wear can be readily taken up. Malleable Iron Frame, Cut Gears, Steel Spindle, turned and fitted. Diameter of Small Gears on Spindle, 1 3/16 inches; Large Gear, 3 1/8 inches. Finished in Dead Black with bright parts Nickel Plated and polished. Wood handle is 4 1/2 inches long, 1 1/2 inches in diameter, and can be detached from frame to use as a magazine for holding drills.

No. 1430—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch, inclusive; entire length, 10 1/2 inches; weight, 1 1/4 pounds.....

.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.



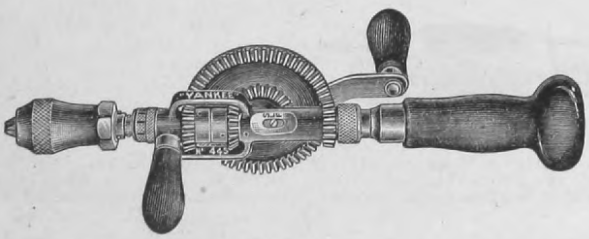
No. 1530.

Yankee, Single Speed, Plain Bearing, with **Three**-Jawed Chuck. **Right and Left hand and Continuous Ratchet movement.** Can be made to perform the different movements by means of the **shifter** on cylinder between the small gears. Thrust on spindle is taken up by hardened steel bearing in lower end of frame so arranged that any wear can be readily taken up. Malleable Iron Frame, Cut Gears, Steel Spindle, turned and fitted. Diameter of Small Gears on spindle, 7/8 inch; Large Gear, 3 inches. Finished in Dead Black with bright parts Nickel Plated and Polished. Wood Handle is 4 inches long, 1 1/2 inches in diameter, and can be detached from frame to use as a magazine for holding drills.

No. 1530—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch, inclusive; entire length, 10 1/2 inches; weight, 1 1/4 pounds.....

.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.



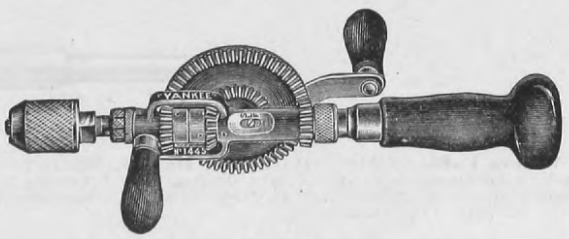
No. 445.

Yankee, Double Speed, Ball Bearing, with **Two**-Jawed Chuck. Jaws are of Drop Forged Steel. Thrust on spindle is taken up by hardened steel bearing in lower end of frame so arranged that any wear may be readily taken up. **Speed** can be instantly changed by means of shifter on cylinder. Malleable Iron Frame, Cut Gears, Steel Spindle, turned and fitted. Diameter of Small Gear, 1 5/8 inches; Large Gear, 4 inches; Gears on Spindle, 1 1/4 inches. Finished in Dead Black with bright parts Nickel Plated and Polished. Wood Handle is 4 1/2 inches long, 2 1/2 inches in diameter, and can be detached from frame to use as a magazine for holding drills.

No. 445—Double Speed Hand Drill, **Capacity—Round or Square** Shank Drills from 0 to 3/8 inch, inclusive; entire length, 15 3/4 inches; weight, 3 1/2 pounds.....

.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.



No. 1445.

Yankee, Double Speed, Ball Bearing, with **Three**-Jawed Chuck. Jaws are of Tool Steel. Thrust on spindle is taken up by hardened steel bearing in lower end of frame so arranged that any wear may be readily taken up. **Speed** can be instantly changed by means of a shifter on cylinder. Malleable Iron Frame, cut Gears, Steel Spindle, turned and fitted. Diameter of Small Gear, 1 5/8 inches; Large Gear, 4 inches; Gears on spindle, 1 1/4 inches. Finished in Dead Black with bright parts Nickel Plated and Polished. Wood Handle is 4 1/2 inches long, 2 1/2 inches in diameter, and can be detached from frame to use as a Magazine for holding drills.

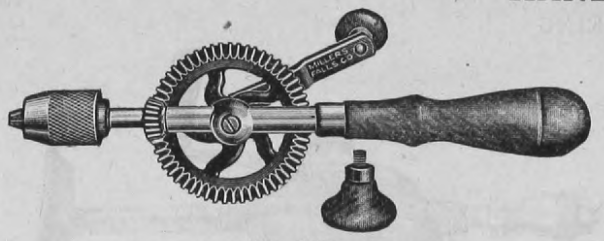
No. 1445—Double Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/8 inch, inclusive; entire length, 15 inches; weight, 3 1/2 pounds.

.....Per Dozen, $.....

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAND DRILLS

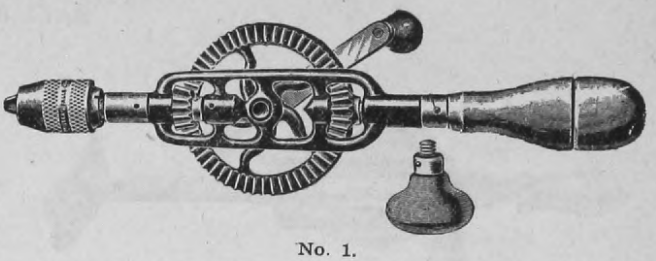


No. 303.

Millers Falls, Single Speed. Provided with hollow Main Handle of stained Hardwood, and **Three**-Jawed Chuck. Solid Steel Frame, Cut Gears, Large Gear Red, all other metal parts nickeled. Pinion made of Steel, with Detachable Side Handles.

No. 303—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch inc.; Entire Length 11¼ inches; weight 1½ lbs. ..... Per Dozen, $17.00

Packed—One Twelfth Dozen in a Box.



No. 1.

Millers Falls, Single Speed. Provided with Nickel Plated **Three**-Jawed Chuck, resting in Solid Sockets. Cocobolo Handles. Side Handle as shown in cut furnished with each Drill. No springs to get out of order. Drill Points are contained in Hollow Handle.

No. 1—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch inc.; Entire Length 12½ inches; Weight 1½ lbs. with **Eight Fluted Steel Drill Points,** assorted sizes ..... Per Dozen, $20.00

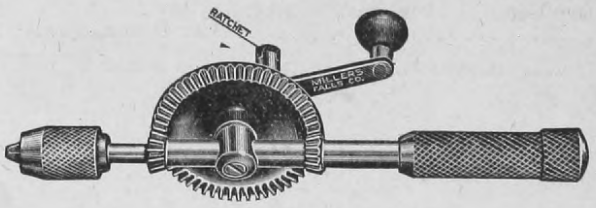
Packed—One Twelfth Dozen in a Box.

No. 5.

Millers Falls, Single Speed. Provided with Nickel Plated **Three**-Jawed Chucks, resting in Solid Sockets. Cocobolo Handles. Double geared and provided with wide rim gear to be grasped between the thumb and fingers when the Drill is used for delicate work. Side handle as shown in cut furnished with each Drill. No springs to get out of order. Drill Points are contained in Hollow Handle.

No. 5—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch inc.; Entire Length 12½ inches; weight 1¾ lbs. with **Eight Fluted Steel Drill Points,** assorted sizes ..... Per Dozen, $24.00

Packed—One Twelfth Dozen in a Box.

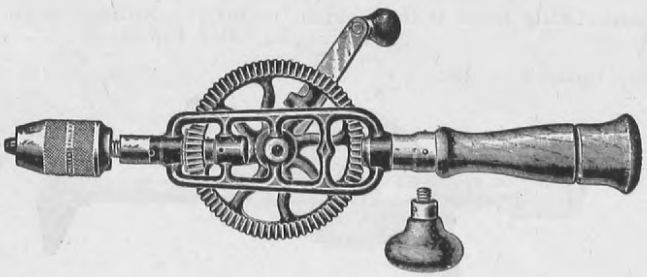


No. 353.

Millers Falls, Single Speed. All metal, except Enameled Hardwood Crank Handle. **Three**-Jawed Chuch, Solid Steel Frame, Nickeled; large gear enameled black, with red stripe. Cut Gears. Pinions made of Steel. Hollow end handle, handsomely knurled, with removable screw caps. Provided with simple and effective **Ratchet** operated by raising and turning to the right or left the cap to a small boss on the crank handle. This is a convenience in cramped places or when doing delicate work.

No. 353—Ratchet Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/16 inch inc.; Entire Length 11 inches; weight, 1¾ lbs..... Per Dozen, $29.00

Packed—One Twelfth Dozen in a Box.

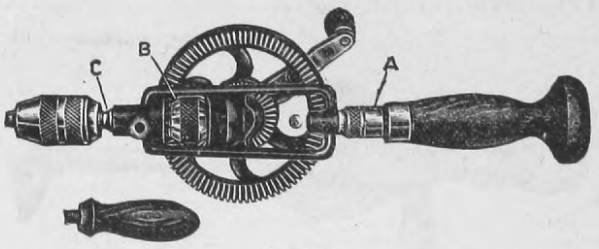


No. 2.

Millers Falls, Single Speed. Provided with Nickel Plated **Three**-Jawed Chuck, resting in Solid Sockets. Cocobolo Handles. Has Cut Gears and adjustable friction roll to prevent gears from springing out of engagement. Furnished with Side Handle. Drill Points are contained in Hollow Handle.

No. 2—Single Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/8 inch inc.; Entire Length 14½ inches; Weight 2½ lbs.; with **Eight Fluted Steel Drill Points,** assorted sizes ..... Per Dozen, $35.00

Packed—One Twelfth Dozen in a Box.



No. 980.

Millers Falls, Double Speed. Changeable from 1½ to 1 and 4 to 1, operated by shifting knurled ring B. Pinions and shifting device of Steel and inclosed for protection. **Star** Pattern Chuck with **three** jaws opening with springs, which are protected from injury and will not get out of order and hold Round Shank only. Provided with Hollow End Handle with Mushroom Head, malleable iron frame; large gear painted red, other parts nickeled. Hollow end handle with receptacle for holding twist drills, detached by loosening a knurled check nut. Removable side grip handle. Cut Gears with adjustable friction roll to equalize bearings.

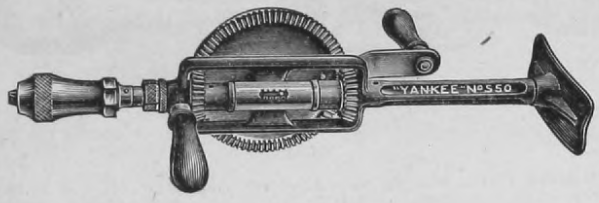
No. 980—Double Speed Hand Drill, **Capacity—Round** Shank Drills from 0 to 3/8 inch inc.; Entire Length 15¼ inches; Weight 3 lbs.. ..... Per Dozen, $40.00

Packed—One Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BREAST DRILLS

BALL BEARING

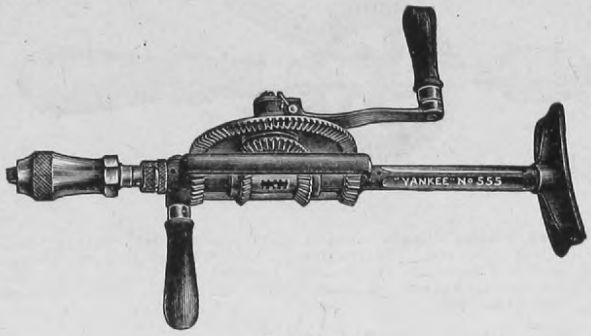


No. 550.

Yankee, Single Speed, with **Two**-Jawed Chuck and **Right** and **Left**-hand and continuous **Ratchet** movement. Can be made to perform different movements by means of the **Shifter,** on the cylinder. Adjustable Ball Bearings take all strain or thrust. Malleable Iron Frame, Cut Gears, Drop Forged and hardened Steel Jaws, Steel Spindles, turned and fitted. Diameter of Small Gear, 1⅞ inches; Large Gear, 5¼ inches. Finished in Dead Black with bright parts Nickel Plated and Polished.

No. 550—Single Speed Breast Drill, **Capacity—Round** or **Square** Shank Drills from **0** to ½ inch, inclusive; entire Length, 18 inches; weight, 5½ lbs.....
.....Per Dozen, $.....

Packed—One-Twelfth Dozen in a Box.

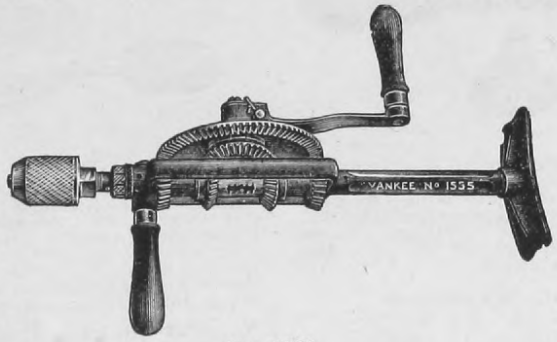


No. 555.

Yankee, Double Speed, same as No. 550, except that in addition to the shifter on the cylinder for changing the movement, this drill has a lever at the hub of crank by which the operator can change from **fast to slow speed** or vice versa without removing the drill from the work.

No. 555—Double Speed Breast Drill, **Capacity—Round or Square** Shank Drills from **0** to ½ inch, inclusive; entire Length, 18 inches; weight, 6½ lbs.....
.....Per Dozen, $.....

Packed—One-Twelfth Dozen in a Box.

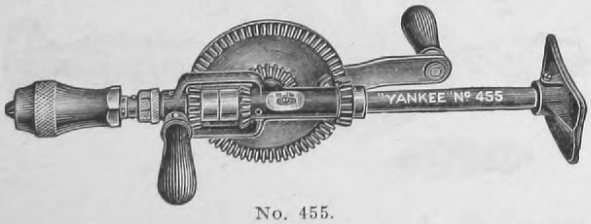


No. 1555.

Yankee, Double Speed, with **Three**-Jawed Chuck—**Right** and **Left**-hand and continuous **Ratchet** movement. Can be made to perform different movements by means of the shifter on the cylinder. In addition this drill has a lever at the hub of crank by which the operator can change the **speed** without removing the drill from the work. Adjustable Ball Bearings take all strain or thrust. Malleable Iron Frame, Cut Gears, Drop Forged and hardened Steel Jaws, Steel Spindles, turned and fitted. Diameter of small Gear, 1⅞ inches; large Gear, 5¼ inches. Finished in Dead Black with bright parts Nickel Plated and Polished.

No. 1555—Double Speed Breast Drill, **Capacity—Round** Shank Drills from **0** to ½ inch, inclusive; Entire Length, 17½ inches; weight, 5½ lbs.....Per Dozen, $.....

Packed—One-Twelfth Dozen in a Box.

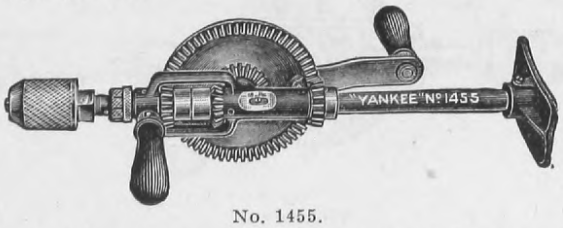


No. 455.

Yankee, Double Speed, with **Two**-Jawed Chuck. Jaws are of Drop Forged Steel. Adjustable Ball Bearings on spindle take up all strain or wear. **Speed** can be instantly changed from fast to slow or vice versa by means of the shifter on cylinder. Malleable Iron Frame, Cut Gears, Steel Spindles, turned and fitted. Diameter of small Gear, 1⅞ inches; large Gear, 5 inches; Gears on Spindle, 1½ inches. Finished in Dead Black with bright parts Nickel Plated and polished. Adjustable Breast Plate.

No. 455—Double Speed Breast Drill, **Capacity—Round or Square** Shank Drills from **0** to ½ inch, inclusive; entire Length, 17¼ inches; weight, 5½ lbs...
.....Per Dozen, $.....

Packed—One-Twelfth Dozen in a Box.



No. 1455.

Yankee, Double Speed, with **Three**-Jawed Chuck. Jaws are of Tool Steel. Adjustable Ball Bearings on Spindle take up all strain. **Speed** can be instantly changed from fast to slow or vice versa by means of the shifter on cylinder. Malleable Iron Frame, Cut Gears, Steel Spindles, turned and fitted. Diameter of small Gears, 1⅞ inches; large Gear, 5 inches; Gears on Spindle, 1½ inches. Finished in Dead Black with bright parts Nickel Plated and polished. Adjustable Breast Plate.

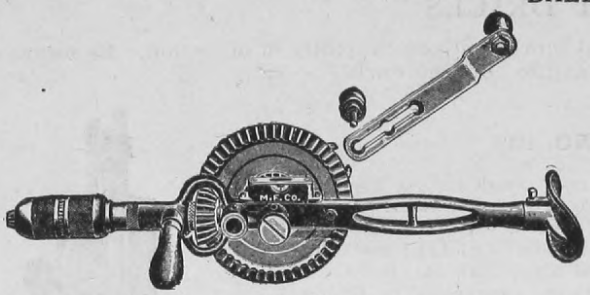
No. 1455—Double Speed Breast Drill, **Capacity—Round** Shank Drills from **0** to ½ in., inclusive; entire Length, 16½ inches; weight, 5½ lbs...Per Dozen, $.....

Packed—One-Twelfth Dozen in a Box.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BREAST DRILLS

BALL BEARING

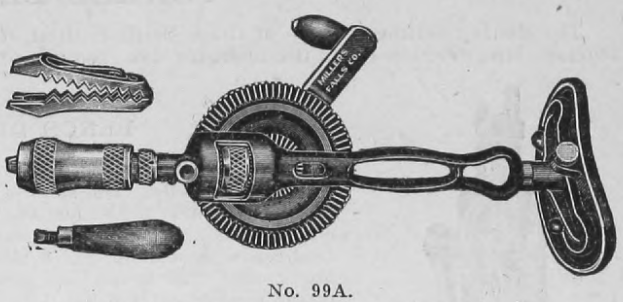


No. 12.

Millers Falls, Double Speed. Changeable from Even to 3 to 1. Cut Gears with Idler Roll. Level Attachment to show when the tool is being held true. **Master Chuck** which holds both Round and Square Shanks. The Handles are Cocobolo, and the Chucks Nickled. Everything about the tool will be found durable and nicely finished. **Extension Crank** with radius from 4 to 6 inches adding to the power of the tool. **Ball Bearing,** and Adjustable Breast Plate.

No. 12—Double Speed Breast Drill, **Capacity—Round** Shank Drills from ⅛ to ½ inch inc., all sizes of Bit Stock and No. 1 Taper Shanks; Entire Length 17½ inches; Weight 6½ pounds .....Per Dozen, $40.00

Packed—One Twelfth Dozen in a Box.

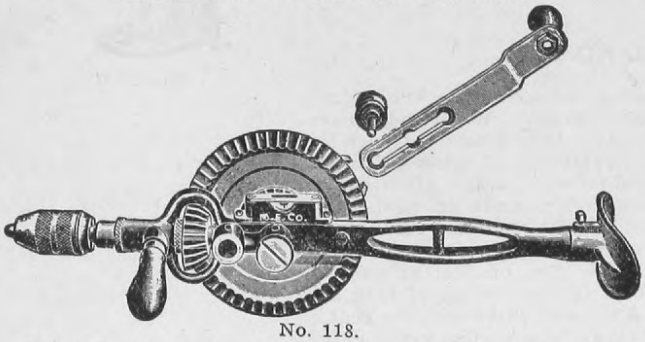


No. 99A.

Millers Falls, Double Speed. Changeable from even to 3 to 1. **Barber** Improved Pattern Chuck with Alligator Jaws which hold both Round and Square Shanks. Cut Gears; Small Gear made of Steel. Selected Hardwood handles stained; malleable iron, black frame; large gear and main breast plate red. Breast plate **Adjustable** to different positions and made to fit the hand; Tool can be held easily and steadied in awkward and out-of-the-way places when the breast plate must be held in hand. **Auxiliary** Breast Plate furnished for use in doing Heavy Work. **Ball** Thrust Bearings.

No. 99A—Double Speed Breast Drill, **Capacity—Round** Shank Drills from ⅛ to ½ inch inc., all sizes of Bit Stock and No. 1 Taper Shanks; Entire Length 18½ inches; Weight 7 pounds. ..... Per Dozen $42.00

Packed—One Twelfth Dozen in a Box.

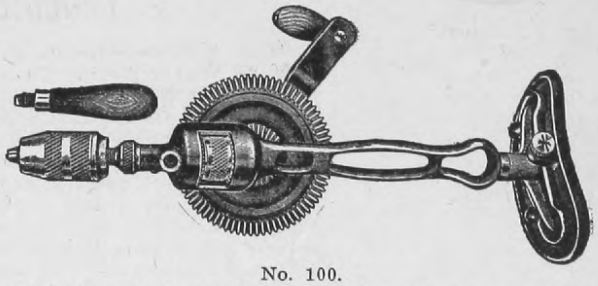


No. 118.

Millers Falls, Double Speed. Changeable from even to 3 to 1; **Star** pattern Chuck with **3 Jaws** which are operated with springs protected from injury. Stained hardwood handles; large gear painted green and malleable iron main stock enameled black; chuck and crank nickled. Patent Level Attachment, Cut Gears; large gears with idler roll to equalize bearings; Pinion made of Steel. Extension Crank with radius from 4 to 6 inches. **Ball** Thrust Bearings and Adjustable Breast Plate.

No. 118—Double Speed Breast Drill, **Capacity—Round** Shank Drills from 0 to ½ inch inc.; Entire Length 17½ inches; Weight 6½ pounds .....Per Dozen $47.00

Packed—One Twelfth Dozen in a Box.

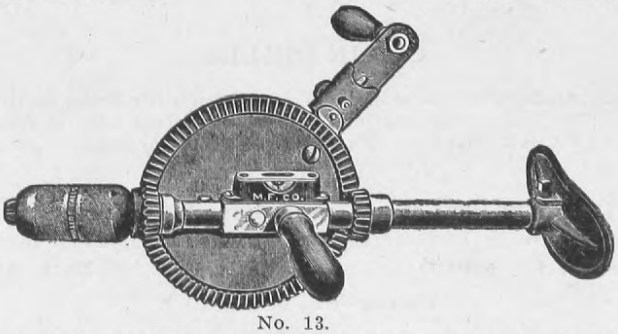


No. 100.

Millers Falls, Double Speed. Changeable from even to 3 to 1. **Star** Pattern Chuck with **3 Jaws** which are operated with springs protected from injury, and hold Round Shanks only. Selected hardwood handles, stained; malleable iron, black frame; large gear and main breast plate red. Breast Plate **Adjustable** to different positions and made to fit the hand; the tool can be held easily and steadied in awkward and out-of-the-way places when the Breast Plate must be held in the hand. **Auxiliary** Breast Plate furnished for use in doing Heavy Work. **Ball** Thrust Bearing.

No. 100—Double Speed Breast Drill, **Capacity—Round** Shank Drills from 0 to ½ inch inc.; Entire Length 18 inches; Weight 7 pounds ..... Per Dozen $49.00

Packed—One Twelfth Dozen in a Box.



No. 13.

Millers Falls. Cocobolo Handle. Solid Steel Main Stock; large gear and underside of Breast Plate painted red, other metal parts polished and nickeled. Cut Gears; **High Speed**, large gear 6 inches in diameter, giving speed of 4½ to 1; Idler Gear to equalize Bearings. Steel Pinions. **Ball** Thrust Bearings and Patent Level Attachment. **Master Chuck,** holding and centering Round and Square Shanks. **Extension** Crank with a radius of 5½ to 7 inches, adding to the power of the tool. Breast Plate **Adjustable** to different positions and removable.

No. 13—High Speed Breast Drill, **Capacity—Round** Shank Drills from ⅛ to ½ inch inc.; all sizes of Bit Stock and No. 1 Taper Shanks; Entire Length 15 inches; Weight 6 pounds.....Per Dozen $55.00

Packed—One Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YANKEE BENCH DRILLS

The distinguishing feature of these Drills is their strength, convenience and rapidity in operation. By means of automatic and friction feeds the operator has free use of one hand to hold the work.

No. 1003.

BENCH DRILL NO. 1003

Made with **one speed** only, one turn of crank giving 3½ revolutions to spindle. The spindle is steel, ⅜ inch diameter. A little lever on the arm to the left of the spindle locks it fast to open and close chuck. The chuck is of steel, polished and nickel plated. The feed screw is of steel, has V thread and fitted with ball bearing at lower end. The crank is 4 inches between centers. The bracket at the base of column has a vertical adjustment of 2¾ inches—the hand feed adjustment 1¼ inches. The table is 4¾ inches in diameter, its center 2½ inches from face of slide. The extreme depth of the drill from front of table to back of bench clamp bracket is 9¾ inches. The greatest height from the table to point of chuck is 5 inches, an unusually large capacity for drills of this kind. This permits the use of ordinary twist drills. The frame is finished in dead black color.

No. 1003—Yankee Bench Drill, holding Round Shank Drills from 0 to ¼ inch, inclusive, in diameter; total height, 18¾ inches; net weight, 10¼ lbs.....Each, $.....

Packed—One in a Box. Shipping Weight, 20 Pounds.

No. 1005.

BENCH DRILL NO. 1005

Made with **two speeds** and quickly changed from one to the other by simply moving the shifter on spindle. When the shifter is placed in center notch the spindle is locked fast, to open or close chuck. On the fast speed one revolution of crank gives 3½ to spindle and on slow speed one revolution of crank gives one to spindle. The spindle is 9-16 inch diameter, made of steel. The chuck is of steel, polished and nickel plated. The feed screw is of steel, has square thread and fitted with ball bearing at lower end. The crank is 6 inches between centers. The bracket at base of column has a vertical adjustment of 5 inches—the hand feed adjustment 1¾ inches. The table is 6¾ inches diameter, its center 3½ inches from face of slide. The lower end of bracket slide on column is 6 inches below clamp bracket resting on bench. The extreme depth of the drill from front of table to back of bench clamp bracket is 13½ inches. The greatest height from the table to point of chuck is 7½ inches, an unusually large capacity for drills of this kind. This permits the use of ordinary twist drills. The frame is finished in dead black color.

No. 1005—Yankee Bench Drill, holding Round Shank Drills from 0 to ½ inch, inclusive, in diameter; total height, 28 inches; net weight, 29 lbs.....Each, $.....

Packed—One in a Box. Shipping Weight, 57 Pounds.

No. 719.

CHAIN DRILLS

Very useful when used in connection with a Bit Brace or Breast Drill. The feed is automatic, and the end thrust has its friction reduced by Ball Bearings. Four feet of chain furnished with each drill.

No. 719—With Star Chuck for holding **Round Shank** Drills from 0 to ½ inch, inclusive; entire length, 11¾ inches; weight, 4½ pounds.....Each, $4.00

Packed—One in a Box.

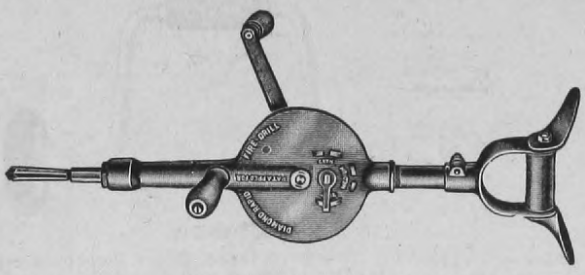
No. 720—With Barber Improved Chuck for holding Bit Stock Shank Drills and some sizes of Round Shank, most satisfactorily 3/16 to ⅜ inch, inclusive; entire length, 11½ inches; weight, 4½ pounds.....Each, $2.80

Packed—One in a Box.

No. 720.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DIAMOND RAPID FIRE DRILLS



For Drilling Holes in Concrete, Brick and Stone for Expansion Shields

The Diamond "Rapid Fire" Drill reproduces the same action as is produced with the hand-hammer and drill with greatly multiplied speed. The hammer's action upon the drill and the drill's action upon the stone is identical with that produced in the old way with the ordinary hammer and steel drill with **eight times the rapidity,** in other words, with every revolution of the crank **eight sharp** blows are struck. It is an acknowledged fact that the best results obtained with the old method of hammer and drill are produced by comparatively light blows properly timed and struck. The "Rapid Fire" Drill was designed on this theory to strike from eight to twenty times the number of blows that are regulary delivered with an ordinary hand-hammer and a corresponding increase is produced in its rapidity in drilling holes. The action of this drill is precussive and its mechanism is so constructed that practically **no vibration** or concussion is felt by the operator. The handles are so arranged as to adapt the drill for use in any position that may be required. Has three adjustments, hard, medium and soft, controlled by a spring lever at the side of the housing and each is furnished with two springs of different power, thus allowing six graduations to the force of the blow that can be delivered by the hammer. **Will drill** a hole for a ¼x1 inch screw anchor in 15 seconds and only consumes 1 minute and 35 seconds to drill a hole for ½x4 inch expansion bolt in concrete. Holes drilled with this machine have a smooth bore and a sharp edge and there is no danger of cracking the wall at the surface.

Diamond Rapid Fire Drills, **without** Drill Points.....Each, $32.00

Drill Points for Diamond Rapid Fire Drills

Diameter .....inch,	¼	5/16	⅜	7/16	½	⅝	¾	⅞	1
Length over all..inches,	4¼	4¼	4¼	4¼	6	6	6	6½	6½
Depth of Hole Drilled, in.	3	3	3	3	4½	4½	4½	5	5
Price .....Each,	$0.71	.71	.71	.75	.84	1.00	1.17	1.33	1.50

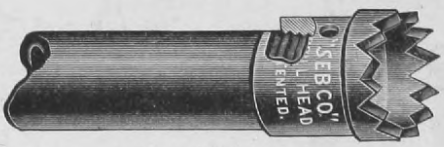
Assorted Set of Drill Points, Consisting of One Each

Set No. 1.....	¼	5/16	⅜	7/16	½	..	..	..	..	Per Set, $3.70
Set No. 2.....	½	⅝	¾	⅞	1	..	..	..	..	Per Set, 5.84
Set No. 3.....	⅜	7/16	½	⅝	¾	..	..	..	..	Per Set, 4.46
Set No. 4.....	¼	5/16	⅜	7/16	½	⅝	¾	⅞	1	Per Set, 7.40

STAR DRILLS

No. 12

DRILL HEADS



Nos. 2 to 6.

Diamond Star Drills, for brick, stone, concrete and cement.

No.	Length Inches	Diameter of Cutting Edge, Inches.									
		¼	5/16	⅜	½	⅝	¾	⅞	1	1⅛	1¼
12	12	$8.50	$8.50	$8.50	$9.00	$10.00	$12.00	$14.00	$18.00	$24.00	$30.00

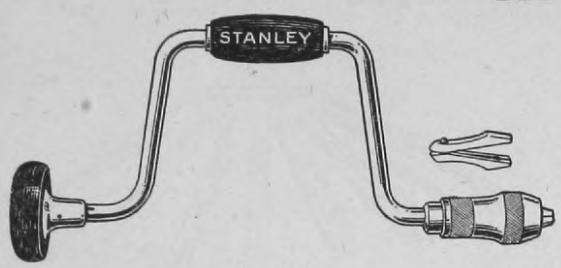
SEBCO DRILL HEADS

Can be transformed into an extension drill by the use of a piece of gas or water pipe for a handle. For drilling deep holes in brick or plaster the Drill Heads are found very convenient. They are made of best Steel carefully tempered and can be carried in the pocket.

Drill Head Nos.	Size Pipe for Handle Inch	Diameter of Hole Inch	Drills for Expansion Shield for following Bolts, Inch	Per Dozen	**Drill Head Nos.**	Size Pipe for Handle Inch	Diameter of Hole Inch	Drills for Expansion Shield for following Bolts, Inch	Per Dozen
2	⅛	9/16	⅜	$3.00	**5**	½	1	¾	$3.00
3	¼	11/16	½	3.00	**5A**	½	1⅛	1	3.60
4	⅜	⅞	⅝	3.00	**6**	¾	1¼	.....	4.20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BIT BRACES

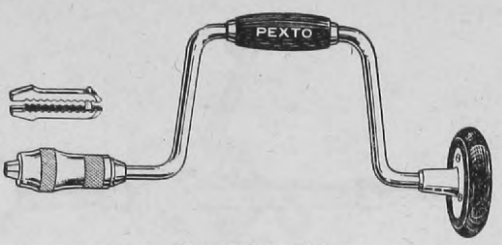


No. 966.

Sleeve Braces, Polished Steel Sweep, Plain Jaws, Hardwood Head and Handle.

No. 966	8 inch Sweep	Per Dozen, $4.75
	10 inch Sweep	Per Dozen, 5.25

Packed—Half Dozen in a Box.

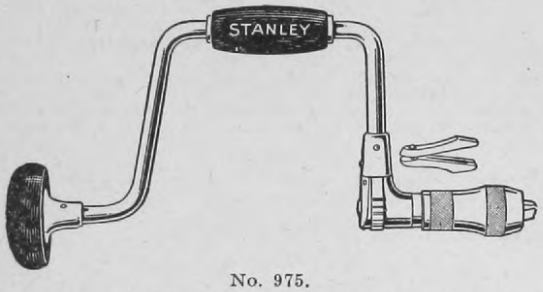


Nos. 708 to 712.

Sleeve Braces, Full Nickel Plated, Steel Sweep, Plain Jaws, Hardwood Head and Handle.

Nos.	**708**	**710**	**712**
Sweep, inches	8	10	12
Per Dozen	$13.15	14.20	15.25

Packed—Half Dozen in a Box.

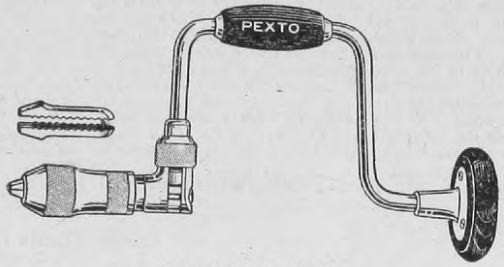


No. 975.

Ratchet Braces, Polished Steel Sweep, Plain Jaws, Hardwood Head and Handle.

No.	**975**
Sweep, inches	10
Per Dozen	$9.60

Packed—Half Dozen in a Box.

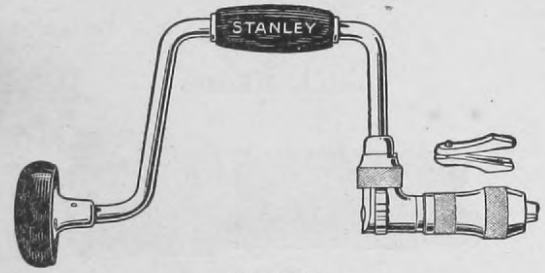


Nos. 4008 to 4012.

Ratchet Braces, Polished Steel Sweep, Alligator Jaws, Hardwood Head and Handle.

Nos.	**4008**	**4010**	**4012**
Sweep, inches	8	10	12
Per Dozen	$22.00	24.50	27.00

Packed—Half Dozen in a Box.

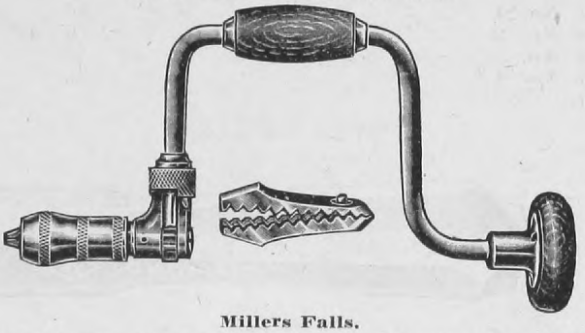


No. 945.

Ratchet Braces, Nickel Plated, Steel Sweep, Plain Jaws, Hardwood Head and Handle.

No. 945	Sweep, inches	8	10	12
	Per Dozen	$13.00	13.75	14.50

Packed—Half Dozen in a Box.

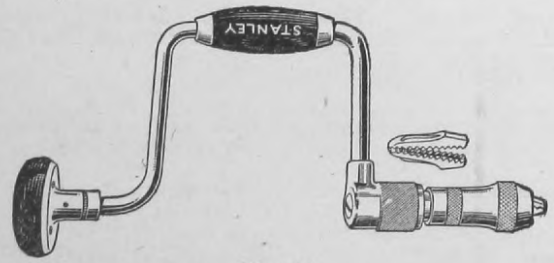


Millers Falls.

Ratchet Braces, Polished Steel Sweep, Alligator Jaws, Hardwood Head and Handle.

Nos.	**1663**	**1662**	**1661**
Sweep, inches	8	10	12
Per Dozen	$12.50	13.00	14.00

Packed—Half Dozen in a Box.

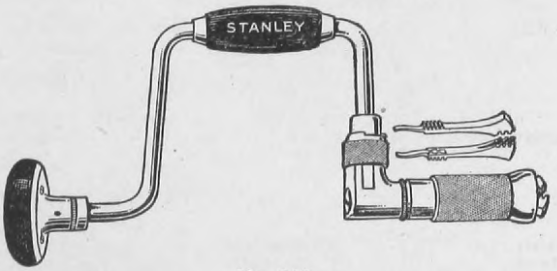


No. 911.

Concealed Ratchet Braces. Full Nickel Plated, Steel Sweep, Alligator Jaws, Metal Clad **Ball Bearing** Cocobola Head, Cocobola Handle.

No. 911	Sweep, inches	8	10	12
	Per Dozen	$25.20	27.00	28.80

Packed—One-sixth Dozen in a Box.



No. 919.

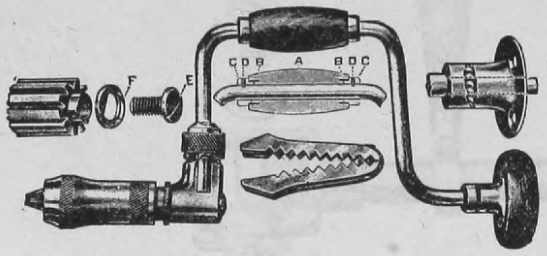
Box Ratchet Braces, Full Nickel Plated, Steel Sweep, Interlocking Jaws, Metal Clad **Ball Bearing** Cocobola Head and Handle.

No. 919	Sweep, inches.	6	8	10	12
	Per Dozen	$23.40	23.40	25.20	27.00

Packed—One-sixth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BIT BRACES

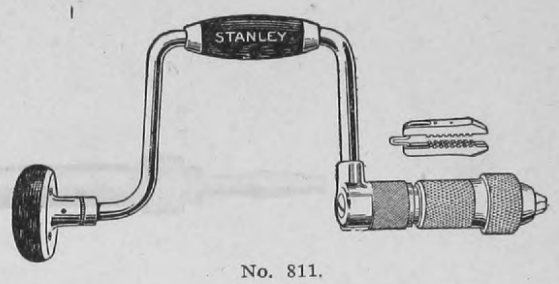


Millers Falls.

Barber Improved **Ratchet** Braces, Full Nickel Plated, Steel Sweep, Alligator Jaws, **Ball Bearing** Cocobola Head and Handle.

Nos.	33	32	31
Sweep, inches	8	10	12
Per Dozen	$24.00	25.50	27.50

Packed—One-Sixth Dozen in a Box.

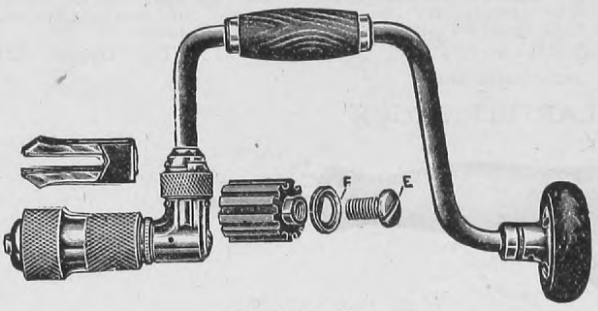


No. 811.

Concealed Ratchet pattern, fitted with Universal Jaws, Cocobola Head and Handles, Ball Bearing Metal Clad Heads, heavily Nickel Plated. Chuck Bodies are machined to receive the Jaws and are **Ball Bearing.**

No. 811				
	Sweep, Inches	10	12	14
	Per Dozen	$31.20	33.00	34.80

Packed—One-Sixth Dozen in a Box.

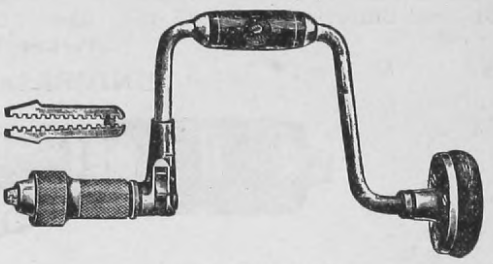


Millers Falls.

Ratchet Braces, Ball Bearing Steel Clad Head, Free Acting Sweep Handle with inserted Brass Rings. Patent Cup Washer (F) and Screw (E) to hold chuck to sweep without working loose. Chuck Shell **Ball Bearing,** Forged Steel **Jaws** holding Round Shank Drills from ⅛ to ½ inch in diameter. No. 1 Morse Taper and all sizes of Bit Stock and Expansion Bit Shanks.

Nos.	772	771	770	769
Sweep, inches	10	12	14	16
Per Dozen	$32.50	34.50	36.50	40.50

Packed—One-Sixth Dozen in a Box.



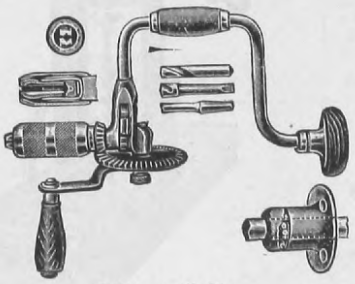
Nos. 1202 to 1200.

P. S. & W. Co., Ratchet Braces, Full Nickel Plated. Steel Sweep, Alligator Jaws, **Ball Bearing** Chuck, Metal Clad Ball Bearing Lignum-vitae Head, Cocobola Handle.

Nos.	1202	1201	1200
Sweep, inches	10	12	14
Per Dozen	$52.00	55.50	59.00

Packed—One-Sixth Dozen in a Box.

RATCHET DRILL BRACES



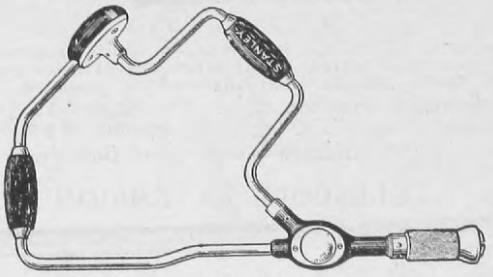
Millers Falls.

Ball Bearing, Nickel Plated, Steel Sweep and Jaws, Cocobola Head and Handles. For use as an ordinary ratchet or brace or as a breast drill. Drill can be attached or detached in a moment's time.

No. **182**—Ratchet Drill Brace, 10 inch Sweep... ..... Per Dozen, $42.00

Packed—One-Twelfth Dozen in a Box.

STANLEY CORNER BIT BRACES



No. 992

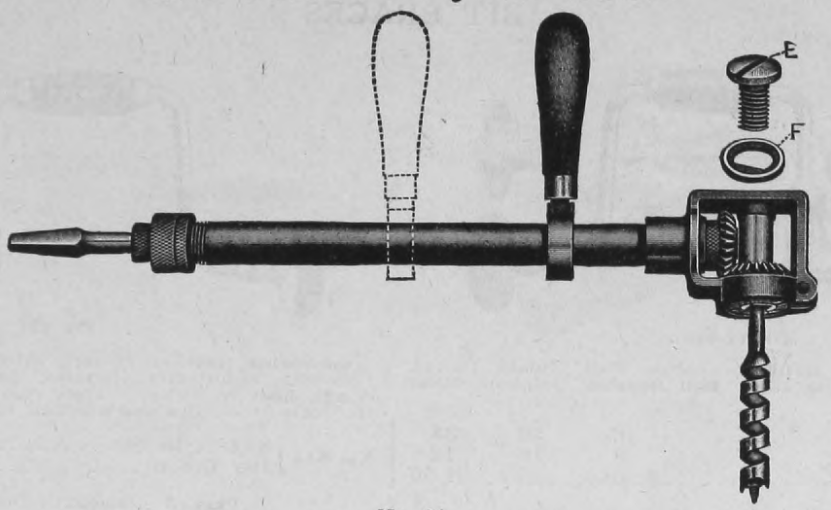
Ball Bearing, Full Nickel Plated, Steel Sweep, Interlocking Jaws, Cocobola Head and Handles. For corner work when using a bit of ordinary size these braces will work much faster than a regular ratchet brace. The quill is fastened to the head by three screws one of which goes through that part of the frame where it enters the head, securely fastening all three together.

No. 992			
	Sweep, inches	8	10
	Per Dozen	$33.00	36.00

Packed—One-Sixth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SILL BORER OR JOIST TOOL



No. 51.

For use in connection with a Bit Brace or Breast Drill in boring at right angles in cramped places. Indispensable for Car Builders, Electricians, Carpenters and other Wood Workers. Main Frame Malleable Iron; working parts, including Gears, Bushings, etc., of Hardened Steel. Ball Bearing and efficient takeups for bushings in case of wear. Adjustable steadying Handle. Patent Cup Washer (F) and Screw (E) to hold head in place without working loose.

No. 51—Sill Borer, entire length 16½ inches, depth of head 2⅜ inches.....Per Dozen, $30.00

Packed—One-twelfth Dozen in a Box.

UNIVERSAL ANGULAR BIT STOCK

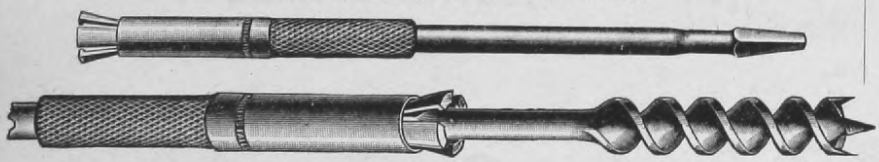
No. 108.

To be used with a Bit Brace or Breast Drill either as an Extension or Angular Borer. Adjustable Arc varies angle from 180 to 125 degrees.

No. 108—Angular Bit Stock, entire length 12½ inches.....Per Dozen, $26.00

Packed—One-twelfth Dozen in a Box.

EXTENSION BIT HOLDER



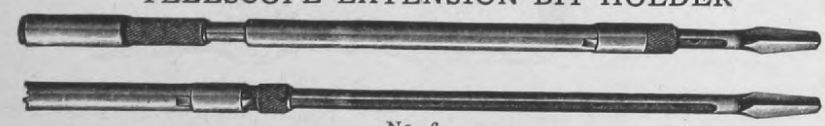
No. 5.

Polished and Nickel Plated Steel. Follows Bits ⅝ inch in diameter and larger into their Bores. Four strong Steel Jaws grip firmly over shoulders of Bit Stock Shanks. Bit inserted or released instantly when desired.

No. 5—Length, inches	12	15	18	21	24
Per Dozen	$14.60	14.80	15.00	15.20	15.40

Packed—One-twelfth Dozen in a Box.

TELESCOPE EXTENSION BIT HOLDER



No. 6.

Polished and Nickel Plated Steel. Outer Sleeve, telescoping over, and engaging at one and one-half inch intervals upon inner spindle, combining lightness with strength. Four strong Steel Jaws grip firmly over shoulders of Bit Stock Shanks. Bit inserted or released instantly when desired.

No. 6—Telescope Extension Bit Holder, Length collapsed 16½ inches, Length extended to the extreme 24 inches.....Per Dozen, $24.00

Packed—One-twelfth Dozen in a Box.

BORING MACHINES

Ajax

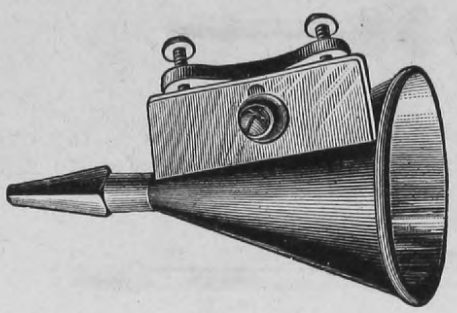
Self-withdrawing, can be used either upright or angular, Extension Arms. Any round or square shank Auger can be used.

Ajax Improved Boring Machine, without Augers.....Each, $6.50

Packed—One in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPOKE POINTERS

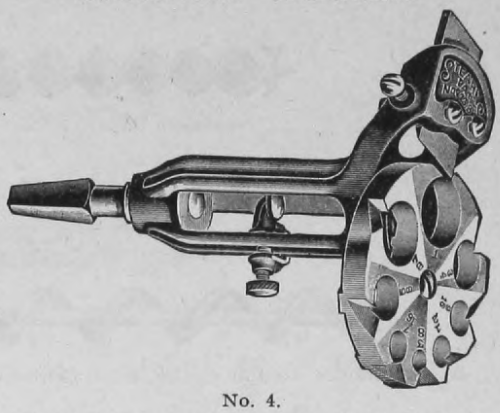


No. 2.

No. 2—Adjustable Spoke Pointers or Trimmers .....Per Dozen, $7.00

Packed—Half Dozen in a Box.

HOLLOW AUGERS

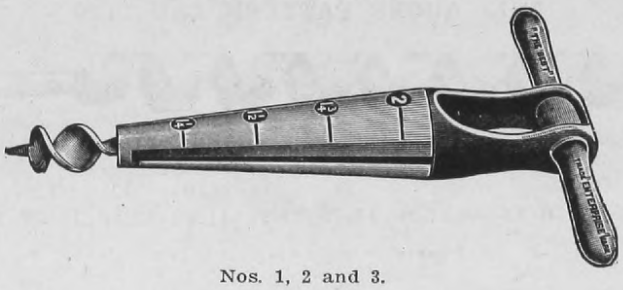


No. 4.

No. 4—Stearns Improved Bonney Adjustable Hollow Auger, with adjustable Stop to regulate the length of tenons. Cuts ⅜ to 1 inch..... .....Per Dozen, $48.00

Packed—One-sixth Dozen in a Box.

BUNG BORERS



Nos. 1, 2 and 3.

Enterprise Improved Bung Borers

No. 1—Small Size, boring from ⅝ to 1½ inches.....Each, $1.25
No. 2—Medium Size, boring from 1⅛ to 2 inches.....Each, 1.75
No. 3—Large Size, boring from 1½ to 3 inches.....Each, 2.50

Packed—Twelve in a Case.

CARPENTERS' NUT AUGERS

Buhl Sons Co. Cast Steel Carpenters' Nut Augers. **First Quality.**

Inches ...	¾	⅞	1	1⅛	1¼	1½	1¾	2	2¼	2½	3
Per Dozen,	$10.75	12.00	13.25	15.00	17.00	22.00	26.00	30.00	40.00	50.00	90.00

Packed—¾ to 2 inch, Half Dozen; 2¼ and 2½ inch, One-third Dozen; 3 inch, One-sixth Dozen in a Box.

BORING MACHINE AUGERS

BUHL SONS CO.

Buhl Sons Co. Best Cast Steel Boring Machine Augers.

Inches	1	1¼	1½	1¾	2
Per Dozen..	$15.00	19.00	24.00	28.00	32.00

Packed—Quarter Dozen in a Box.

IRWIN

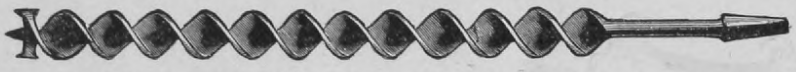
Irwin Boring Machine Augers, Double Cutters, Solid Center, Crucible Cast Steel.

Inches	1	1¼	1½	1¾	2
Per Dozen..	$15.00	19.00	24.00	28.00	32.00

Packed—Quarter Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CAR BITS



Standard Superior Cast Steel Car Bits. 12 inch Twist, Polished.

Size, in 16ths.....	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Per Dozen	$11.25	11.25	11.25	11.25	11.25	12.50	13.75	15.00	16.25	17.50	19.00	20.50	22.00	24.00

Packed—Half Dozen in a Box.

Irwin Car Bits, Double Cutter, Solid Center, Crucible Cast Steel, 12 inch Twist, Entire Length 18 inches.

Size, in 16ths.....	4	5	6	7	8	9	10	11
Per Dozen	$9.00	9.00	9.00	10.00	11.25	12.50	13.75	15.00

Size, in 16ths.....	12	13	14	15	16	17	18	19	20
Per Dozen	$16.25	17.50	19.00	20.50	22.00	24.00	26.00	28.00	30.00

Packed—Half Dozen in a Box.

SHIP AUGER PATTERN CAR BITS

Ford Ship Auger Pattern Car Bits. Designed for rough work and rapid boring, 12 inch Twist, with Screw.

Size, in 16ths.....	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Per Dozen	$11.00	11.00	11.00	11.00	11.00	11.00	11.00	12.00	12.00	13.00	13.00	14.50	14.50	16.00

Packed—Half Dozen in a Box.

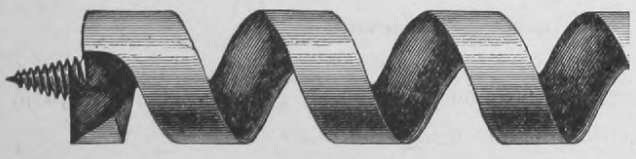
SHIP AUGER BITS

With Screw.

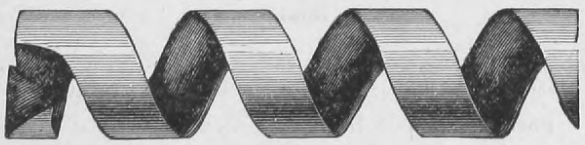
Size, in 8ths.....	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8
Per Dozen	$6.00	6.00	6.00	6.00	6.00	7.50	7.50	9.00	9.00	10.50	10.50	12.00	12.00

Packed—2 to 4-8ths, One Dozen in a Box; Others, Half Dozen.

SHIP AUGERS



With Screw.



Without Screw.

List Price Per Dozen

Size, in 8ths.....	3	3½	4	4½ and 5	5½ and 6	6½ and 7	7½ and 8	8½ and 9
With Screw	$11.00	11.00	11.00	11.00	12.00	13.00	14.50	16.00
Without Screw	13.20	13.20	13.20	13.20	14.40	15.60	17.40	19.20

Size, in 8ths...	9½ and 10	10½ and 11	11½ and 12	12½ and 13	13½ and 14	14½ and 15	15½ and 16	16½ and 17
With Screw ...	$18.00	20.00	23.00	27.00	32.00	38.00	45.00	57.00
Without Screw.	21.60	24.00	27.60	32.40	38.40	45.60	54.00	68.40

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

JENNINGS PATTERN POWER MACHINE BITS

No. 10. Double Spur.

No. 20. Ship Auger.

No. 30. Extension Lip.

No. 40. Solid Center.

Machine Bit Heads

No. 10—Double Spur. A general purpose tool and the principal stock is carried in this pattern. Suited for very rapid work of all kinds.

No. 20—Ship Auger Pattern. With single spiral and cutter, a stiff, strong tool, especially adapted for boring to extreme depths.

No. 30—Extension Lip. Preferred by many who desire to do particularly smooth boring as in Furniture and Cabinet work.

No. 40—Solid Center. This Bit meets a demand for a boring Bit having greater stiffness than the Stock Double Twist Machine Bit.

Sizes in 16ths.....	4	5	6	7	8	9	10	11	12	13	14	15	16	17
6 inch Twist, Per Doz.,	$10.80	10.80	10.80	10.80	10.80	12.00	13.20	14.40	15.60	16.80	18.00	19.20	20.40	21.60
12 inch Twist, Per Doz.,	17.28	17.28	17.28	17.28	17.28	19.20	21.12	23.04	24.96	26.88	28.80	30.72	32.64	34.56
18 inch Twist, Per Doz.,	.....	.....	23.76	23.76	23.76	26.40	29.04	31.68	34.32	36.96	39.60	42.24	44.88	47.52

Sizes in 16ths.....	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
6 inch Twist, Per Doz.,	$22.80	24.00	25.20	26.40	27.60	28.80	30.00	31.50	33.00	34.50	36.00	37.50	39.00	40.50	42.00
12 inch Twist, Per Doz.,	36.48	38.40	40.32	42.24	44.16	46.08	48.00	50.40	52.80	55.20	57.60	60.00	62.40	64.80	67.20
18 inch Twist, Per Doz.,	50.16	52.80	55.44	58.08	60.72	63.36	66.00	69.30	72.60	75.90	79.20	82.50	85.80	89.10	92.40

Note—For Machine Bit Shanks and Machine Bit Specifications see below.

IRWIN POWER MACHINE BITS

No. 62R. Double Cutter Extension Lip.

No. 72R. Double Cutter Flat Head.

No. 92R. Double Cutter Round Head.

No. 52R. Single Cutter Ship Head.

Fig. 1. Straight Shank.

Fig. 2. Screw Shank.

Fig. 3. Taper Shank.

Machine Bit Heads

No. 62R—Double Cutter Extension Lip. Bores easily, cutting a smooth hole and is adapted for general use, especially for fine work.

No. 72R—Double Cutter Flat Head. Especially adapted for boring in hard woods or rough timber and for end boring.

No. 92R—Double Cutter Round Head. Will bore well at an angle and will follow another bit and make the hole larger.

No. 52R—Single Cutter Ship Head. Used for boring considerable depths or through wood with a strong grain.

Sizes in 16ths.....	4	5	6	7	8	9	10	11	12	13	14	15	16	17
6 inch Twist, Per Doz.,	$ 7.80	8.40	9.00	9.90	10.80	12.00	13.20	14.40	15.60	16.80	18.00	19.20	20.40	21.60
12 inch Twist, Per Doz.,	12.48	13.44	14.40	15.84	17.28	19.20	21.12	23.04	24.96	26.88	28.80	30.72	32.64	34.56
18 inch Twist, Per Doz.,	17.16	19.48	19.80	21.78	23.76	26.40	29.04	31.68	34.32	36.96	39.60	42.24	44.88	47.52

Sizes in 16ths.....	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
6 inch Twist, Per Doz.,	$22.80	24.00	25.20	26.40	27.60	28.80	30.00	31.50	33.00	34.50	36.00	37.50	39.00	40.50	42.00
12 inch Twist, Per Doz.,	36.48	38.40	40.32	42.24	44.16	46.08	48.00	50.40	52.80	55.20	57.60	60.00	62.40	64.80	67.20
18 inch Twist, Per Doz.,	50.16	52.80	55.44	58.08	60.72	63.36	66.00	69.30	72.60	75.90	79.20	82.50	85.80	89.10	92.40

Machine Bit Shanks

The Standard Straight Shank for Machine Bits is shown in Figure 1. It is 2 inches long and ½ inch in diameter. Straight shanks of other dimensions can also be furnished if desired, but unless other specifications are given, the 2 by ½ inch shank will be sent.

The two principal variations from the straight shank are the screw shank and the taper shank.

The screw shank is shown in Figure 2. We can furnish **various types** of screw shanks with **different sizes** and pitches of screw.

The taper shank is shown in Figure 3. We can also furnish tapers of **different lengths and sizes. Specify** carefully your requirements.

The list prices are based upon a machine bit with a 2 by ½ inch straight shank. Taper shanks are 5 cents extra, net, each and screw shanks are 12½ cents extra, net, each.

Machine Bit Specifications

To avoid delay on orders we suggest that the buyer keep in mind these five specifications; Stock Number, or Style of Head, Size of Bit, Length of Twist, Style, Length and Diameter of Shank. If Screw or Taper Shanks are wanted **Specify** carefully your requirements in detail.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BUHL SONS CO. AUGER BITS

No. 2—Buhl Sons Co. Jennings Pattern, Extension Lip, Cast Steel Auger Bits, Polished Shank and Twist.

Size, in 16ths	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Per Dozen	$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.25	8.25	9.50	9.50

Packed—Half Dozen in a Slide Cover Box.

Sets of 32½ quarters, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16 inch.....Per Set, $7.50

Packed—One Set in a Slide Cover Box.

STANDARD AUGER BITS

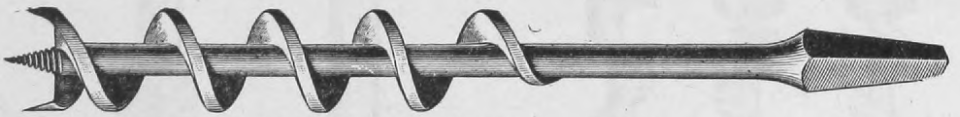
No. 3—Standard Cast Steel Lip and Spur Auger Bits, **Polished.**

Size, in 16ths	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Per Dozen	$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.25	8.25	9.50	9.50

Packed—3-16 to 10-16, One Dozen; Others, Half Dozen in a Box.

Sets of 32½ quarters, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16 inch.....Per Set, $7.50

Packed—One Set in a Box.



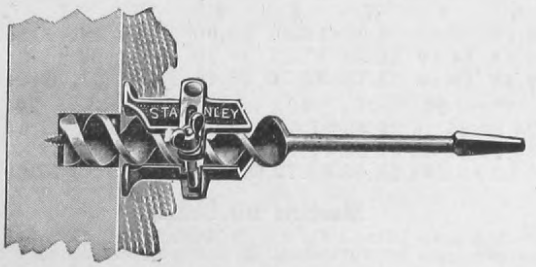
No. 05—Buhl Auger Bits, "Irwin Pattern," Double Cutter, Solid Center, Crucible Steel, **Polished.**

Size, in 16ths	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Per Dozen	$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.25	8.25	9.50	9.50

Packed—Half Dozen in a Box.

Note.—For all above Auger Bits in fancy boxes, see page 373.

AUGER BIT GAUGES



No. 49.

Stanley Adjustable Auger Bit Depth Gauges

Can be attached to any size bit up to one inch in diameter to enable one to bore any number of holes to a given depth.

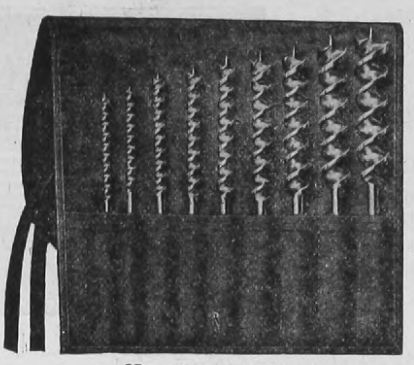
No. 49—Nickel Plated, 2½ inches long.....Each, $0.50

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

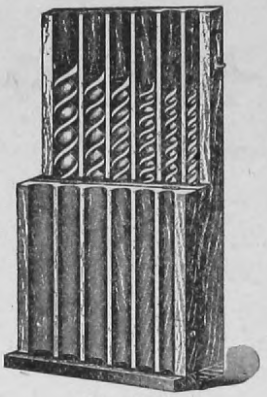
AUGER BIT SETS

AUGER BIT SETS IN ROLLS



Nos. 62 to 1305.

AUGER BIT SETS IN BOXES



No. 111¼C.

Auger Bit Sets in Canvas Rolls

No. 62—Sets of 11¼ quarters No. 2 Auger Bits, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16....Per Set, $.....

No. 63—Sets of 11¼ quarters No. 3 Auger Bits, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16....Per Set, ...

No. 605—Sets of 11¼ quarters No. 05 Auger Bits, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16....Per Set, ...

No. 92—Sets of 20½ quarters No. 2 Auger Bits, 9 Bits, one each, 4, 5, 6, 7, 8, 10, 12, 14 and 16/16 .....Per Set, ...

No. 93—Sets of 20½ quarters No. 3 Auger Bits, 9 Bits, one each, 4, 5, 6, 7, 8, 10, 12, 14 and 16/16 .....Per Set, ...

No. 905—Sets of 20½ quarters No. 05 Auger Bits, 9 Bits, one each, 4, 5, 6, 7, 8, 10, 12, 14 and 16/16 .....Per Set, ...

No. 132—Sets of 32½ quarters No. 2 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16.....Per Set, ...

No. 133—Sets of 32½ quarters No. 3 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 15 and 16/16.....Per Set, ...

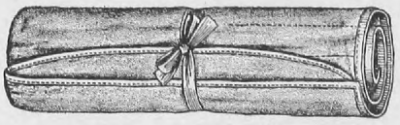
No. 1305—Sets of 32½ quarters No. 05 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16.....Per Set, ...

Bates Auger Bit Sets

In Wooden Boxes similar to Bartlett Bit Boxes.

No. 111¼C—Sets of 11¼ quarters, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16 Fire Blued Finish..Per Set, $.....

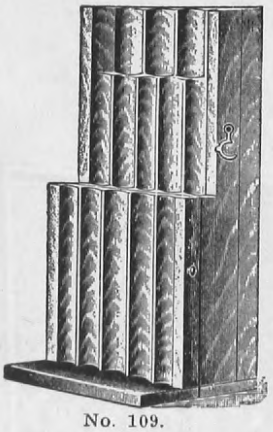
CANVAS AUGER BIT ROLLS



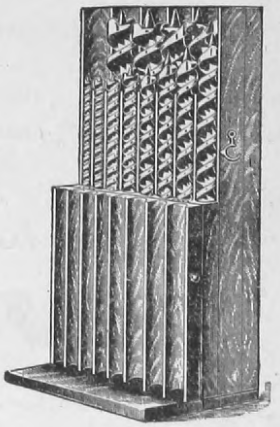
A separate pocket for each bit.

No. A—To hold 9 Bits.....Each, $.....

No. B—To hold 13 Bits.....Each, ...



No. 109.



No. 1132.

BARTLETT BIT BOXES

Made of hardwood, nicely finished, and trimmed with metal hinges and corners. The bits cannot get loose and be damaged by striking together.

Nos.	106	109	113
For No. of Bits.....	6	9	13
Each	$.....	.....	.....

Auger Bit Sets in Bartlett Boxes

No. 1062—Sets of 11¼ quarters No. 2 Auger Bits, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16....Per Set, $.....

No. 1063—Sets of 11¼ quarters No. 3 Auger Bits, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16....Per Set, ...

No. 1092—Sets of 20½ quarters No. 2 Auger Bits, 9 Bits, one each, 4, 5, 6, 7, 8, 10, 12, 14 and 16/16.. .....Per Set, ...

No. 1093—Sets of 20½ quarters No. 3 Auger Bits, 9 Bits, one each, 4, 5, 6, 7, 8, 10, 12, 14 and 16/16.. .....Per Set, ...

No. 1132—Sets of 32½ quarters No. 2 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16.....Per Set, ...

No. 1133—Sets of 32½ quarters No. 3 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16.....Per Set, ...

No. 11305—Sets of 32½ quarters No. 05 Auger Bits, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16.....Per Set, ...

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

RUSSELL JENNINGS AUGER BITS

No. 4—Russell Jennings Auger Bits, Extension Lip, Solid Cast Steel, Polished.

Size, in 16ths	3	4	5	6	7	8	9
Per Dozen	$6.00	5.00	5.00	5.00	5.00	5.00	6.00
Size, in 16ths	10	11	12	13	14	15	16
Per Dozen	$6.00	7.00	7.00	8.25	8.25	9.50	9.50

Packed—From 4 to 12-16ths, One Dozen; 13 to 16-16ths, Half Dozen in a Box.

No. 410.

Sets of No. 4 Russell Jennings Auger Bits in Fancy Hardwood Cases.

No. 410—Sets of 32½ quarters, 13 Bits, One each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16 . . . . . Per Set, $7.50

Packed—Each Set in a Separate Package.

IRWIN AUGER BITS

No. 5—Irwin Auger Bits, Double Cutters, Solid Center, Crucible Steel, Polished.

Size, in 16ths	3	4	5	6	7	8	9	10	11
Per Dozen	$4.50	4.00	4.00	4.00	4.50	5.00	5.50	6.00	7.00
Size, in 16ths	12	13	14	15	16	18	20	22	24
Per Dozen	$7.00	8.00	8.00	9.00	9.00	10.50	12.00	13.50	15.00

Packed—Half Dozen in a Box.

No. 510.

Sets of No. 5 Irwin Model Auger Bits in Fancy Hardwood Cases.

No. 506—Sets of 14 quarters, 6 Bits, one each, 4, 5, 6, 8, 10 and 12/16 . . . . . Per Set, $3.25

No. 510—Sets of 32½ quarters, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16 . . . . . Per Set, 7.00

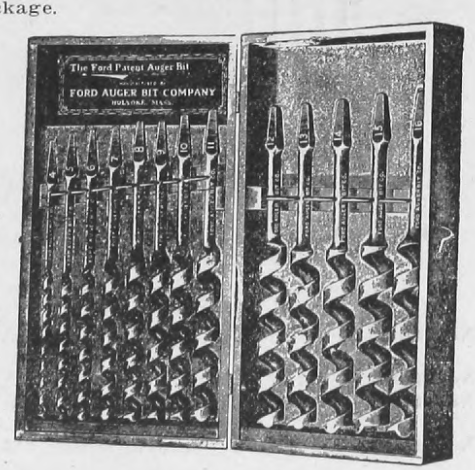
Packed—Each Set in a Separate Package.

FORD AUGER BITS

No. 6—Ford Improved Auger Bits, superior clearance, will not clog, peculiarly adapted for end grain boring or at any angle.

Size, in 16ths	3	4	5	6	7	8	9
Per Dozen	$6.00	5.00	5.00	5.00	5.00	5.00	6.00
Size, in 16ths	10	11	12	13	14	15	16
Per Dozen	$6.00	7.00	7.00	8.25	8.25	9.50	9.50

Packed—Half Dozen in a Box.



No. 610.

Sets of No. 6 Ford Improved Auger Bits in Fancy Hardwood Cases.

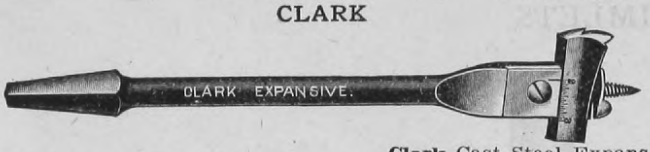
No. 610—Sets of 32½ quarters, 13 Bits, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 14 15 and 16/16 . . . . . Per Set, $7.50

Packed—Each Set in a Separate Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EXPANSIVE BITS

CLARK



WRIGHT'S PATENT

Clark Cast Steel Expansive Bits, Fully Warranted.

No. 2—Small Size, Cuts from ½ to 1½ inches.....Per Dozen, $18.00
No. 1—Large Size, Cuts from ⅞ to 3 inches.....Per Dozen, 26.00

Packed—One-twelfth Dozen in a Box.

Extra Cutters for Clark Expansive Bits.

Nos.	1	2	3	4
Cuts, inches	½ to ⅞	⅞ to 1½	⅞ to 1¾	1¾ to 3
Per Dozen	$3.00	3.75	5.25	6.00

Packed—Half Dozen in a Box.

Wrights' Patent Cast Steel Expansive Bits, Fully Warranted.

No. 20—Small Size, Cuts from ⅝ to 1¾ inches.....Per Dozen, $22.00
No. 10—Large Size, Cuts from ⅞ to 3 inches.....Per Dozen, 26.00

Packed—One-twelfth Dozen in a Box.

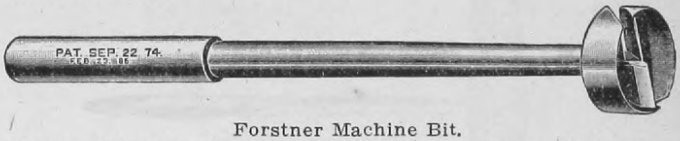
Extra Cutters for Wrights' Expansive Bits.

Nos.	1	2	3	4
Cuts, inches	⅝ to 1⅛	1⅛ to 1¾	⅞ to 1¾	1¾ to 3
Per Dozen	$3.00	3.75	5.25	6.00

Packed—Half Dozen in a Box.

FORSTNER AUGER BITS

Forstner Brace Bit.



Forstner Machine Bit.

The Forstner Auger Bit, unlike other bits, is guided by its Circular Rim instead of its center, consequently it will bore any arc of a circle, and can be guided in any direction regardless of grain or knots, leaving a true polished surface. **Brace** Bit with **Square** Shanks, **Machine** Bits with **Round** Shanks ½ inch in diameter; special sizes can be furnished on specifications.

Inches	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞
Brace Bit over all, inches	6¼	6¼	6¼	6¼	6¾	6¾	6¾	6¾	7¼	7¼	7¼
Each	$0.90	.90	1.00	1.00	1.05	1.15	1.15	1.20	1.30	1.40	1.40
Machine Bit over all, inches	5	5	5	5	5	5	5	5	5	5	5
Each	$1.10	1.10	1.20	1.20	1.25	1.35	1.35	1.40	1.50	1.60	1.60

Inches	15/16	1	1 1/16	1⅛	1 3/16	1¼	1 5/16	1⅜	1 7/16	1½
Brace Bit over all, inches	7¼	7¾	7¾	7¾	7¾	8¼	8¼	8¼	8¼	8¼
Each	$1.70	1.70	1.80	1.80	1.95	2.20	2.20	2.35	2.65	3.00
Machine Bit over all, inches	5	5	5	5	5	5	5	5	5	6¾
Each	$1.90	1.90	2.00	2.00	2.15	2.40	2.40	2.55	2.85	3.20

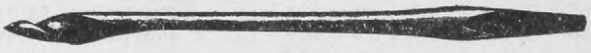
Packed—Half Dozen in a Box.

GIMLET BITS

DOUBLE CUT

No. 100

GERMAN PATTERN



No. 60.

Double Cut Gimlet Bits, Best Cast Steel, Hardened and Tempered.

No. 100— Size, Nos.	0	1	2	3	4	5	6	Assorted 0 to 6
Per Dozen	$1.00	1.10	1.22	1.34	1.46	1.58	1.70	1.40

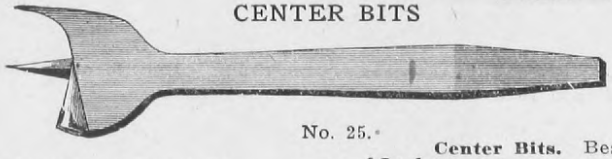
Packed—One Dozen in a Box.

German Pattern Gimlet Bits, Best Cast Steel, Hardened and Tempered.

No. 60— Size, in 32nds	2	3	4	5	6	7	8	9	10	Assorted 4 to 8
Per Dozen	$1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Packed—One Dozen in a Box.

CENTER BITS



No. 25.

DIAMOND COUNTERSINKS

No. 130.

Center Bits. Best Quality, Straw Colored.

No. 25—Center Bits. Inches	½	⅝	¾	⅞	1	1⅛	1¼	1½
Per Dozen	$0.75	.75	.75	.75	.80	1.00	1.20	1.60

Packed—One Dozen in a Box.

Diamond Countersink Gimlet Bits. Best Cast Steel.

No. 130— Size, Nos.	0	1	2	3	4	Assorted 0 to 4
Sizes, inches	5/32	6/32	7/32	8/32	9/32	5/32 to 9/32
Bores, inches	¾	1	1¼	1½	1¾	¾ to 1¾
Per Dozen	$2.00	2.00	2.00	2.00	2.00	2.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

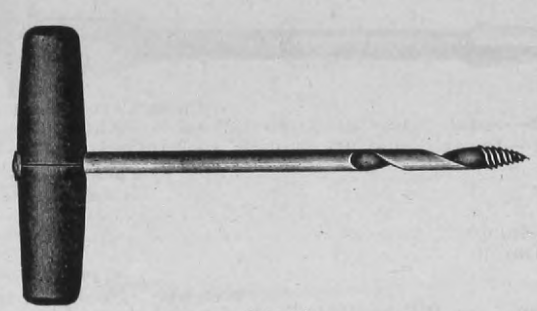
NAIL GIMLETS

No. 5.

Stubs' Finish. Handle and Blade from one piece of Steel. No rivets to work loose.

No. 5—Eureka Nail Gimlets, all Steel, Assorted Sizes, Nos. 1, 2, 3 and 4.....Per Dozen, $0.60

Packed—Quarter Gross in a Box.



No. 32.

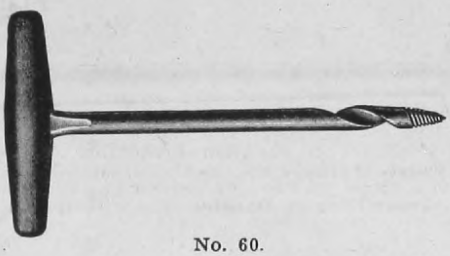
No. 32—Ebonized Wood Head Nail Gimlets, Assorted Sizes, Nos. 1, 2, 3 and 4...Per Dozen, $0.80

Packed—Quarter Gross in a Box.

No. 10.

No. 10—Star Wood Head Nail Gimlets, Straw Finish, Assorted Sizes, 4 to 9/32 inch..Per Dozen, $1.50

Packed—Quarter Gross in a Box.



No. 60.

No. 60—Metal Head Spike Gimlets, Assorted Sizes, Nos. 1, 2 and 3.....Per Dozen, $1.20

Packed—Quarter Gross in a Box.

COUNTERSINKS FOR WOOD

No. 20.

No. 18—Countersink without Gauge....Per Dozen, $3.00
No. 20—Countersink with Gauge.....Per Dozen, 4.50

Packed—Half Dozen in a Box.

No. 14.

No. 14—Double Cut Snail Head, Hammer forged from finest Tool Steel. For Metal or Wood ..... Per Dozen, $2.00

Packed—One Dozen in a Box.

COUNTERSINKS FOR METAL

No. 12.

No. 12—Flat Head, Extra Cast Steel, Assorted Sizes.....Per Dozen, $1.50

Packed—One Dozen in a Box.

No. 13

No. 13—Rose Countersink for Metal, hammered from finest Tool Steel.....Per Dozen, $1.80

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STRAIGHT TAPER SQUARE REAMERS

No. 015.

No. 015—Cast Steel, hardened and tempered..... .....Per Dozen, $1.80

Packed—One Dozen in a Box.

No. 350.

No. 350—Hammer forged from the finest Tool Steel ..... Per Dozen, $2.00

Packed—One Dozen in a Box.

SCREW DRIVER BITS

Nos. 371 and 370.

No. 340 Bolster Pattern

No. 371—Cast Steel, hardened and tempered, Assorted.....Per Dozen, $1.30
No. 370—Hammer forged from high grade Cast Steel, Polished, Assorted .....Per Dozen, 1.50
No. 340—Drop forged from finest Tool Steel, carefully tempered, Assorted .....Per Dozen, 3.30

Packed—One Dozen in a Box.

No. 26.

Stanley Screw Driver Bits, forged from a special brand of Crucible Steel, oil tempered and full polished.

No. 26—Inches	5/16	3/8	1/2	5/8
Length, inches	4 3/4	5	5	5
Per Dozen	$2.10	2.10	2.10	2.10

Packed—One Dozen in a Box.

NAIL SETS

Easy Hold.

Easy Hold Cup Point Nail Sets, made of highest grade Steel, properly tempered. Square center is knurled on two opposite sides to afford an easy grasping surface.

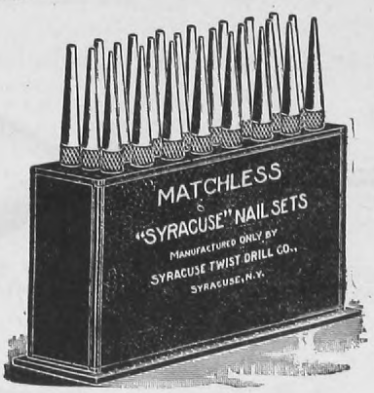
Easy Hold—Inch	2/32	3/32	**Assorted** 2/32, 3/32, 4/32
Per Dozen	$1.60	1.60	1.60

Packed—Solid Sizes, One Dozen in a Box. **Assorted**, Two Dozen in a Display Box.

KNURLED NAIL SETS

Nos. 10 to 253.

No. 100.



No. 20A.

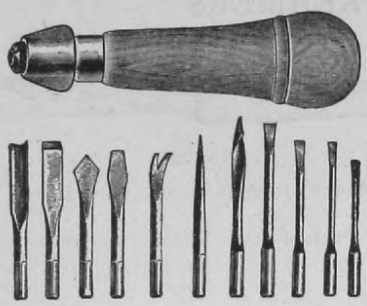
Syracuse Cup Point Knurled Nail Sets, Polished.

No. 10 —Buhl, One Dozen Assorted, 2, 3 and 4/32 inch in a **Round** Wooden Box.....Per Dozen, $1.50
No. 25A—Syracuse, One Dozen Assorted, 2, 3 and 4/32 inch in a **Round** Wooden Box.....Per Dozen, 1.60
No. 252—Syracuse, One Dozen Solid Sizes, 2/32 inch in a **Round** Wooden Box.....Per Dozen, 1.60
No. 253—Syracuse, One Dozen Solid Sizes, 3/32 inch in a **Round** Wooden Box .....Per Dozen, 1.60
No. 100—V. and B., One Dozen Assorted, 2, 3, 4 and 5/32 inch in a **Round** Wooden Box.....Per Dozen, 1.80
No. 20A—Syracuse Matchless, Two Dozen Assorted 2, 3, and 4/32 in fine **Morocco** Covered **Case**.....Per Case, 3.50

Packed—Each Box or Case in a Separate Package.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AWL AND TOOL SETS

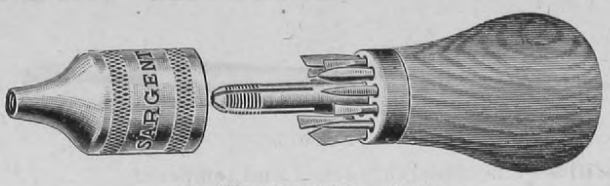


No. 160. One-Third Size Cuts.

The tools in this set are made of superior Cast Steel and contained in receptacle in handle; there is no wrench required with No. 160 Set.

No. 160—Applewood Handle, Nickel Plated Thumb Nut and Grip, 10 Tools, **without** Gouge..... .....Per Dozen, $6.20

Packed—Half Dozen in a Box.

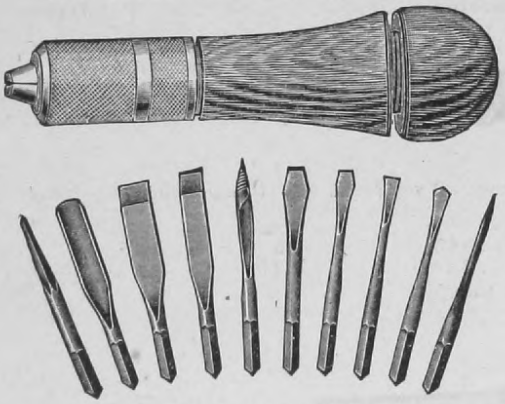


No. 130. Half Size Cut.

The following tools are made of highest grade Cast Steel and are contained in receptacle in handle: **Two** each, Small and Medium Brad Awls, and **One** each, Large Brad Awl, Scratch Awl, Belt Awl, Reamer, Chisel, Screw Driver, Countersunk and Tack Claw.

No. 130—Applewood Handle, Nickel Plated Grip, Cap, 12 Tools.....Per Dozen, $8.40

Packed—Half Dozen in a Box.

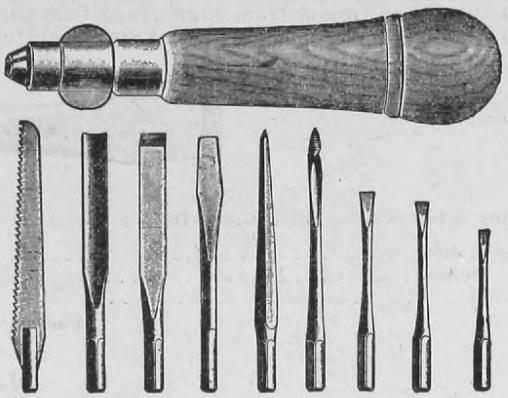


No. 4. Half Size Cuts.

Millers Falls. The tools are made of the highest grade of Steel and are contained in receptacle in handle. No wrench required. Handle also answers the purpose of a hand vise.

No. 4—Cocobola Handle, 6¼ inches long, Nickel Plated Ferrule and Jaws, 11 Tools..Per Dozen, $14.75

Packed—Half Dozen in a Box.



No. 80. One-Third Size Cuts.

The tools are made of highest grade Cast Steel and are contained in receptacle in handle. No wrench required.

No. 80—Applewood Handle, Extra Fine Finish, Nickel Plated Thumb Nut and Grip, 9 large Tools .....Per Dozen, $17.00

Packed—Half Dozen in a Box.

SCRATCH AWLS

No. 01.

No. 01—Tinners' Solid Steel Scratch Awls, Length 8½ inches.....Per Dozen, $2.20

Packed—One Dozen in a Box.

No. 1.

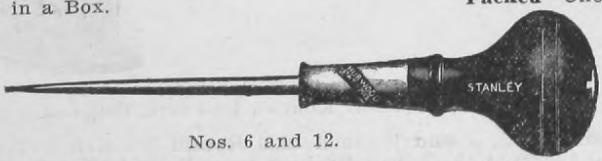
No. 1—Plain Scratch Awls, 4 inch Cast Steel Blade, Beech Handle, Brass Ferrule. Per Dozen, $1.00

Packed—One Dozen in a Box.

No. 25.

No. 25—Socket Scratch Awls, 5 inch Forged and Polished Cast Steel Blade, Beech Handle..... .....Per Dozen, $3.50

Packed—One Dozen in a Box.



Nos. 6 and 12.

Made with Blade, Shank and Square Head formed from one piece of special Steel as shown in Cut. The blade is finely tempered, and the whole tool is well finished. A rivet through the ferrule; together with the form of the head, securely fastens the handle.

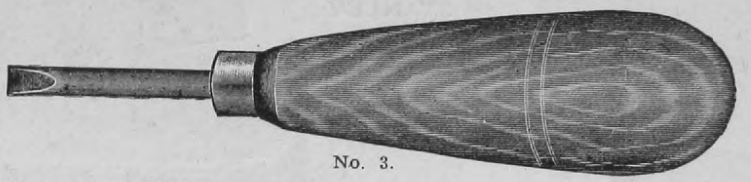
No. 6—Hurwood Cabinet Makers' Scratch Awls, 2¾ inch Best Cast Steel Blade.....Per Dozen, $3.40

No. 12—Hurwood Carpenters' Scratch Awls, 5 inch Best Cast Steel Blade.....Per Dozen, 4.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HANDLED BRAD AWLS



No. 3.

No. 3—Handled Brad Awls, Assorted Sizes.....Per Dozen, $1.10

Packed—One Dozen in a Box.

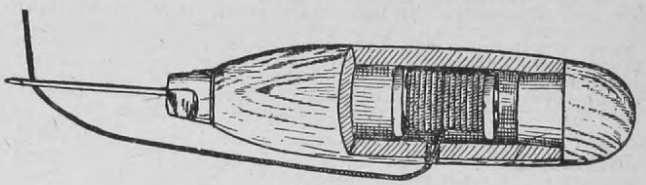
LOCK STITCH SEWING AWLS

No. 16.

Myers. A practical hand sewing machine for repairing shoes, harness, belts, carpets, rugs, tents, awnings, canvas of all kinds, gloves, saddles, etc. Can also be used to tie comforts or for sewing up wire cuts in stock. Put up with a straight and curved needle, waxed thread, instruction book and everything ready for use.

No. 16—Myers Sewing Awls.....Per Dozen, $10.50

Packed—One-Twelfth Dozen in a Box.



No. 17.

Summers. Indispensable to farmers and horse owners as well as in the household for repairing harness, shoes, canvas, carpets, belting, etc. Has Three Points, one small and one large for light and heavy stitching, and one, curved for patching shoes, etc. Put up with needles, thread and directions for use.

No. 17—Summers Sewing Awls.....Per Dozen, $4.00

Packed—One in a Carton. One Dozen in a Display Box.

Sewing Awl Thread

No. 116—Waxed Linen Thread for Myers Sewing Awls, on Metal Spools same as furnished withAwls.....Per Dozen, $2.40

No. 117—Special Linen Thread for Summers' Sewing Awls on Wooden Spools for refilling small spools furnished with Awls; One Spool will fill the Awl twice.....Per Dozen, 1.00

Packed—Three Dozen in a Box.

AWLS

PATENT BRAD

No. 31.

PATENT SEWING

No. 51.

PATENT PEGGING

No. 41.

No. 31—Patent Brad Awls, Assorted.....Per Dozen, $0.40

No. 41—Patent Pegging Awls, Assorted.....Per Dozen, .40

No. 51—Shoemakers' Patent Tanged Sewing Awls, Assorted.....Per Dozen, .50

Packed—Twelve Dozen in a Box.

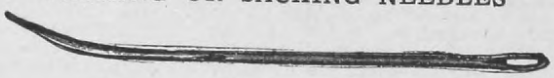
PATENT HARNESS AWLS

No. 61.

No. 61—Patent Saddlers' or Harness Awls, Assorted.....Per Dozen, $0.50

Packed—Twelve Dozen in a Box.

PACKING OR SACKING NEEDLES

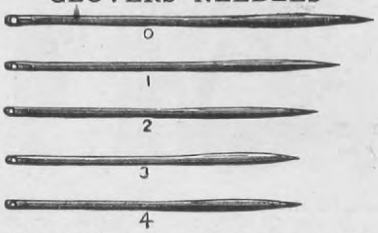


Bent Packing or Sacking Needles.

Inches	3½	4	5	6
Per Dozen	$0.40	.45	.65	1.00

Packed—Three Dozen in a Package.

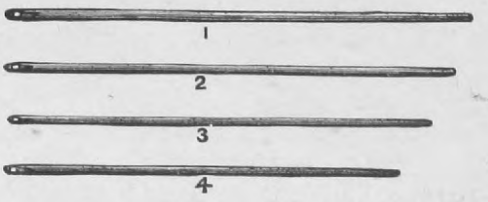
GLOVERS' NEEDLES



Glovers' Needles, Nos. 0, 1, 2, 3, or 4, All Nos.....Per Dozen Papers, $3.00

Packed—Twenty-five in a Paper.

HARNESS NEEDLES



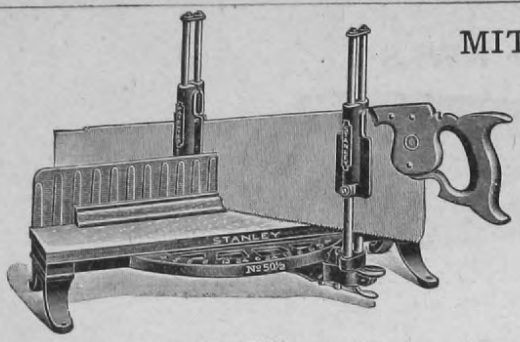
Harness Needles, Nos. 1, 2, 3, or 4, All Nos.....Per Dozen Papers, $1.50

Packed—Twenty-five in a Paper.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MITER BOXES

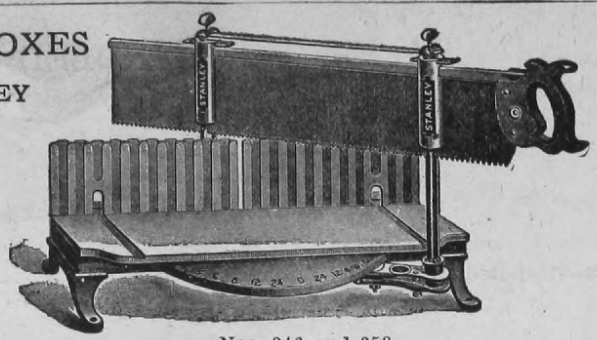
STANLEY



No. 50½.

The Saw Guides are adjustable and either a Back or Panel Saw may be used. The Box has a single piece frame both the Base and Back of which are accurately machined. Saw Guides, Upright Swivel, and all parts of the Box are interchangeable. The Swivel is provided with an index pin which engages holes in the frame at the commonly used angles and are designated by raised figures on the frame. Can be made stationary at any Angle. **Packed**—One in a box.

No.	**50½**
For Saws, inches	20x4
Capacity at Right Angle, inches	7¼
Capacity at Miter 45°, inches	4¾
Each, **without** Saw	$5.50

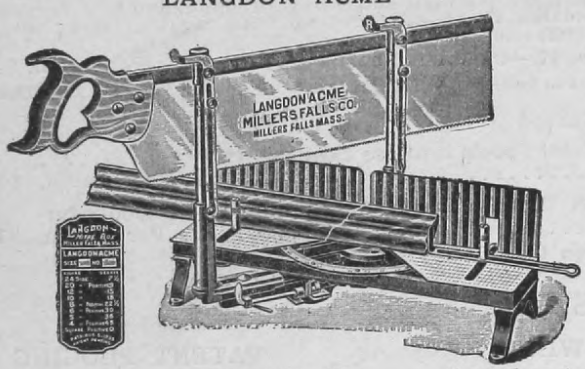


Nos. 246 and 358.

Single Piece Frame. Detachable Malleable Iron Legs, supporting saw above the work. Automatic clamping of swivel. Second socket in swivel arm permits the use of a short saw or allows a much longer stroke with a standard or regular saw. Two cone pointed leveling screws on the rear feet prevent box from sliding when in use. Furnished with Back Saws made expressly for the purpose by Henry Disston & Sons. **Packed**—One in a Box.

Nos.	**246**	**358**
Saw, inches	26x4	28x5
Capacity at Right Angle, inches	8¼	9½
Capacity at Miter 45°, inches	5½	6½
Cap. at 30° without Stock Guide, inches	3½	4⅛
Each, **including** Saw	$11.25	13.00

LANGDON ACME



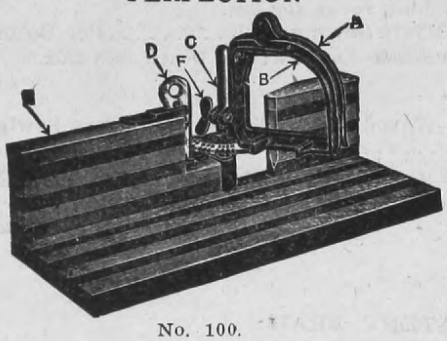
Nos. 68 to 75.

Langdon Acme Miter Boxes

Elevators hold the saw stationary above work when desired. Has graduated arc in front with degrees plainly marked. Saw can be secured at any angle by thumb lever. Has length gauge for duplicate lengths. Metallic index plate with degrees marked thereon is attached to machine. All polished parts are nickel plated. Furnished with saws made expressly for the purpose by Henry Disston & Sons. **Packed**—One in a Box.

Nos.	**68**	**71**	**72**	**73**	**74**	**75**
Saw, inches	22x4	22x4	24x4	26x4	28x5	30x5
Capacity at Right Angle, inches	7½	10¼	10¼	10¼	10¼	10¼
Capacity at Miter, inches	5	7	7	7	7	7
Each, **including** Saw	$12.00	13.00	13.50	14.00	15.50	16.00

PERFECTION



No. 100.

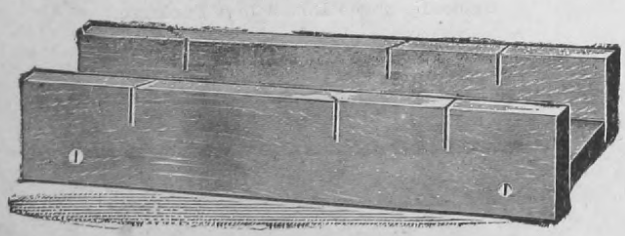
Perfection Miter Box

Quickly set, rigidly held, accuracy assured. By means of the gauge points and sliding key the saw guide can be at once set at any of the commonly used angles, which are indicated on the dial. For cutting the exact depths, use a back saw, the back rib resting on the shoulders within the swinging guide, the height at which the guide is set, determining the depth of cut, and a friction stop holding the guide so that it will not slide down on the post. **Packed**—Two in a Box.

Note.—Any Saw may be used, back-saw, panel or hand. The capacity at any angle being governed by length of saw.

No. 100—Perfection Miter Boxes, **without** Saw, ... Each, $4.00

HARDWOOD



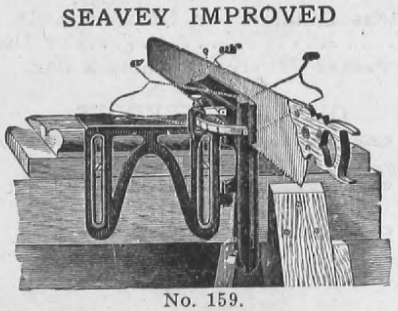
Nos. 1 and 2.

No. 1—Hardwood Miter Boxes, Length 12 inches, Width 2⅞ inches, Height 2⅛ inches. Per Dozen $4.80

No. 2—Hardwood Miter Boxes, Length 18 inches, Width 3⅜ inches, Height 2⅝ inches. Per Dozen, 7.20

Packed—In Open Stock.

SEAVEY IMPROVED



No. 159.

Made of Iron and Steel, finished in Japan with bright parts nickeled. Any ordinary saw can be used. Can be folded up and carried in coat pocket.

No. 159—Seavey Improved Miter Box, **without** Saw ..... Each, $2.50

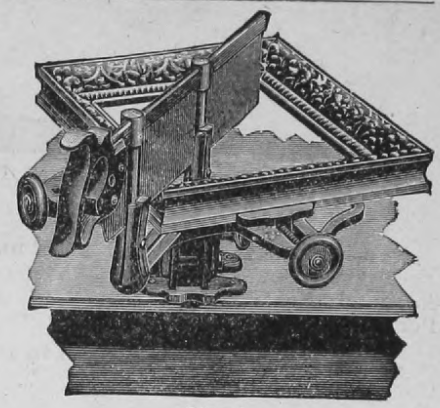
Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MITER MACHINE AND PICTURE FRAME VISE

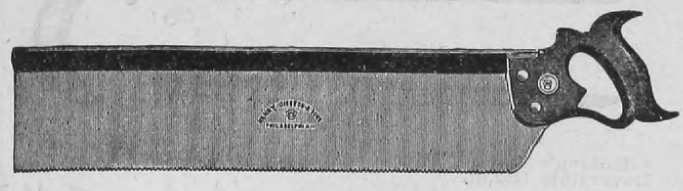
Marsh Miter Machine and Picture Frame Vise Combined is the only machine by which mouldings of any form whatever can be securely clamped. The Low Clamps can be adjusted in an instant, and are especially constructed to hold firmly the Florentine and Shell Moulding or any peculiar form made. Particularly adapted for high back mouldings, no need of a planer with this machine. Frame can be measured from one side as well as the other, or cut from front or back as desired. Provided with a rule and measure gauge so arranged as to measure and gauge from either side of a machine alike, making it possible to cut the sides and ends of a frame and get them exactly of a length. Frames can be held firmly either in a horizontal or vertical position. Furnished with E. C. Atkins & Co.'s Saws.

Marsh Miter Machine and Picture Frame Vise Combined, with 26x4½ inch Saw. ..... Each, $13.50



Marsh.

MITER BOX SAWS



No. 4.

BACK SAWS

No. 04.

Miter Box Saws

Disston, Crucible Steel Blade, Applewood Handle, Polished Edge, Steel Back. The peculiar shape of the butt or heel makes the toothed edge about 2 inches shorter than full length of blade. Regularly made 11 points to the inch.

No. 4—Inches.....	20x4	22x4	24x4	26x4	28x5	30x5
Per Dozen.....	$24.00	26.00	28.00	30.00	36.00	38.50

Packed—One-Third Dozen in a Box.

Back Saws

Sheffield, Cast Steel Blade, Beech Handle, Polished Edge, Blued Back.

No. 3—Inches.	12	14	16
Per Dozen....	$13.50	15.75	18.00

Packed—One-Third Dozen in a Box.

Disston, Crucible Steel Blade, Applewood Handle, Polished Edge, Blued Back.

No. 04—Inches..	12	14	16	18
Per Dozen.....	$16.00	18.00	20.00	22.00

Packed—One-Third Dozen in a Box.

Atkins' Silver Steel Blade, Applewood Handle, Polished Edge, Blued Back.

No. 2—Inches.....	10	12	14	16	18
Per Dozen.....	$16.00	18.00	20.00	22.50	25.00

Packed—One-Third Dozen in a Box.

STAIR BUILDERS' SAWS

No. 10.

Bishop. Spring Steel Blade, hand filed and set. Blade has rip teeth on one side and cross cut on the other, and can be instantly adjusted to cut to any desired depth and no deeper, carved Applewood Handle, Nickel Trimmings.

No. 10—Inches.....	12	16
Per Dozen	$19.00	$23.00

Packed—One-Third Dozen in a Box.

FLOORING SAWS

No. 100.

This Saw is designed for sawing into flat surfaces such as floors without the necessity of boring or using a key-hole saw or chisel. Blade is 4⅛ inches wide at the butt, 4⅝ inches at the breast. Made of silver steel and tempered. Applewood Varnished Handle with 3 Brass Screws.

No. 100—Flooring Saw, 18 in. long. Per Dozen...$23.00

Packed—One-Third Dozen in a Box.

HANDY HACK SAWS

No. 78.

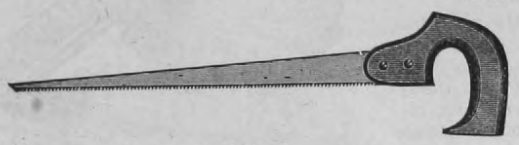
For sawing metal, nails, etc., as well as wood. Blade is made of specially tough steel, toothed and tempered to suit the purpose of sawing nails and metal without harming the teeth. Patent Carved Adjustable Handle with Nickel Trimmings.

No. 78—Handy Handle Hack Saws, 20 inches... ..... Per Dozen $19.00

Packed—One-Third Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMPASS SAWS



No. 8.

Atkins' Compass Saws, Cast Steel Blade, Beech Handle. Varnished Edges.

No. 8—Inches	10	12	14
Per Dozen	$2.50	2.50	2.50

Packed—Half Dozen in a Box.

No. 10.

Atkins' Interchangeable Compass Saws, Beech Handle.

No. 10—Inches	10	12	14
Per Dozen	$4.50	4.75	5.00
Extra Blades.....Per Dozen,	2.50	2.75	3.00

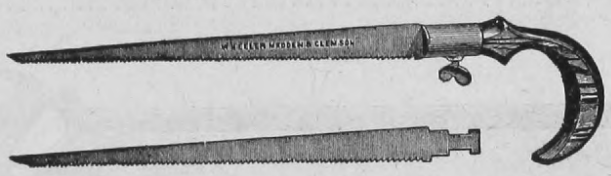
Packed—Half Dozen in a Box.

No. 2.

Disston Compass Saws, Crucible Steel Blade, Applewood Handle.

No. 2—Inches	12	14
Per Dozen	$4.50	4.75

Packed—Half Dozen in a Box.

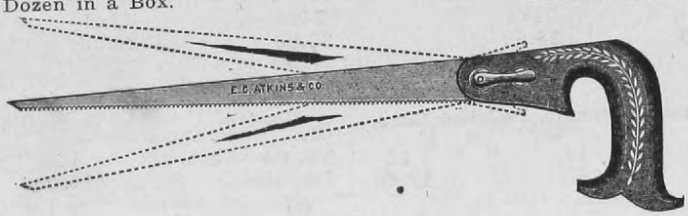


Holden.

Holden's Patent Compass Saws, Interchangeable Blades, Reversible Handle.

Inches	12	14
Per Dozen	$5.00	5.50
Extra Blades .....Per Dozen,	2.50	3.00

Packed—One Dozen in a Box.



No. 11.

Atkins' Adjustable Compass Saws, Apple Handle, Carved and Polished.

No. 11—Inches	12	14	16
Per Dozen	$6.75	7.00	7.25
Extra Blades.....Per Dozen,	3.25	3.50	3.75

Packed—Half Dozen in a Box.

KEYHOLE SAWS

No. 5.

No. 5—Atkins Keyhole Saws, 10 inch Blade, Beech Handle.....Per Dozen, $2.50

Packed—Half Dozen in a Box.

No. 21.

No. 21—Atkins 10 inch Keyhole Saw and Iron Pad .....Per Dozen, $2.30

Extra Keyhole Blades, 10 inch.....Per Dozen, 1.60

Packed—One Dozen in a Box.

ATKINS NESTS OF SAWS

No. 1.

This Nest combines One each, 12 inch Keyhole, 14 inch Compass and 18 inch Pruning Blade, and one Handle with adjusting Screws.

No. 1—Nest, Complete.....Per Dozen Sets,	$12.50
Extra Handles and Screws.....Per Dozen,	2.00
Extra 12 inch Keyhole Blades.....Per Dozen,	2.00
Extra 14 inch Compass Blades.....Per Dozen,	3.00
Extra 18 inch Pruning Blades.....Per Dozen,	5.50

Packed—Quarter Dozen Sets in a Box.

No. 3.

This Nest combines One each, 12 inch Keyhole, 14 inch Compass and 18 inch Silver Steel **Nail** Cutting Blade, with Patent Adjustable Handle.

No. 3—Nest, Complete.....Per Dozen Sets,	$20.00
Extra Handles and Screws.....Per Dozen,	3.50
Extra 12 inch Keyhole Blades.....Per Dozen,	2.00
Extra 14 inch Compass Blades.....Per Dozen,	3.00
Extra 18 inch Nail Cutting Blades.....Per Dozen,	11.50

Packed—Quarter Dozen Sets in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

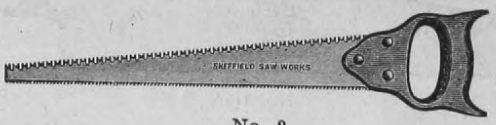
PRUNING SAWS

No. 12.

Atkins' Paragon Double Edge Pruning Saws, Silver Steel Blade, Beech Handle.

No. 12—Inches	18	20
Per Dozen	$10.50	11.50

Packed—One-Third Dozen in a Box.

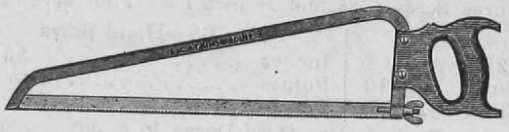


No. 2.

Atkins' Duplex Pruning Saws, Special Steel Blade, Beech Handle.

No. 2—Inches	18	20
Per Dozen	$8.00	9.00

Packed—One-Third Dozen in a Box.



No. 9.

Atkins' Tapered Pruning Saws, Frame is made of fine Crucible Steel, ½ inch wide and 5/16 inch thick. Blade is of ¾ inch high grade Special Steel. Handle has an extra large Grip making it comfortable where a glove is used by operator. Fastened to Frame by two nickeled Screws.

No. 9—Tapered Pruning Saws, 20 inch.....Per Dozen, $16.50

Packed—One-Third Dozen in a Box.

No. 11.

Atkins' Tapered Pruning Saws, Frame is made of high grade Crucible Steel, ¾ inch wide by 3/16 inch thick. Blade is fastened to frame by a turnbuckle arrangement so that the blade may be used at any angle. Handle is of our new easy grip pattern.

No. 11—Tapered Pruning Saws, 18¾ inch.....Per Dozen, $20.25

Packed—One-Third Dozen in a Box.

No. 7.

Atkins' Tapered Pruning Saws, Frame is made of very fine Crucible Steel, ¾ inch wide by 3/16 inch thick. Blade is of high quality Steel, adjustable to cut at any angle. Handle is equipped with **socket** arrangement to fasten to a pole when working from the ground.

No. 7—Tapered Pruning Saws, 16¾ inch.....Per Dozen, $21.00

Packed—One-Sixth Dozen in a Box.

No. 1.

Atkins' Table or Pruning Saws, Silver Steel Blade, Beech Handle, Polished Edge.

No. 1—Inches	18	20
Per Dozen	$7.75	8.50

Packed—One-Third Dozen in a Box.

No. 4.

Atkins' Panel Pruning Saws, High Grade Steel Blade, Beech Handle, Carved and Polished. Blade about 1 inch wide at Point.

No. 4—Inches	20
Per Dozen	$12.00

Packed—Half Dozen in a Box.

No. 44.

Atkins' Panel Pruning Saws, High Grade Steel Blade, Tempered extra stiff. **Special Steel Handle** which prevents Breakage. Narrow point.

No. 44—Inches	18	20
Per Dozen	$10.00	10.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAND, PANEL AND RIP SAWS

No. B66.

No. B8.

Buhl Extra, Finest Crucible Steel, Highly Polished, Patent Ground and Tempered, Full Skew Back, Applewood Handle, Carved and Polished, 18 to 24-inch have Four Screws, 26 and 28-inch have Five Screws. Fully warranted.

No. B66—Panel Saws				
Inches	18	20	22	24
Points	9 to 12	8 to 12	8 to 12	7 to 12
Per Dozen	$16.00	17.00	18.00	19.00

No. B66—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$20.00

No. B66—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$20.00

Packed—One-third Dozen in a Box.

Buhl Sons Co., Finest Crucible Steel, Patent Ground and Tempered, Full Skew Back, Applewood Handle, Carved on Grip, Polished Edge. 18 to 24-inch have Three Screws, 26 and 28-inch have Four Screws.

No. B8—Panel Saws				
Inches	18	20	22	24
Points	9 to 12	8 to 12	8 to 12	7 to 12
Per Dozen	$12.00	12.75	13.50	14.25

No. B8—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$15.00

No. B8—Rip Saws	
Inches	26
Points	4½ to 6
Per Dozen	$15.00

Packed—One-third Dozen in a Box.

No. B10.

No. 103.

Buhl Sons Co., Fine Cast Steel, Polished, Skew Back, Carved Handle, 18 to 24-inch have Three Screws, 26 and 28-inch have Four Screws.

No. B10—Panel Saws				
Inches	18	20	22	24
Points	9 to 12	9 to 12	9 to 12	9 to 12
Per Dozen	$9.50	10.15	10.80	11.45

No. B10—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$12.10

No. B10—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$12.10

Packed—One-third Dozen in a Box.

Navy Blue, Fine Cast Steel, Skew Back, Blued Blade. Warranted, Beech Handle, Polished Edge, Four Screws.

No. 103—Navy Blue Hand Saws, 26 inch, 6 to 10 points.....Per Dozen, $12.00

Packed—Half Dozen in a Box.

No. 403.

Buckeye, Fine Cast Steel, Skew Back, Polished Blade. Warranted, Beech Handle, Polished Edge. 18 to 24-inch have Three Screws, 26 and 28-inch have Four Screws.

No. 403—Panel Saws				
Inches	18	20	22	24
Points	8 to 10	8 to 10	8 to 10	8 to 10
Per Dozen	$7.40	7.80	8.20	8.60

No. 403—Hand Saws	
Inches	26
Points	6 to 10
Per Dozen	$9.00

No. 403—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$9.00

Packed—Half Dozen in a Box.

No. 303.

No. 203.

Chinook, Cast Steel Blade, Etched Combination Rule and Square, Beech Handle, Three Brass Screws.

No. 303—Chinook Superior Hand Saws, 26 inch, 6 to 9 Points.....Per Dozen, $7.20

Packed—Half Dozen in a Box.

Joe Patterson, Cast Steel, Filed and Set. Beech Handle, Polished Edge, 16 to 24 inch have Two Screws, 26 inch has Three Screws.

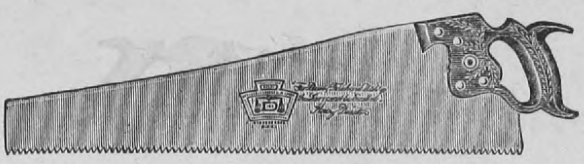
No. 203—Panel Saws					
Inches	16	18	20	22	24
Points	8 to 10	8 to 10	8 to 10	8 to 10	8 to 10
Per Dozen	$4.40	4.80	5.20	5.60	6.00

No. 203—Hand Saws	
Inches	26
Points	5 to 10
Per Dozen	$6.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAND, PANEL AND RIP SAWS



No. D100.

No. D100 Rip

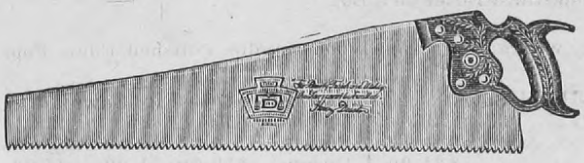
Henry Disston & Sons, Refined Crucible Steel, Patent Ground and Tempered, Skew Back, Warranted, Applewood Handle, Full Polished, Five Brass Screws.

No. D100—Panel Saws			
Inches	20	22	24
Points	9 to 12	9 to 12	9 to 12
Per Dozen	$20.00	22.00	23.50

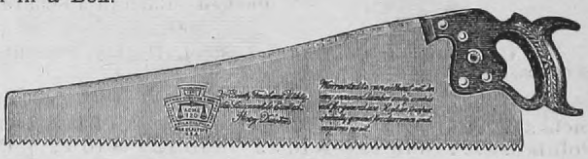
No. D100—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$25.00

No. D100—Rip Saws	
Inches	26
Points	4½ to 6
Per Dozen	$25.00

Packed—One-third Dozen in a Box.



No. D8.



No. 120.

Henry Disston & Sons, Refined Crucible Steel, Patent Ground and Tempered, Skew Back, Warranted, Applewood Handle, Full Polished, Five Brass Screws.

No. D8—Panel Saws				
Inches	18	20	22	24
Points	9 to 12	9 to 12	8 to 12	8 to 12
Per Dozen	$16.25	18.00	20.00	21.50

No. D8—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$22.50

No. D8—Rip Saws		
Inches	26	28
Points	5 to 6	4½ to 6
Per Dozen	$22.50	25.50

Packed—One-third Dozen in a Box.

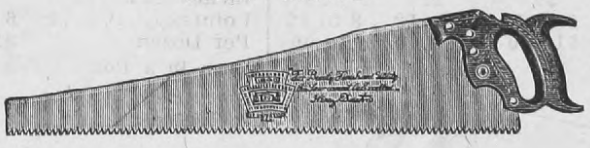
Henry Disston & Sons, Extra London Spring Steel, Selected and Highly Polished Blade. Acme Skew Back, Warranted. Applewood Handle, Carved and Polished, Five Brass Screws.

No. 120—Hand Saws	
Inches	26
Points	7 to 12
Per Dozen	$32.00

No. 120—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$32.00

Packed—One-third Dozen in a Box.

SHIP SAWS



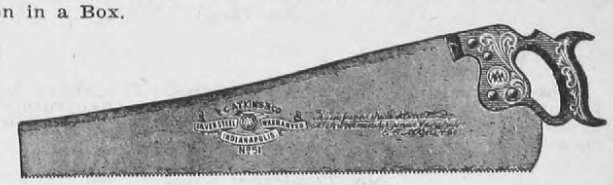
No. SD20.

Henry Disston & Sons, Refined Crucible Steel, Patent Ground and Tempered, Skew Back, Warranted, Applewood Handle, Carved and Polished, Five Brass Screws.

No. SD20—Narrow Blade Ship Saw, Skew Back, 26 inch Blade, 7 to 10 Points .....Per Dozen, $25.00

Packed—One-third Dozen in a Box.

No. 68.



No. 51

E. C. Atkins & Co., Rex, Silver Steel, Mirror Finish, Skew Back, Warranted. Perfection Carved Applewood Handle. Polished Edge, Four Screws.

No. 68—Panel Saws				
Inches	18	20	22	24
Points	8 to 12	8 to 12	8 to 12	8 to 12
Per Dozen	$19.50	21.50	23.50	25.50

No. 68—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$27.50

No. 68—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$27.50

Packed—Each in a Separate Carton, One-third Dozen in a Box.

E. C. Atkins & Co., Silver Steel, Damaskeened, Skew Back, Warranted. Carved Apple Handle, Varnished. Five Screws.

No. 51—Panel Saws			
Inches	20	22	24
Points	8 to 12	8 to 12	8 to 12
Per Dozen	$19.50	21.75	23.50

No. 51—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$24.50

No. 51—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$24.50

Packed—Each in a Separate Carton, One-third Dozen in a Box.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

HAND, PANEL AND RIP SAWS

No 53.

No. 70.

E. C. Atkins & Co., Silver Steel, Damaskeened, Skew Back, Warranted. Perfection Applewood Handle, Carved and Polished, Four Screws.

No. 53—Panel Saws				
Inches	18	20	22	24
Points	8 to 12	8 to 12	8 to 12	8 to 12
Per Dozen	$18.50	20.50	22.50	24.50

No. 53—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$25.50

No. 53—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$25.50

Packed—Each in a Separate Carton or One-third Dozen in a Box.

E. C. Atkins & Co., Special Steel, Highly Finished, Skew Back, Warranted. Applewood Handle, Polished Edge, Four Screws.

No. 70—Panel Saws				
Inches	18	20	22	24
Points	8 to 12	8 to 12	8 to 12	8 to 12
Per Dozen	$15.00	16.50	18.00	19.50

No. 70—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$21.00

No. 70—Rip Saws			
Inches	24	26	28
Points	5 to 6	5 to 6	4½ to 6
Dozen	$19.50	21.00	25.00

Packed—One Third Dozen in a Box.

No. 10½.

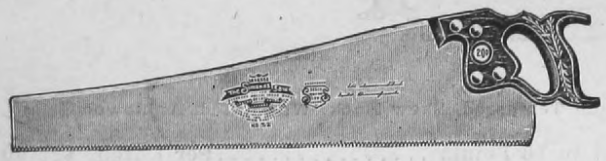
Simonds Mfg. Co. This manufacturer's own brand saw is offered at a price so low as to appeal especially to the amateur mechanic, manual training student, or the worker on the farm or at the home shop. Taper ground blade made of Simonds Crucible Steel. Polished beech handle.

No. 10½—Panel Saws			
Inches	20	22	24
Points	8 to 12	8 to 12	8 to 12
Per Dozen	$16.00	18.00	19.00

No. 10½—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$20.00

No. 10½—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$20.00

Packed—One Third Dozen in a Box.



No. 72.

No. 372.

Skew Back

Simonds "Blue Ribbon" Hand Saws. The above saws have blades made of Simonds Special Crucible Steel. Simonds Patented Temper. An easy hanging saw. Accurately ground and tapered. Carved and highly polished apple-wood handles. Brass screws. Absolutely guaranteed. These saws instantly attract the favorable attention of every one who sees them.

No. 72—Panel Saws			
Inches	20	22	24
Points	8 to 12	8 to 12	8 to 12
Per Dozen	$24.00	24.00	30.00

No. 72—Hand Saws	
Inches	26
Points	6 to 12
Per Dozen	$30.00

No. 72—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$30.00

Packed—Each in a Separate Carton, One-Third Dozen in a Box.

"Narrow" Skew Back

Simonds narrow bladed, Finishing, Siding or Ship Saw. Made with that high quality of material and appearance which genuinely pleases carpenters desiring this style of a special saw. It may also be described as a Mitering saw or a combination Hand and Panel saw. These saws are good sellers because a high grade, **narrow-bladed** saw is now a necessity in every tool kit.

No. 372—Panel Saws			
Inches	20	22	24
Points	8 to 12	8 to 12	8 to 12
Per Dozen	$24.00	24.00	30.00

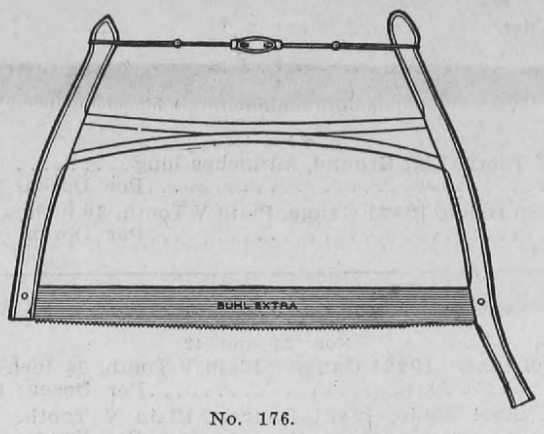
No. 372—Hand Saws	
Inches	26
Points	6 to12
Per Dozen	$30.00

No. 372—Rip Saws	
Inches	26
Points	5 to 6
Per Dozen	$30.00

Packed—Each in a Separate Carton, One-Third Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WOOD SAWS

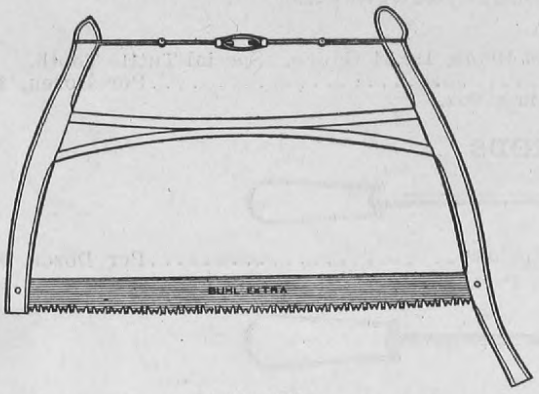


No. 176.

Buhl Extra. Double Brace Frame, Painted Blue, Single Rivet, Clipper Rod, Round Breasted 19x21 Gauge Best Cast Steel Blade, **"Special" ½-inch** wide V Tooth, **Three Points** to the inch.

No. 176—With 2¼ inch Blades, 30 inches long.. .....Per Dozen, $14.50

Packed—Half Dozen in a Box.

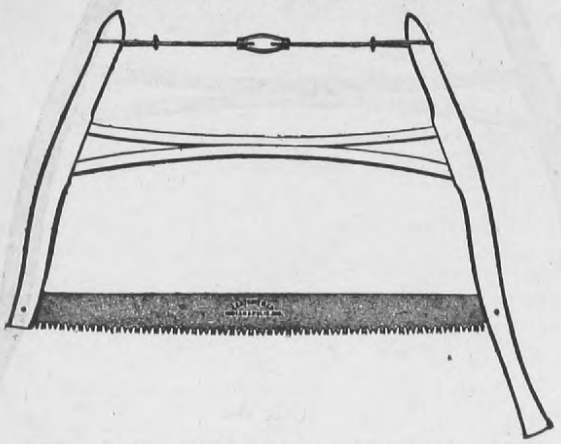


No. 236.

Buhl Extra, Double Brace Frame, Painted Blue, Single Rivet, Clipper Rod. Round Breasted 19x21 Gauge Best Cast Steel Blade, **Tuttle Tooth.**

No. 236—With 2¼ inch Blades, 30 inches long.. .....Per Dozen, $15.70

Packed—Half Dozen in a Box.

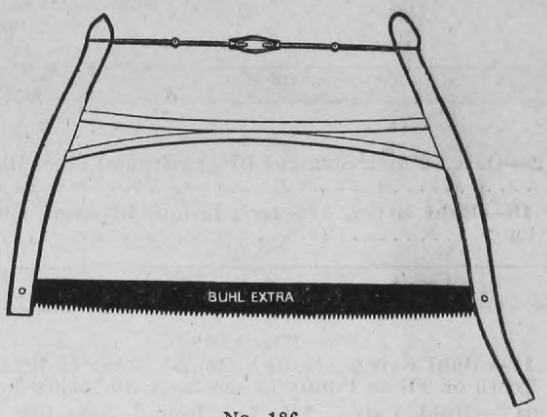


No. N909.

E. C. Atkins & Co. Heavy Double Brace Frame, Selected Stock, **Natural** Finish, Double Rivet. Tinned Jumbo Rod, Round Breasted 19x21 Gauge Silver Steel Blade, **Tuttle Tooth.**

No. N909—With 2⅜ inch Silver Steel Blade, 30 inches long.....Per Dozen, $21.60

Packed—Half Dozen in a Box.

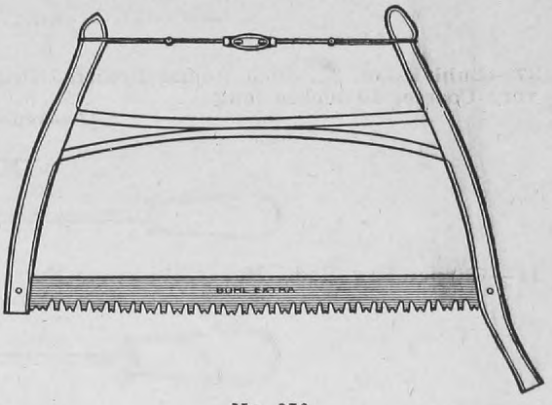


No. 186.

Buhl Extra, Double Brace Frame, Painted Blue, Single Rivet, Clipper Rod. Round Breasted **Blued** Clock Spring Blade, 19x21 Gauge. Standard V Tooth.

No. 186—With 1¾ inch Blades, 30 inches long.. .....Per Dozen, $14.50

Packed—Half Dozen in a Box.

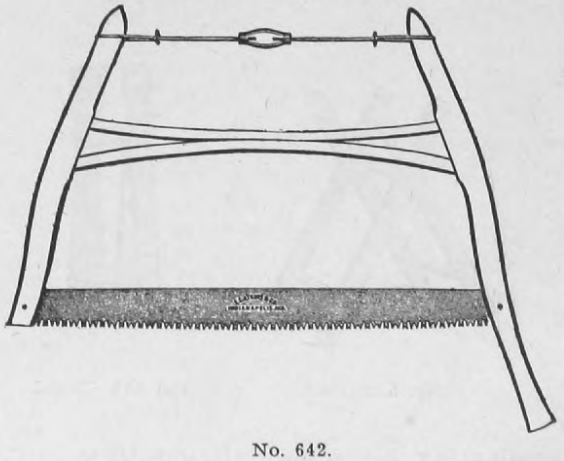


No. 376.

Buhl Extra, Double Brace Frame, Painted Blue, Single Rivet, Clipper Rod. Round Breasted 19x21 Gauge Best Cast Steel Blade. **Special Tuttle Tooth, Very Coarse.**

No. 376—With 2½-inch Blades, 30 inches long.. .....Per Dozen, $15.70

Packed—Half Dozen in a Box.



No. 642.

Sheffield, Wood Brace Frame, Painted Red, Single Rivet, Clipper Rod, Straight, Special Steel, Flat Ground Blade, **Tuttle Tooth.**

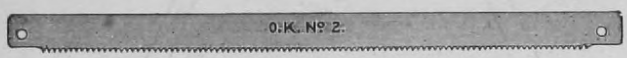
No. 642—With 2-inch Blade, 30 inches long.... .....Per Dozen, $13.80

Packed—Half Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

WOOD SAW BLADES

Sharpened and Set.



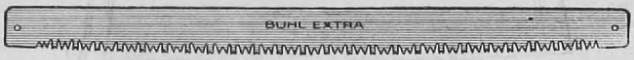
No. 2.

No. 18.

No. 2—O. K., 2 inch Straight Bright Special Steel Blade, Plain V Tooth, Flat Ground, 30 inches long.....Per Dozen, $5.40

No. 18—Buhl Extra, 1¾ inch Round Breasted **Blued** Tool Steel Blade, 19x21 Gauge, Plain V Tooth, 30 inches long.....Per Dozen, 6.90

Nos. 17 and 017.



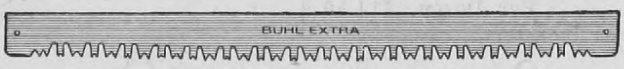
Nos. 23 and 42.

No. 17—Buhl Extra, 2¼ inch Round Breasted Bright Tool Steel Blade, 19x21 Gauge. Plain V Tooth, ½ inch Teeth or **Three Points** to the inch, 30 inches long.....Per Dozen, $6.90

No. 017—Buhl Extra, 2¼ in., Round Breasted Bright Tool Steel Blade, 19x21 Gauge. Plain V Tooth. **Four Points** to the inch, 30 inches long.....Per Dozen, 6.90

No. 23—Buhl Extra, 2¼ inch Round Breasted Bright Steel Blade, 19x21 Gauge, Tuttle Tooth, 30 inches long.....Per Dozen, 7.80

No. 42—Sheffield, 2 inch Straight Flat Ground Special Steel Blade, Tuttle Tooth, 30 in.....Per Dozen, 6.30



No. 37.

No. 37—Buhl Extra, 2¼ inch Round Breasted Bright Tool Steel Blade, 19x21 Gauge. Special Tuttle Tooth, very **Coarse,** 30 inches long.....Per Dozen, $7.80

Packed—Half Dozen in a Box.

WOOD SAW RODS

No. 11.

No. 11—Clipper Saw Rods, Heavy Malleable Nuts, Length 22 inches.....Per Dozen, $1.00

Packed—One Dozen in a Package.

No. 5.

No. 5—Jumbo Saw Rods, Extra Heavy, Tinned Rod and Loops, Japanned Nuts, Length 22 inches...Per Dozen, $2.20

Packed—One Dozen in a Package.

FOLDING SAW BUCKS

No. 533 Open.

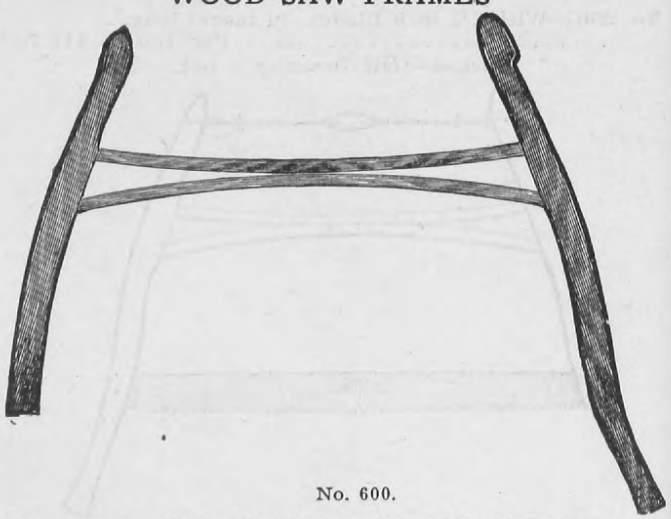
No. 533 Closed.

Revolving Saw Round, Malleable Iron Locks. Uprights 1⅛x2x28 inches, Saw Round 1¾x9½ inches; Rungs ⅞ inch.

No. 533—Hoosier Folding Saw Bucks, Hardwood with Beveled Edges.....Per Dozen, $6.00

Packed—Half Dozen in a Crate.

WOOD SAW FRAMES



No. 600.

No. N900—Atkins Heavy two Rivet Wood Brace Frame, Natural Finish, for 22 inch Rod and 30 inch Blade.....Per Dozen, $6.70

No. 600—Buhl Extra Single Rivet Wood Brace Frame, **Painted Blue,** for 22 inch Rod and 30 inch Blade.....Per Dozen, 6.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CROSS CUT SAWS

ATKINS THIN BACK

Nos. 331 and 332.

Atkins Thin Back Tuttle Tooth, Special Steel, 14x18 and 14x19 Gauge on Tooth Edge and Back Edge respectively.

Length, feet		5	5½	6	6½
No. 331—14x18 Gauge	Each,	$2.60	2.86	3.12	3.38
No. 332—14x19 Gauge	Each,	3.10	3.36	3.62	3.88

ATKINS REX

No. 1.

Atkins Rex, Pennsylvania Pattern, Silver Steel, **Segment** Ground, 14 Gauge on Tooth Edge, 17 Gauge on Ends on Back Edge, 20 Gauge at Center on Back Edge.

Length, feet		5	5½	6	6½
No. 1—14x20 Gauge	Each,	$4.10	4.80	5.60	6.40

DISSTON TUTTLE TOOTH

Disston Tuttle Tooth, Spring Steel, 14 Gauge on Tooth Edge and 18 Gauge on Back Edge respectively.

Length, feet		5	5½	6	6½
14x18 Gauge	Each,	$3.25	3.57	3.90	4.22

DISSTON VIRGINIAN

Disston Virginian Cross Cut Saws, Finest Crucible Steel, Extra High Temper, Patent Ground, 14 Gauge on Tooth Edge, 20 Gauge on Back Edge. A superior saw for fast cutting.

Length, feet		5	5½	6
14x20 Gauge	Each,	$4.55	5.30	6.20

ATKINS HOLLOW BACK

No. 379.

Atkins Hollow Back, Tuttle Tooth, High Grade Special Steel.

Length, feet		5	5½	6
No. 379—3¼ inches wide	Each,	$1.30	1.43	1.56

ATKINS TENON SAWS

No. 337.

Atkins Common **V Tooth Tenon** Saws, Special Steel, 14 Gauge on Tooth Edge, 16 Gauge on Back Edge.

Length, feet		4	4½	5
No. 337—14x16 Gauge	Each,	$1.92	2.16	2.40

Note—Prices on Cross Cut Saws do not include handles.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CROSS CUT SAWS

No. 13.

Simonds Tuttle Tooth, Crucible Steel, 14x19 Gauge on Tooth Edge and Back Edge respectively. Crescent Ground.

No. 13—Feet	5	5½	6
Each	$4.30	5.10	5.90

No. 22.

Simonds Lance Tooth, Perforated, Crucible Steel, 14 Gauge on Tooth Edge, 19 Gauge on Back Edge. Crescent Ground.

No. 22—Feet	5	5½	6
Each	$4.30	5.10	5.90

No. 113.

Simonds Tuttle Tooth, Crucible Steel, 14 Gauge on Tooth Edge, 19 Gauge on Back Edge. Crescent Ground.

No. 113—Feet	5	5½	6
Each	$4.30	5.10	5.90

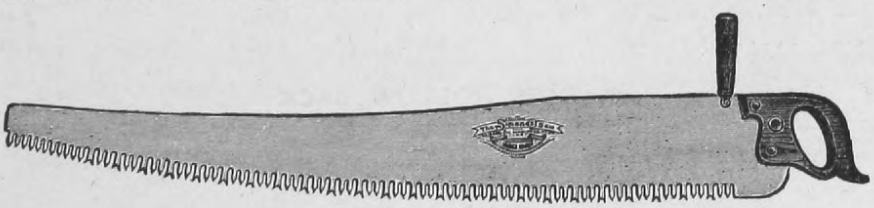
Note—Prices on Cross Cut Saws do not include Handles.

ONE MAN CROSS CUT SAWS

No. 222.

Simonds Lance Tooth, Perforated, Crucible Steel, Straight Ground.

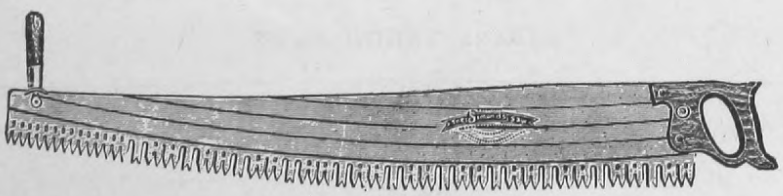
No. 222—Feet	3½	4	4½
Each	$2.52	2.88	3.24



No. 112.

Simonds Special Tooth, for cutting soft wood; Crucible Steel, Sway Back, Straight Ground.

No. 112—Feet	3½	4	4½
Each	$2.65	3.00	3.40



No. 223.

Simonds Lance Tooth, Perforated, Crucible Steel, Crescent Ground.

No. 223—Feet	3½	4	4½
Each	$3.50	4.00	4.50

Note.—Prices on One Man Cross Cut Saws include Handles Complete.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ONE MAN CROSS CUT SAWS

TUTTLE TOOTH

No. 390.

Atkins' Tuttle Tooth, Special Steel.

No. 390—Feet.....	3½	4	4½	5
Each	$1.96	2.24	2.52	2.80

"Standard" Tuttle Tooth.

No. 390A—Feet.	3½	4	4½	5
Each	$.....	.....	.....	.....

CEDAR KING

No. 389.

Atkins' Cedar King, Rex Pattern Tooth, Special Steel, Skew Back, Carved Handle.

No. 389—Feet	3½	4	4½	5
Each	$2.45	2.80	3.15	3.50

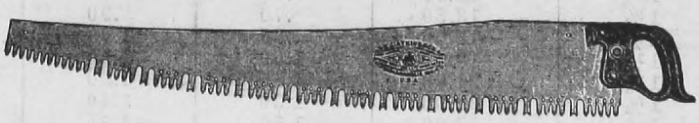
ATKINS' TAMARACK

No. 741.

Atkins' Extra Heavy Gauge. Taper ground. Lance tooth perforated. Perfection shape rakers. Extra large hand hold, for use with heavy gloves. Silver Steel. Three Brass Screws.

Length, feet	3½	4	4½
No. 741—One Man Saw.....Each,	$3.50	4.00	4.50

ATKINS' NO. 749



No. 749.

Atkins' New Pattern Skew Back One Man Saw, with medium sized Lance Tooth, Four cutting teeth and raker. Made of High-grade special Steel. Extra large Roomy Handle, Carved; edges stained and varnished; fastened to Blade by 3 Screws.

Length, feet	3½	4	4½
No. 749—One Man Saw.....Each,	$2.45	2.80	3.15

DISSTON LANCE TOOTH

No. D10.

Disston Two Cutter, Lance Tooth, Perforated, Spring Steel, Thin Skewback, Narrow Pattern.

No. D10—Feet	3½	4	4½	5
Each	$3.15	3.60	4.05	4.50

No. D210.

Disston One Man Saw, Long slim teeth with extra wide gullets, high quality Crucible Steel. Thin Skewback, Narrow Pattern.

No. D210—Feet	3½	4	4½
Each	$3.15	3.60	4.05

Note—Prices for One Man Cross Cut Saws include Handles Complete.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

Cross Cut.

SOLID TOOTH CIRCULAR SAWS

"Special" Circular Cross Cut or Cord Wood Saws

Diameter Inches	Thickness Gauge	Size of Hole Inches	Teeth in Saw	Each
24	11	1¼	64	$13.50
26	11	1¼	66	16.00
28	10	1⅜	68	18.50
30	10	1⅜	70	21.00

Rip.

Atkins Circular Saws

Solid Tooth, Silver Steel, patent ground and tempered, quality and workmanship unequaled.

Prices Quoted on Application.

Diameter Inches	Thickness Gauge	Size of Hole Inches	Price, Each	Extra for Each Gauge Heavier	Beveling New Saws Per Gauge	NET PRICES Extra for Setting and Sharpening if	
						Rip	Cross-Cut
1	24	⅜	$ 1.00	$0.01	$0.06	$0.03	$ 0.04
1½	24	⅜	1.00	.01	.07	.03	.05
2	23	⅜	1.00	.01½	.08	.04	.05
2½	22	⅜	1.00	.02	.09	.04	.06
3	21	½	1.00	.02½	.10	.05	.06
3½	20	½	1.00	.03	.12	.05	.07
4	19	¾	1.20	.03	.14	.06	.07
5	19	¾	1.50	.04	.16	.06	.08
6	18	¾	1.80	.05	.18	.07	.10
7	18	¾	2.10	.06	.20	.08	.11
8	18	⅞	2.40	.08	.22	.10	.13
9	17	⅞	2.80	.10	.25	.11	.14
10	16	1	3.30	.12	.28	.12	.16
11	16	1	3.90	.16	.30	.13	.18
12	15	1	4.40	.20	.35	.15	.20
14	14	1⅛	5.30	.25	.40	.18	.23
16	14	1⅛	6.50	.30	.50	.20	.25
18	13	1¼	8.00	.40	.60	.23	.28
20	13	1 5/16	9.50	.50	.70	.25	.32
22	12	1 5/16	11.50	.60	.80	.28	.35
24	11	1⅜	13.50	.70	.90	.31	.40
26	11	1⅜	16.00	.85	1.05	.35	.45
28	10	1½	18.50	1.00	1.20	.38	.50
30	10	1½	21.00	1.15	1.30	.42	.55
32	10	1⅝	24.00	1.30	1.40	.45	.60
34	9	1⅝	27.00	1.50	1.55	.50	.65
36	9	1⅝	31.00	1.80	1.70	.55	.70
38	9	1⅝	35.00	2.00	1.85	.60	.75
40	9	2	41.00	2.30	2.00	.65	.80
42	8	2	47.00	2.60	2.20	.....	.85
44	8	2	55.00	3.00	2.40	.....	.90
46	8	2	65.00	3.50	2.60	.....	1.00
48	8	2	75.00	4.00	2.80	.....	1.10
50	7	2	85.00	4.50	3.00	.....	1.20
52	7	2	95.00	5.00	3.25	.....	1.30
54	7	2	105.00	6.00	3.50	.....	1.40
56	7	2	120.00	7.00	3.75	.....	1.50
58	7	2	135.00	8.00	4.05	.....	1.60
60	6	2	150.00	9.00	4.35	.....	1.70
62	6	2	170.00	10.00	4.65	.....	1.80
64	6	2	190.00	12.00	5.00	.....	1.90
66	6	2	210.00	15.00	5.35	.....	2.00
68	5	2	235.00	18.00	5.75	.....	2.10
70	5	2	265.00	21.00	6.15	.....	2.20
72	5	2	300.00	24.00	6.55	.....	2.30
74	5	2	340.00	27.00	7.00	.....	2.40
76	5	2	390.00	30.00	7.50	.....	2.50
78	5	2	465.00	34.00	8.10	.....	.....
80	5	2	550.00	38.00	8.80	.....	.....
82	5	2	640.00	43.00	9.60	.....	.....
84	5	2	730.00	48.00	10.50	.....	.....

All Saws of odd diameter, not listed, take price of next larger size listed.

No extra charge for Saws one gauge thicker than list.

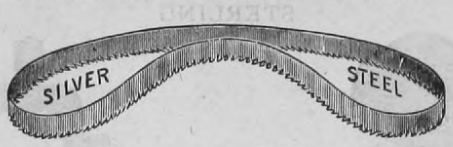
No extra charge for Saws one to three gauges thinner than list; when more than three gauges thinner, add 5 per cent to list for each gauge.

Circular Saws 48 inches and larger, thinner than 10 gauge are not warranted.

Circular Saws 42 inches or less in diameter beveled one gauge without extra charge; 44 inches or larger, beveled two gauges without extra charge.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

NARROW BAND SAWS



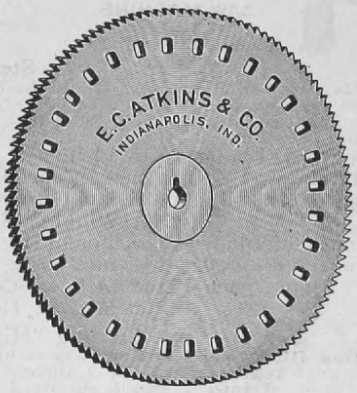
Atkins' Silver Steel Narrow Band Saws in 500 foot Coils.

Width, inch	3/16	1/4	3/8	1/2	5/8	3/4	1
Standard Gauge, Nos	23	22	22	21	21	21	20
Standard Teeth, Points	7	6	5 1/2	5	4 1/2	4	3 1/2
Per Foot	$0.11	.12	.13	.14	.16	.18	.23
Extra for Filing and Setting, Per Foot	$.....	.....	.....	.....	.....	.....	.....
Extra for Brazing Net Each	.....	.....	.....	.....	.....	.....	.....

Note.—These Saws are not joined, set or filed unless so ordered. We will cut to any length desired and have saws brazed, filed and set to order.

HIGH SPEED METAL SAWS

MILLING MACHINE SAWS



Atkins Circular Saws for Cutting Hot or Cold Iron at High Speed

Diameter Inches	Gauge	Each	Diameter Inches	Gauge	Each	Diameter Inches	Gauge	Each	Diameter Inches	Gauge	Each
14	10	$4.00	24	7	$10.50	34	5	$18.50	44	3	$41.00
16	10	5.00	26	7	12.00	36	5	20.50	46	3	50.00
18	8	6.50	28	6	13.50	38	4	24.00	48	3	60.00
20	8	7.50	30	6	15.50	40	3	29.50	50	3	70.00
22	7	9.00	32	6	17.00	42	3	35.00	.....	.....	.....

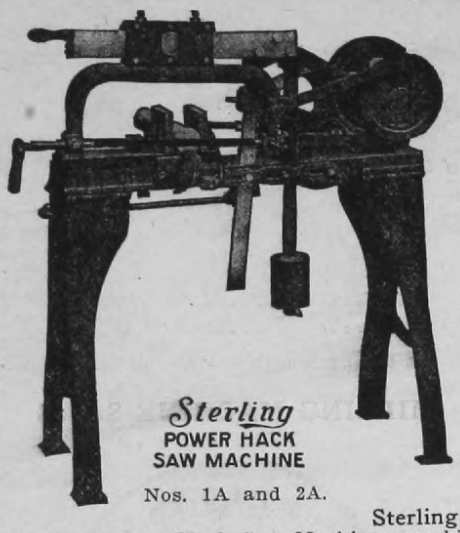
Special Milling Saws for Higley Machines

Diameter Inches	Thickness Inches	Hole Inches	New Style Machine	Old Style Machine	Each	Diameter Inches	Thickness Inches	Hole Inches	New Style Machine	Old Style Machine	Each
12 1/2	1/8	1 1/4	10	Bench	$ 9.50	20	3/16	1 1/4	31	.....	$ 18.10
13 1/2	1/8	1 1/4	11	.....	9.50	26	3/16	1 1/4	17	26" Cambria	28.00
13 1/2	5/32	1 1/4	.....	5	10.55	26	3/16	1 1/2	19	1	28.00
13 1/2	11/64	1 1/4	11	.....	10.90	26	1/4	1 1/2	19	1	32.00
15	5/32	1 1/4	12	.....	12.15	28	3/16	1 1/2	.....	1	35.00
16	3/16	1 1/4	13	3	12.55	30	3/16	1 1/2	.....	1	40.00
17 1/2	3/16	1 1/4	30	.....	15.25	31	1/4	1 1/2	18	7	48.00
18	11/64	1 1/4	14	2	14.75	31	1/4	1 1/2	20	1 1/2	48.00
18	3/16	1 1/4	14	2	15.25	31	1/4	1 1/2	21	9	48.00
18	7/32	1 1/4	14	2	16.25	36	9/32	1 1/2	21 1/2	.....	65.50
18 1/2	7/32	1 1/4	14	2	19.30	36	11/32	1 1/2	21 1/2	.....	71.50
20	3/16	1 1/4	15	8	18.10	40	5/16	1 1/2	22	.....	105.50
20	3/16	1 1/4	16	20" Cambria	18.10	40	11/32	1 1/2	22	.....	111.50
20	7/32	1 1/4	16	20" Cambria	19.30	50	1/2	1 1/2	24	.....	206.50

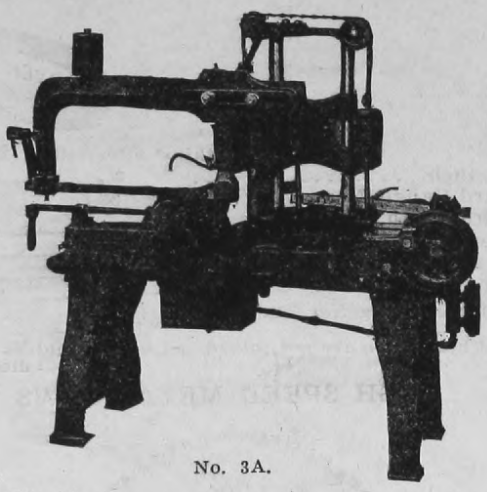
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POWER HACK SAW MACHINES

STERLING



Nos. 1A and 2A.



No. 3A.

Sterling Power Hack Saw Machine

The **Sterling Power** Hack Saw Machines combine many important features making them very effective and economical. **Automatic** Lift relieves the Blade on return stroke. Driven by Milled Gears. The automatic shut-off stops the saw on the backward stroke, throwing the belt from tight to loose pulley. The Swivel Vise, cutting any angle up to 45 degrees, is interchangeable.

No. 1A—Length of Blades 10 to 12 inches, 6 inch Stroke. Cutting capacity 5x5 inches. Tight and loose pulleys, 10 inches diameter, 1¾ inch face. Geared 3 to 1. Vise Jaws 2⅝ inches high, 4½ inches wide, 6 inch opening. Floor space 17x32 inches. Complete with half-dozen 12x⅝ inch blades.....Each, $.....

Net Weight 185 pounds, Crated for Shipping 210 pounds.

No. 2A—Length of Blade, 12 inches or 14 inches, 6 inch Stroke. Cutting capacity 6x6 inches. Tight and loose pulleys 10 inches diameter, 2¼ inch face. Geared 3 to 1. Vise Jaws 3⅛ inches high, 4½ inches wide, 6¼ inch opening. Floor space 17x32 inches. Complete with half-dozen 14x¾ inch blades.....Each, $.....

Net Weight 190 pounds, Crated for Shipping 210 pounds.

Sterling "High Speed" Power Hack Saw Machine

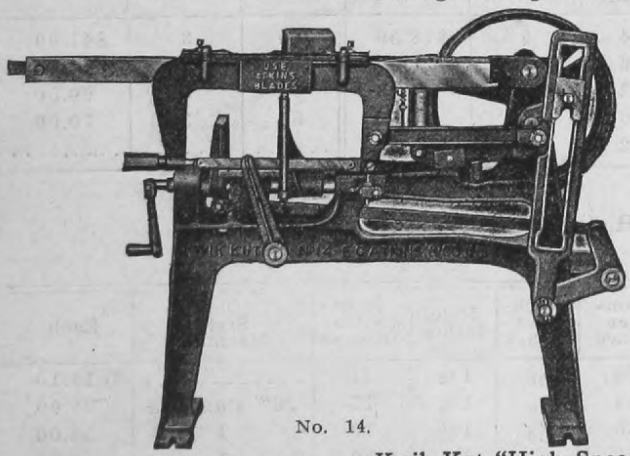
The **Sterling High Speed Power** Saw is built on the same principle as the Nos. 1A and 2A.

The additional features are the Lubricant Plunger Pump, two water tanks, the lower being the reservoir from which the water is pumped into a small supply tank, permits the water to flow from there by gravity on the blade to keep same cool. Equipped with adjustable frame which allows any length blade from 17 to 21 inches inclusive to be used. Can safely be run at 100 strokes per minute with lubricant when cutting soft steel or annealed tool steel.

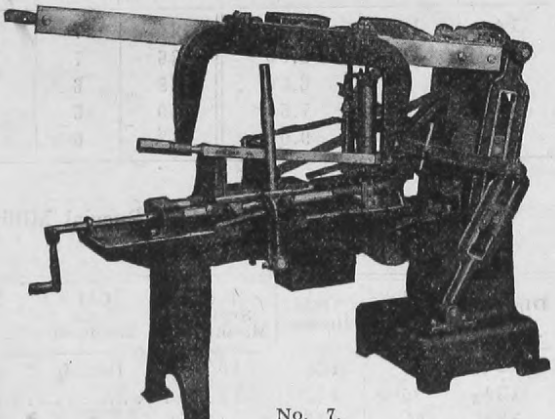
No. 3A—Length of Blade 17 to 21 inches, 6 inch Stroke. Cutting capacity 8x12 inches. Tight and loose pulleys 10 inches diameter, 2¼ inch face. Geared 2⅐ to 1. Vise Jaws 4⅛ inches high, 5¼ inches wide, 12 inch opening. Bed of machine 2 feet from floor. Floor space 17x43 inches. Complete with one-third dozen 17 inch blades.....Each, $.....

Net Weight 500 pounds, Crated for Shipping 600 pounds.

KWIK-KUT



No. 14.



No. 7.

Kwik-Kut "High Speed" Power Hack Saw Machines

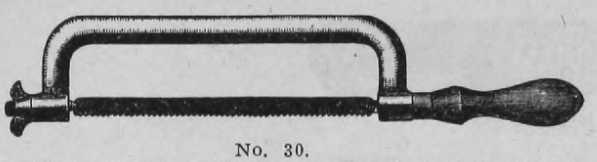
These are Draw Cut Machines, that is, they operate with a pulling instead of a pushing motion. They employ the full stroke of the blade and are automatically adjusted to all sizes of cuts. Blade is automatically lifted from the work during the reverse stroke, thus avoiding unnecessary wear on the saw teeth. The Base is cabinet pattern and being extra heavy permits of no vibration. Equipped with swivel vise, cutting any angle up to 45 degrees. The Saw Frame is provided with a long compensating bearing, which helps to insure accuracy of cut, and oil pockets for waste. Has a two-speed Pulley, which enables the user to regulate the speed to suit the requirements. Equipped with tank for holding cutting compound and pump for supplying same to blade. A five-pound bucket of Atkins' Kooling Kompound furnished with each machine.

No.	Capacity Straight Cut	Capacity at 45 Degrees	Speed	Takes Blades	Size of Pulley	Floor Space	Shipping Weight	Each
12S	4x4 inch	2½x4 inch	1	12 inch	16x3 inch	12x36 inch	350 lbs.	$70.50
14S	5x6 inch	3¼x6 inch	1	14 inch	16x3 inch	12x38 inch	400 lbs.	100.50
7S	7x8 inch	4½x8 inch	2	18 inch	18x3"—20x3"	18x40 inch	600 lbs.	157.50

Note.—All Power Hack Saw Machines shown on this page may be equipped with electric motors, either direct or alternating current. Prices furnished on application.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

HACK SAW FRAMES



No. 30.

Union, Cast Iron Frame, Japanned, Oval Back, Stained Cherry Handle. Faces Blades in four directions.

Inches	8	9	10
Depth of Cut, inches	2½	2½	2½
No. 30—Without Blades..Per Dozen,	$4.00	4.50	5.00

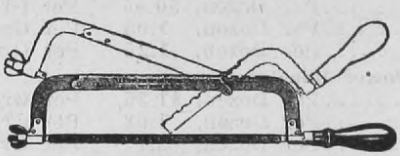
Packed—Half Dozen in a Box.

No. 50.

Union, Adjustable Steel Frame, made from best cold drawn steel, ⅝ inch wide, Nickel Plated. Handle Mahogany Finish. Faces blades in four directions.

No. 50—Holds 8 to 12 inch Blades, depth of Cut 2⅝ inches, **without** Blades.....Per Dozen, $6.00

Packed—One-Twelfth Dozen in a Box.



No. 40H.

Hoosier, Extension Steel Frame, Polished and Nickel Plated, Enameled Handle. Faces Blades in four directions.

No. 40H—Holds 8 to 12 inch Blades, depth of Cut 2⅝ inches, **without** Blades....Per Dozen, $12.00

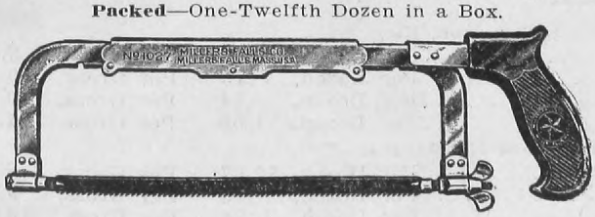
Packed—One-Twelfth Dozen in a Box.

No. 66.

True Aim, Extension Steel Frame, full Polished and Nickel Plated, Hardwood Handle, Polished. Faces Blades in four directions. Power being in a direct line with the blade prevents breakage. Adjustment is make quick and easy by means of a floating rivet. Faces blades in four directions.

No. 66—Holds 8 to 12 inch Blades, Depth of Cut 3¼ inches, **without** Blades.....Per Dozen, $15.00

Packed—One-Twelfth Dozen in a Box.

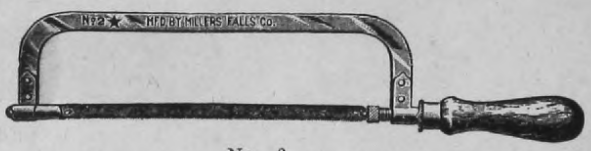


No. 1027.

Star, Extension Steel Frame. Black Composition Handle, secured to Frame by Steel Rib extending nearly the full length of Handle. Plated Steel Stock, stiff Frame with Extra Strength in middle of the back. Faces Blades in four directions.

No. 1027—Holds 8 to 12 inch Blades, Depth of Cut 3¼ inches; with one 10 inch Blade ..... Per Dozen, $15.00

Packed—One-Twelfth Dozen in a Box.



No. 2.

Star, Steel Frame, Polished and Nickel Plated, Cocobola Cocobola Handle. Faces Blades in four directions.

No. 2—Holds 8 inch Blades, Depth of Cut 2⅜ inches, with one Blade.....Per Dozen, $9.50

Packed—One-Twelfth Dozen in a Box.

No. 10.

Star, Extension Steel Frame, Polished and Nickel Plated, Cocobola Handle. Faces Blades in four directions.

No. 10—Holds 8 to 12 inch Blades, Depth of Cut 2⅜ inches, with one 10 inch Blade. Per Dozen, $15.50

No. 11—Holds 8 to 12 inch Blades, Depth of Cut 3½ inches, with one 10 inch Blade. Per Dozen, $16.50

Packed—One-Twelfth Dozen in a Box.

No. 20.

Sterling. A Strong and Durable Frame, Polished. Faces Blades in four directions.

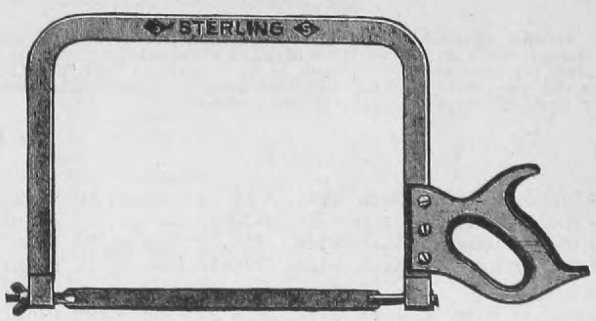
Inches	8	9	10
Depth of Cut, inches	2½	2½	2½
No. 20—With One Blade..Per Dozen,	$6.00	6.30	6.60

Packed—Half Dozen in a Box.

Sterling, Made from ⅞ x ¼ inch **Heavy Stock,** Polished. Faces Blades in four directions.

Inches	12	14
Depth of Cut, inches	5¼	5¼
No. 25—With One Blade...Per Dozen,	$16.00	18.00

Packed—Quarter Dozen in a Box.



Nos. 55 to 58.

Sterling "Railroad" Track Saw Frame, for Railroad and Structural Iron Work, Frame forged from 1x¼ inch Steel, Polished. Faces Blades in four directions.

No. 55—Holds 12 inch Blades, Depth of Cut, 7¼ inches, with one Blade.....Per Dozen, $20.50

No. 57—Holds 12 inch Blades, Depth of Cut, 10¼ inches, with one Blade.....Per Dozen, 21.50

No. 58—Holds 14 inch Blades, Depth of Cut 10¼ inches, with one Blade.....Per Dozen, 22.50

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STERLING HACK SAW BLADES

For Hand Frames

Regular—For Sawing Solid Steel, Iron and Bronze.

8 inches long, ½ inch wide, .026-23 Gauge, 18 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 18 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, .026-23 Gauge, 18 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, 9/16 inch wide, .026-23 Gauge, 18 Points	Per Dozen, 1.02	Per Gross, 12.30

Medium—For sawing Solid Brass, Pipe and Light Work.

8 inches long, ½ inch wide, .026-23 Gauge, 24 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 24 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, .026-23 Gauge, 24 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, ½ inch wide, .026-23 Gauge, 24 Points	Per Dozen, 1.00	Per Gross, 12.00
12 inches long, ⅝ inch wide, .028-22 Gauge, 24 Points, Hand and Power	Per Dozen, 1.05	Per Gross, 12.60

Very Fine—For sawing Thin Wall Tubing and Light Sheet Metals.

8 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, 1.00	Per Gross, 12.00
12 inches long, ⅝ inch wide, .028-22 Gauge, 32 Points, Hand and Power	Per Dozen, 1.05	Per Gross, 12.60

For Power Machines

For Light Gravity Feed Power Machines

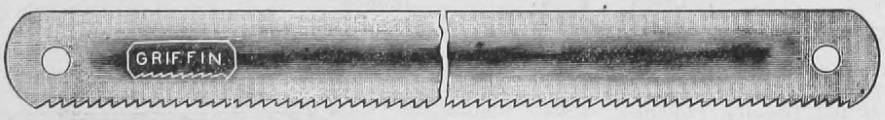
10 inches long, ⅝ inch wide, .028-22 Gauge, 14 Points	Per Dozen, $0.85	Per Gross, $10.20
12 inches long, ⅝ inch wide, .028-22 Gauge, 14 Points	Per Dozen, 1.05	Per Gross, 12.60
14 inches long, ⅝ inch wide, .028-22 Gauge, 14 Points	Per Dozen, 1.25	Per Gross, 15.00

For Heavy Gravity and Positive Feed Power Machines

12 inches long, ¾ inch wide, .033-21 Gauge, 14 Points	Per Dozen, $1.35	Per Gross, $16.20
14 inches long, ¾ inch wide, .033-21 Gauge, 14 Points	Per Dozen, 1.58	Per Gross, 18.90
17 inches long, ¾ inch wide, .049-18 Gauge, 10 Points	Per Dozen, 2.77	Per Gross, 33.15
12 inches long, 1 inch wide, .049-18 Gauge, 10 Points	Per Dozen, 2.45	Per Gross, 29.40
14 inches long, 1 inch wide, .049-18 Gauge, 10 Points	Per Dozen, 2.86	Per Gross, 34.30
17 inches long, 1 inch wide, .049-18 Gauge, 10 Points	Per Dozen, 3.47	Per Gross, 41.65
18 inches long, 1 inch wide, .056-17 Gauge, 10 Points	Per Dozen, 4.20	Per Gross, 50.40
20 inches long, 1 inch wide, .056-17 Gauge, 10 Points	Per Dozen, 4.67	Per Gross, 56.00
24 inches long, 1½ inch wide, .065-16 Gauge, 10 Points	Per Dozen, 10.00	Per Gross, 120.00

Note—Sterling Blades measure as follows: From center to center of holes except the 14-inch, which measure 13½ inches, and the 17-inch which measure 16½ inches.

GRIFFIN FLEXIBLE BACK HACK SAW BLADES



Griffin "Flexible" Hack Saw Blades are tempered throughout, but by a special process the toothed portion of the blade, or about one-quarter of its width, is given the high temper necessary for cutting metals, the central portion is given a spring temper, while the back is only a little less hard than the toothed edge. By this process we produce a blade which has the best cutting and wearing qualities, the stiffness of the all tempered blade and the freedom from breakage found in the flexible blade. All teeth are milled.

For Hand Frames

Regular—For sawing Soft Steel, Cast Iron, Etc.

.8 inches long, ½ inch wide, .026-23 Gauge, 16 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 16 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, .026-23 Gauge, 16 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, ½ inch wide, .026-23 Gauge, 16 Points	Per Dozen, 1.00	Per Gross, 12.00

Medium—For sawing Tool Steel, Hard Metals, Etc.

8 inches long, ½ inch wide, .026-23 Gauge, 22 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 22 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, 026-23 Gauge, 22 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, ½ inch wide, .026-23 Gauge, 22 Points	Per Dozen, 1.00	Per Gross, 12.00

Very Fine—For sawing Thin Tubing and Sheet Metals.

8 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, $0.67	Per Gross, $ 8.00
9 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, .75	Per Gross, 9.00
10 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, .84	Per Gross, 10.00
12 inches long, ½ inch wide, .026-23 Gauge, 32 Points	Per Dozen, 1.00	Per Gross, 12.00

Note—Griffin Blades measure from center to center of holes.

Packed—Entire Page, One Dozen in a Bundle, Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ATKINS' "AAA" HACK SAW BLADES

Atkins "all hard" blades have greater durability than any similar blade on the market, owing to the fact that a special steel is used which is peculiarly adapted to this service. They are tempered by a perfected process wherein any variation in the consistency of the blades is eliminated. The teeth are sharp, and are given just enough set to insure a free, smooth and rapid cut, removing no more stock than necessary. A file will not touch them. It will be well to remember that these Hack Saws are as hard as files. This being the case, care should be taken not to bend them unnecessarily, for, like files, they will break easily and fly to pieces when bent.

For Hand Frames

Regular. For sawing Solid Steel, Iron and Bronze.

No. 200	8 inches long, 7/16 inch wide, .025-23 Gauge, 18 Points	Per Dozen, $0.67	Per Gross, $ 8.00
	9 inches long, 7/16 inch wide, .025-23 Gauge, 18 Points	Per Dozen, .75	Per Gross, 9.00
	10 inches long, 7/16 inch wide, .025-23 Gauge, 18 Points	Per Dozen, .84	Per Gross, 10.00
No. 205	12 inches long, 9/16 inch wide, .025-23 Gauge, 16 Points	Per Dozen, 1.05	Per Gross, 12.60

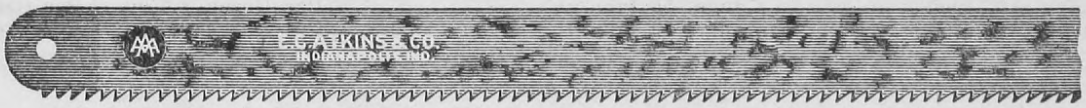
Medium. For sawing Solid Brass, Pipe and Light Work.

No. 210	8 inches long, ½ inch wide, .025-23 Gauge, 24 Points	Per Dozen, $0.67	Per Gross, $ 8.00
	9 inches long, ½ inch wide, .025-23 Gauge, 24 Points	Per Dozen, .75	Per Gross, 9.00
	10 inches long, ½ inch wide, .025-23 Gauge, 24 Points	Per Dozen, .84	Per Gross, 10.00
	12 inches long, ½ inch wide, .025-23 Gauge, 24 Points	Per Dozen, 1.00	Per Gross, 12.00

Very Fine. For sawing Thin Wall Tubing and Light Sheet Metals.

No. 215	8 inches long, ½ inch wide, .025-23 Gauge, 32 Points	Per Dozen, $0.67	Per Gross, $ 8.00
	9 inches long, ½ inch wide, .025-23 Gauge, 32 Points	Per Dozen, .75	Per Gross, 9.00
	10 inches long, ½ inch wide, .025-23 Gauge, 32 Points	Per Dozen, .84	Per Gross, 10.00
	12 inches long, ½ inch wide, .025-23 Gauge, 32 Points	Per Dozen, 1.00	Per Gross, 12.00

ATKINS' "AAA" POWER MACHINE HACK SAW BLADES



Atkins power blades are all tempered hard, but by a special process the temper is graduated through the body so that just enough elasticity and life is imparted to the saw to make it far more serviceable than any other power saw on the market. They are especially adapted for use on Kwik-Kut and all other makes of power machines.

For "Light Gravity" Feed Power Machines.

No. 400	10 inches long, ⅝ inch wide, .028-22 Gauge, 14 Points	Per Dozen, $0.92	Per Gross, $11.00
	12 inches long, ⅝ inch wide, .028-22 Gauge, 14 Points	Per Dozen, 1.10	Per Gross, 13.20

For "Heavy Gravity" and Positive Feed Power Machines.

No. 410	12 inches long, ¾ inch wide, .032-21 Gauge, 14 Points	Per Dozen, $1.35	Per Gross, $16.20
	14 inches long, ¾ inch wide, .032-21 Gauge, 14 Points	Per Dozen, 1.58	Per Gross, 18.90
No. 415	12 inches long, ¾ inch wide, .042-19 Gauge, 14 Points	Per Dozen, $1.75	Per Gross, $21.00
	14 inches long, ¾ inch wide, .042-19 Gauge, 14 Points	Per Dozen, 2.05	Per Gross, 24.50
No. 420	12 inches long, ¾ inch wide, .048-18 Gauge, 12 Points	Per Dozen, $1.95	Per Gross, $23.40
	14 inches long, ¾ inch wide, .048-18 Gauge, 12 Points	Per Dozen, 2.28	Per Gross, 27.30
	17 inches long, ¾ inch wide, .048-18 Gauge, 12 Points	Per Dozen, 2.77	Per Gross, 33.15
No. 435	12 inches long, 1 inch wide, .048-18 Gauge, 10 Points	Per Dozen, $2.45	Per Gross, $29.40
	14 inches long, 1 inch wide, .048-18 Gauge, 10 Points	Per Dozen, 2.86	Per Gross, 34.30
	17 inches long, 1 inch wide, .048-18 Gauge, 10 Points	Per Dozen, 3.47	Per Gross, 41.65
	18 inches long, 1 inch wide, .048-18 Gauge, 10 Points	Per Dozen, 3.68	Per Gross, 44.10
	20 inches long, 1 inch wide, .048-18 Gauge, 10 Points	Per Dozen, 4.09	Per Gross, 49.00

Note—Atkins' Blades measure as follows: 12 inch and under, from center to center of holes; 14 inch and longer, ½ inch less from center to center of holes than length given.

Packed—Entire Page, One Dozen in a Bundle, Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STAR HACK SAW BLADES

It is cheaper to buy a new Blade than file an old one. For ordinary work, Blades with 14 teeth are furnished; but for cutting thin tubing or thin sheets of metal, those with 24 teeth should be used.

For Hand Frames

Medium—For Ordinary Work.

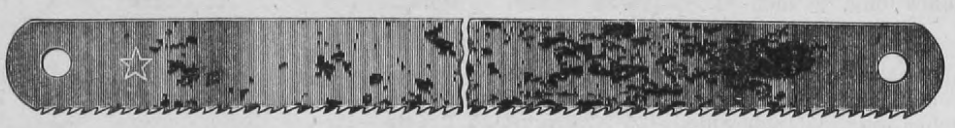
8 inches long,	⅜ inch wide .022-24 Gauge, 14 Points	Per Dozen;	$0.65	Per Gross,	$ 8.00
9 inches long,	⅜ inch wide .022-24 Gauge, 14 Points	Per Dozen,	.70	Per Gross,	9.00
10 inches long,	½ inch wide .022-24 Gauge, 14 Points	Per Dozen,	.85	Per Gross,	10.00
12 inches long,	½ inch wide .025-23 Gauge, 14 Points	Per Dozen,	1.05	Per Gross,	12.00

Fine—For Sawing Thin Tubing and Sheet Metals.

8 inches long,	⅜ inch wide .022-24 Gauge, 24 Points	Per Dozen,	$0.65	Per Gross,	$ 8.00
9 inches long,	⅜ inch wide .022-24 Gauge, 24 Points	Per Dozen,	.70	Per Gross,	9.00
10 inches long,	½ inch wide .022-24 Gauge, 24 Points	Per Dozen,	.85	Per Gross,	10.00
12 inches long,	½ inch wide .025-23 Gauge, 24 Points	Per Dozen,	1.05	Per Gross,	12.00

Packed—One Dozen in a Bundle; Half Gross in a Box.

STAR POWER HACK SAW BLADES



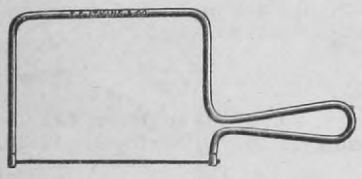
Made from the highest grade of Steel with perfect temper and cutting qualities.

For Power Machines

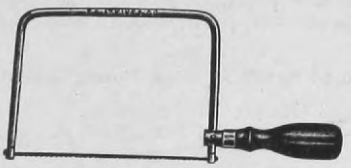
12 inches long,	⅝ inch wide .032-21 Gauge, 14 Points	Per Dozen,	$1.20	Per Gross,	$14.40
14 inches long,	¾ inch wide .032-21 Gauge, 14 Points	Per Dozen,	1.50	Per Gross,	18.00
17 inches long,	1 inch wide .049-18 Gauge, 10 Points	Per Dozen,	3.00	Per Gross,	36.00
24 inches long,	1 inch wide .065-16 Gauge, 10 Points	Per Dozen,	4.50	Per Gross,	54.00

Packed—12 and 14 inch, 6 Dozen; 17 inch, 4 Dozen, and 24 inch, 3 Dozen in a Box.

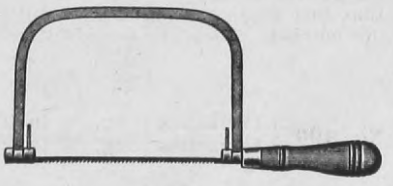
COPING SAWS AND BLADES



No. 100.



No. 110.



No. 50.

Nos. 100 and 110 Coping Saws

Adjustable Wire Frame, Polished and Nickel Plated, 6 inch Bent End Blade, Depth of cut 4 inches. Blades face in four directions.

No. 100—Wire Handle, Complete with One Dozen Extra Blades	Per Dozen,	$3.25
No. 110—Wood Handle, Complete with One Dozen Extra Blades	Per Dozen,	4.00
No. 0100—Coping Saw Blades for Nos. 100 and 110 Frames	Per Gross,	1.66

Packed—Saws Half Dozen in a Box; Blades One Dozen in a Bundle. One Gross in a Box.

No. 50 Coping Saws

Cold Rolled Steel Frame, Nickel Plated and Buffed, ⅝ inch wide by 3/16 inch thick. Frame is fastened to handle by a malleable iron threaded Ferrule. Handle is of Hardwood. Blades can be instantly adjusted to cut sharp or unusual angles.

No. 50—Size 7¼x4⅝ inches, Complete with 2 Blades each	Per Dozen,	$10.00
No. 050—Coping Saw Blades for No. 50 Frames	Per Dozen,	.85

Packed—Saws One-sixth Dozen in a Box; Blades One Dozen in a Bundle. One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KITCHEN SAWS

No. 8.

Atkins Kitchen Saws, $\frac{5}{8}$x$\frac{3}{16}$ inch Flat Steel Black, $\frac{5}{8}$ inch Bright Special Steel Blade, Beech Handle.

No. 8—Inches	12	14	16
Per Dozen.....	$5.00	5.00	5.00

Packed—Half Dozen in a Box.

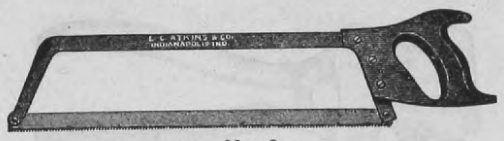
No. 13.

Atkins Kitchen Saws, $\frac{5}{8}$x$\frac{3}{16}$ inch Flat Steel Back, $\frac{3}{4}$ inch Bright Special Steel Blade, Beech Handle.

No. 13—Inches	16	18
Per Dozen	$8.50	8.50

Packed—Half Dozen in a Box.

BUTCHER SAWS



No. 2.

Buhl Sons Co., Butcher Saws, $\frac{3}{4}$x$\frac{1}{4}$ inch Flat Steel Back, Square Edge, $\frac{3}{4}$ inch Blued Clock Spring Blade, Beech Handle.

No. 2—Inches ...	18	20	22	24
Per Dozen	$19.15	20.30	21.45	22.60

Packed—One-Third Dozen in a Box.

No. 10.

Buhl Sons Co., Butcher Saws, 1x$\frac{1}{4}$ inch Frame, made of Spring Steel. Hardwood Handle riveted to frame.

No. 10—Inches ..	20	22	24	26
Per Dozen	$19.30	20.45	21.60	22.75

Packed—One-Third Dozen in a Box.

BEEF SPLITTING SAWS

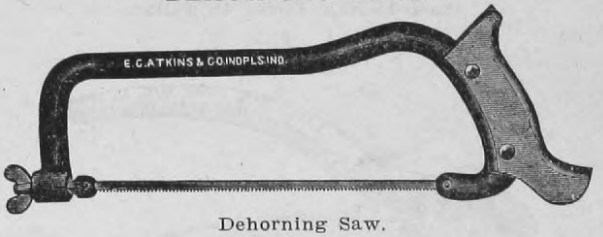
No. 102. Double End.

Atkins Beef Splitting Saws, 1$\frac{1}{4}$x$\frac{5}{16}$ inch Flat Steel Back, Square Edge, 1$\frac{3}{4}$ inch Heavy Bright Silver Steel Blade, Beech Handles.

No. 102—Inches	30	32
Each	$5.50	6.00
Extra Blades.....Per Dozen	8.75	9.00

Packed—One-Twelfth Dozen in a Box.

DEHORNING SAWS



Dehorning Saw.

Malleable Iron Frame, Japanned, Beech Handle. Blade 9$\frac{1}{2}$ inches long, $\frac{1}{4}$ inch wide.

Atkins Dehorning Saws, Complete....Per Dozen, $8.00
Extra Blades .....Per Dozen, 1.50

Packed—Half Dozen in a Box.

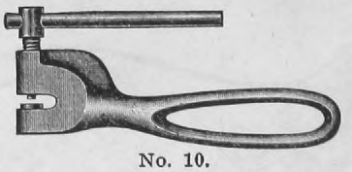
BUTCHER SAW BLADES

Silver Steel, Blued.

No. 25—Butcher Saw Blades, $\frac{3}{4}$ inch wide, in 25 foot Coils, set and filed, ready for use.. ..... Per Foot, $0.16

Packed—One 25 foot Coil in a Box.

BUTCHER SAW PUNCHES



No. 10.

No. 10—Butcher Saw Punches.....Per Dozen, $9.00

Packed—One-Twelfth Dozen in a Box.

BUTCHER SAW BLADES

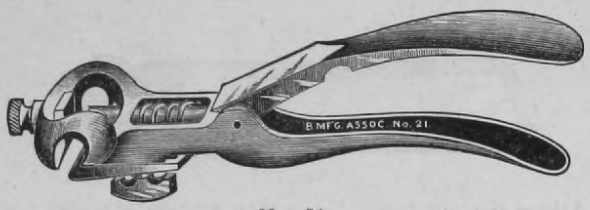
No. 34. $\frac{3}{4}$ inch Wide, Blued Clock Spring Steel.

No. 34—Inches .	18	20	22	24	26
Per Dozen.....	$4.90	5.15	5.40	5.65	5.90

Packed—One Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAW SETS



No. 51.

Morrill Pattern, Adapted for Hand Saws of every description. Anvil Plunger and Spring are of Tempered Tool Steel, with Milled Fittings.

No. 51—Full Polished.....Per Dozen, $10.00

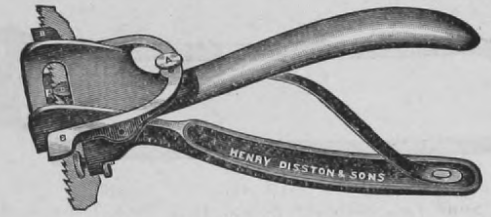
Packed—Half Dozen in a Box.

No. 105.

Improved, The Anvil and Plunger are hardened and the Spring is of tempered steel. The Lever is on the lower side and can be operated by moving the fingers only.

No. 105—Nickel Plated.....Per Dozen, $14.00

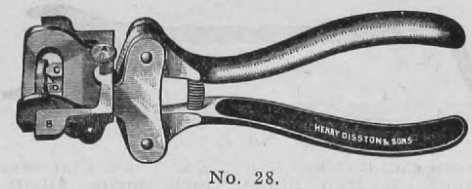
Packed—Half Dozen in a Box.



No. 2.

No. 2—Monarch Saw Sets, Polished, adapted for Hand, Cross Cut, Circular and all Small Saws .....Per Dozen, $13.00

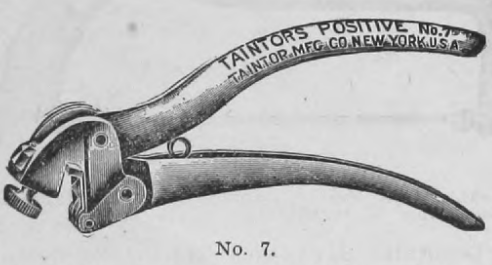
Packed—Half Dozen in a Box.



No. 28.

No. 28—Triumph Saw Sets, Polished, particularly adapted for narrow blades such as Web Saws, Narrow Band Saws, etc...Per Dozen, $17.20

Packed—Half Dozen in a Box.

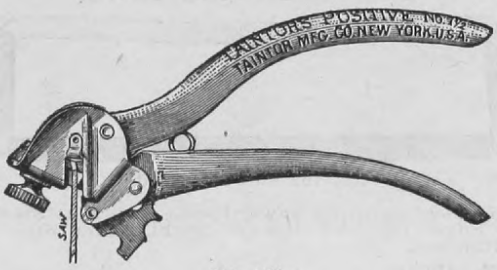


No. 7.

Taintors Positive Saw Set. Has but one gauge to set, will not slip on the finest teeth or break, crack, crease or mar face of teeth. Any setting can be reproduced.

No. 7—Made entirely of Steel, all parts interchangeable.....Per Dozen, $15.00

Packed—Half Dozen in a Box.

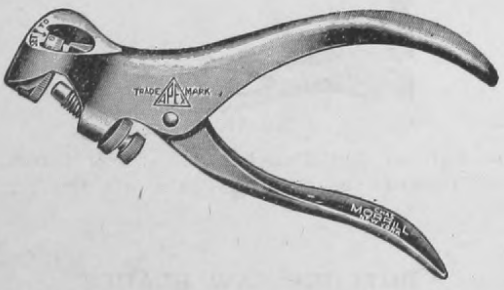


No. 7½.

Taintors Positive Saw Set. Has double plunger; one side for fine, and the other for coarse teeth, giving two plungers in one. Hardened ears which glide easily over the teeth.

No. 7½—Made entirely of Steel, all parts interchangeable.....Per Dozen, $17.50

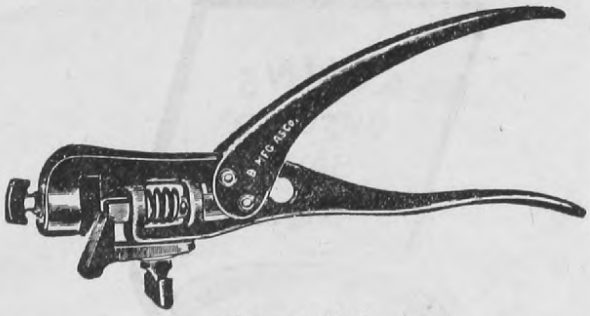
Packed—Half Dozen in a Box.



With Revolving Indicator Handle, Length 6½ inches, for Hand Saws from the widest made down to ½ inch in width and not over 16 Gauge.

Special Morrill Saw Sets.....Per Dozen, $18.00

Packed—Half Dozen in a Box.



Nos. 3 and 4.

Morrill Pattern, Made of Semi and Tool Steel, fully warranted, Cast Finished, Length 9 inches. For Saws from 14 to 20 Gauge.

No. 3—For Single Tooth Cross Cut and Circular Saws.....Per Dozen, $17.00

No. 4—For Cross Cut M Champion and Double Tooth Saws.....Per Dozen, 18.00

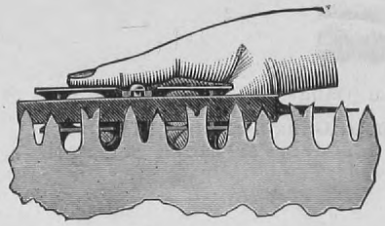
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

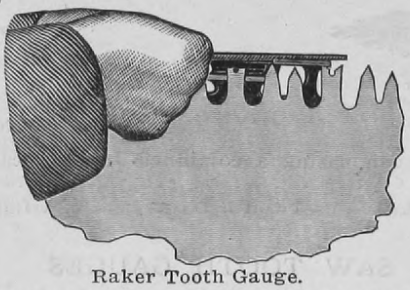
EXCELSIOR SAW TOOLS

Setting Block.

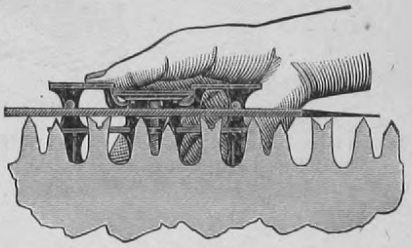
Tooth Set Gauge.



Jointer.



Raker Tooth Gauge.



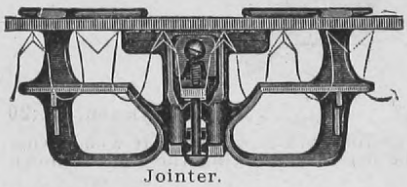
Side File.

No. 2—Excelsior Saw Tools, comprising a Combined Jointer, Raker Tooth Gauge and Side File, Setting Block, and Set Gauge.....Per Dozen Sets, $6.50

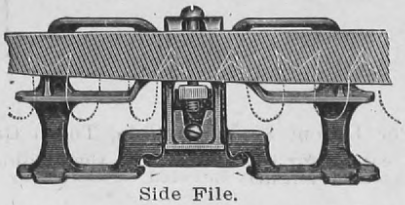
Packed—One-Twelfth Dozen Sets in a Box, with Instructions for Use.

Excelsior Setting Blocks only.....Per Dozen, $3.00

DEXTER SAW TOOLS.



Jointer.



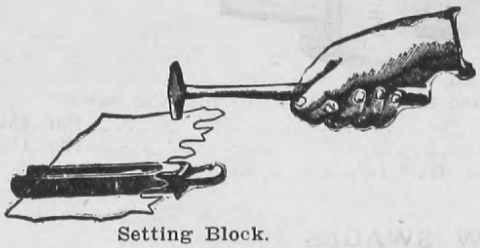
Side File.

Raker Tooth Gauge.

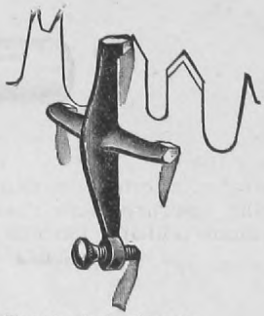
Dexter Saw Tools, Raker Tooth Gauge, Jointer and Side File combined in one tool.....Per Dozen, $4.00

Packed—Half Dozen in a Box, with Instructions for Use.

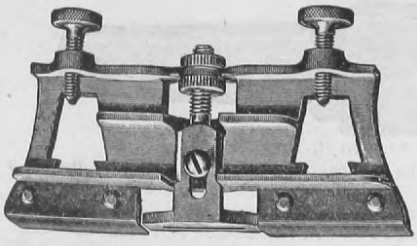
IMPERIAL SAW TOOLS



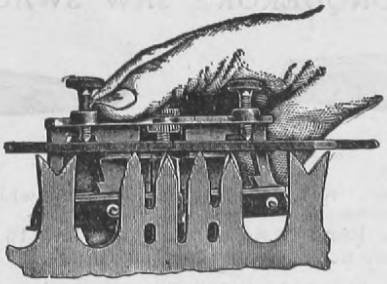
Setting Block.



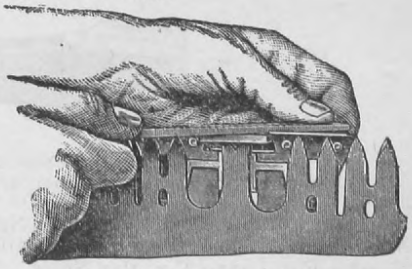
Tooth Set Gauge.



Jointer.



Jointing.



Filing Raker Tooth.

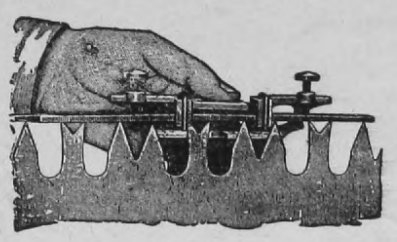
Imperial Saw Tools, comprising a Combined Jointer and Raker Tooth Gauge, Setting Block or Anvil and Set Gauge.....Per Dozen Sets, $15.00

Packed—One-Twelfth Dozen Sets in a Box, with Instructions for use.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CRESCENT SAW TOOLS

No. 340.


Jointer.

Raker Tooth Gauge.

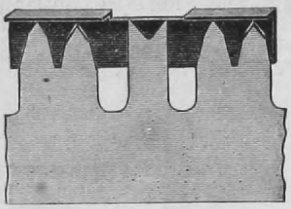
Setting Block.

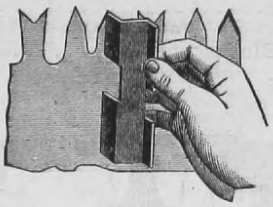
Tooth Set Gauge.

No. 340—Simond's Crescent Saw Tools, comprising a combined Jointer, Raker Tooth Gauge, Setting Block and Set Gauge ..... Per Dozen Sets, $10.50

Packed—One-Twelfth Dozen Sets in a Box.

SAW TOOTH GAUGES


Single.


Double.

Single, Tooth Gauges..... Per Dozen, $0.80 | **Double**, Tooth Gauges..... Per Dozen, $1.20

Note. The Single Gauge regulates the Cleaners for hard wood, and the Double Gauge for both hard and soft wood. One end of the straight edge of these Gauges has been slightly beveled, so that they may be used for gauging the set, as shown in right hand cut.

WHITING'S SAW SETS

No. 10. Style of No. 100.

For Cross Cut Saws only, can be carried in the vest pocket. Adapted to all varieties of Cross Cut Saws.

No. 10—Whiting Improved Saw Sets..... Per Dozen, $11.50
No. 100—Woodman Whiting Pattern Saw Sets..... Per Dozen, 9.50

Packed—Each in a Separate Carton, Half Dozen in a Box.

CONQUEROR'S SAW SWAGES

No. 1. Stye of Nos. 2 and 3.

No. 00. Style of No. 0.

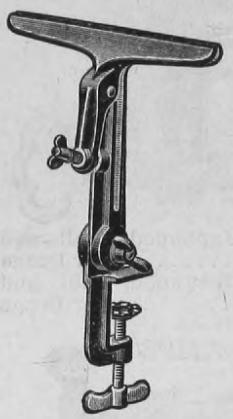
Conqueror Saw Swage, Jumper or Offset. Nos. 0 and 00 have tongue which rests on face of saw tooth and acts as a guide to obtain the proper angle for swaging.

No. 3—For Small Circular and Narrow Band Saws not heavier than 15 Gauge..... Each, $1.75
No. 2—For Small Circular and Mill Saws not heavier than 10 Gauge..... Each, 2.25
No. 1—For Large Circular Saws..... Each, 2.75
No. 0—With ½ inch Projecting Tongue..... Each, 3.00
No. 00—With 2¼ inch Projecting Tongue..... Each, 3.50

Packed—One in a Box.

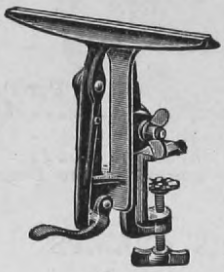
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAW VISES OR CLAMPS

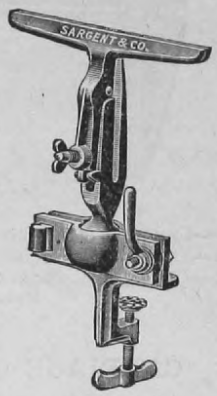


No. 94.

No. 0100.



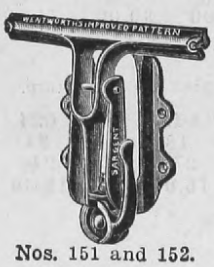
No. 93.



No. 105.

No. 0100—Japanned, 9½ inch Jaws, Polished face, well finished.....Per Dozen, $17.00
No. 93—Japanned, 9½ inch Jaws, with Screw Clamp for fastening to bench, and Screw Adjustment for holding vise at any angle. Malleable Iron wearing parts.....Per Dozen, 22.00
No. 94—Japanned, 9½ inch Jaws, with Screw Clamp for fastening to bench, and Screw Adjustment for holding vise at any angle..... Per Dozen, 22.00
No. 105—Japanned, 9½ inch Jaws, Polished Face. Screw Clamp for fastening to Bench, Ball and Socket Adjustment for holding the vise at any angle..... Per Dozen, 35.00

Packed—In Open Stock.

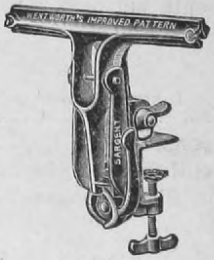


Nos. 151 and 152.

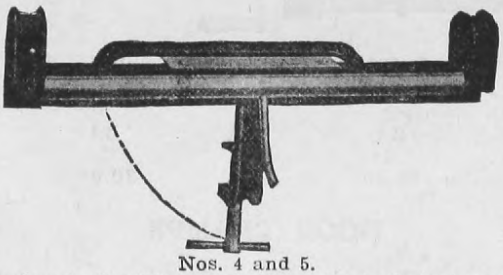
Wentworth Pattern, with Rubber Cushioned Jaws, which prevent vibration and make saw filing noiseless. Japanned, Polished Face.

No. 151—11 inch Jaws.....Per Dozen, $32.00
No. 152—15 inch Jaws.....Per Dozen, 44.00
No. 153—11 inch Jaws, with Screw Clamp for fastening to bench, and Screw Adjustment for holding the vise at any angle..Per Dozen, 44.00

Packed—In Open Stock.



No. 153.



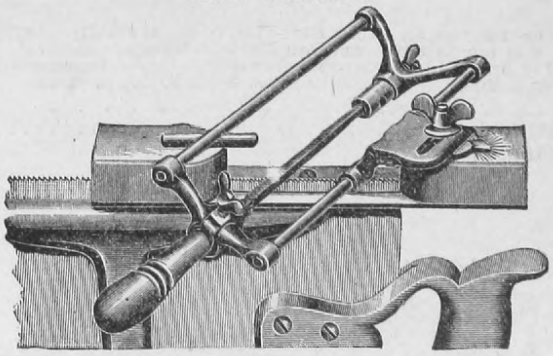
Nos. 4 and 5.

Neverbreak Saw Vise, made from all-steel riveted together and practically unbreakable.

No. 4—With 9½-inch Jaws.....Per Dozen, $10.00
No. 5—With 10-inch Rubber inserted Jaws,.. ..... Per Dozen, 12.50

Packed—Each in a Separate Carton.

SAW FILERS



Wilson.

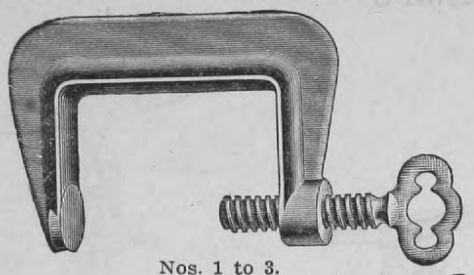
Wilson Hand Saw Filers

This Tool is the simplest and most accurate ever produced. With its aid, any one, whether experienced or not, can file a saw correctly, keeping the teeth the same as when new, making every tooth the same pitch and bevel, it being impossible to change the bevel or slant without readjusting the filer. The pitch and bevel are obtained on both sides of the saw by means of a pointer and index. It can be used with wood clamp in any ordinary vise or with iron saw clamp.

Wilson Hand Saw Filers..... Per Dozen, $18.00

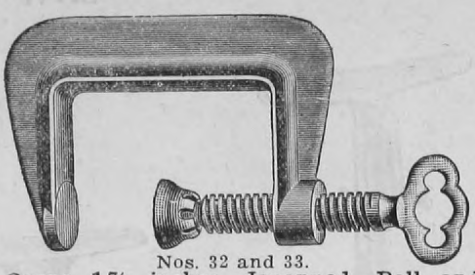
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CABINET OR QUILT FRAME CLAMPS



Nos. 1 to 3.

	Per Dozen
No. 1—Opens 2¼ inches, Japanned	$0.65
No. 2—Opens 2¼ inches, Heavy, Japanned	.85
No. 3—Opens 3⅞ inches, Heavy, Japanned	1.30

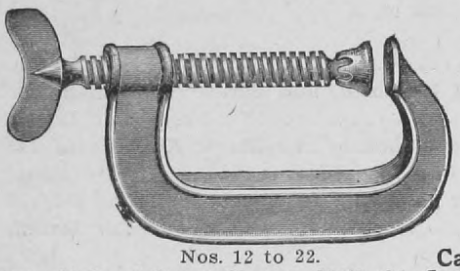


Nos. 32 and 33.

No. 32—Opens 1⅞ inches, Japanned, Ball and Socket Head Screw.....Per Dozen, **$1.00**
No. 33—Opens 2¾ inches, Japanned, Ball and Socket Head Screw.....Per Dozen, **1.25**

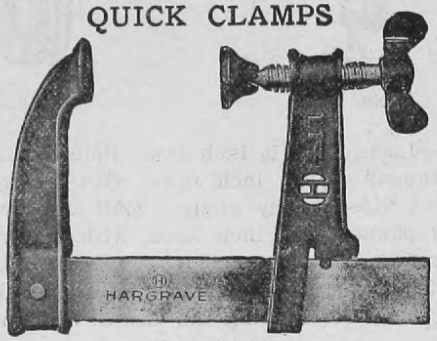
Packed—Nos. 3 and 33, One Dozen in a Box; all other Numbers, Two Dozen.

CARRIAGE MAKERS' CLAMPS



Nos. 12 to 22.

QUICK CLAMPS



Nos. 06 to 024.

Carriage Makers' Clamps

Carriage Makers' Screw Clamps, Malleable Iron, Ball and Socket Swivel Head on Screw. Frame is ribbed all around.

Nos.	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**20**	**22**
Opens, inches	2½	3	4	5	6	7	8	10	12
Depth between Screw and Frame, inches	1½	2 1/16	2 5/16	2½	2¾	2⅝	3 5/16	3½	3½
Per Dozen	$6.00	7.00	9.00	11.00	14.00	17.00	22.00	30.00	34.00

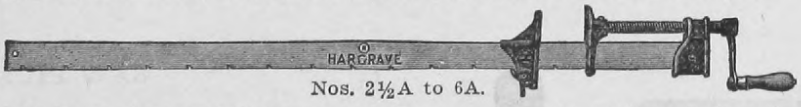
Packed—Nos. 12 to 16, Half Dozen; Nos. 17 to 22, Quarter Dozen in a Box.

Quick Clamps

Instantaneous in action and can be adjusted and applied to the work just as quickly as the user can pick up the clamp.

Nos.	**06**	**08**	**010**	**012**	**018**	**024**
Opens, inches	6	8	10	12	18	24
Depth between Screw and Frame, inches	2½	2½	2½	2½	2½	2½
Per Single Dozen	$9.00	10.00	11.00	12.00	15.00	18.00

PERFECTION STEEL BAR CARPENTER CLAMPS

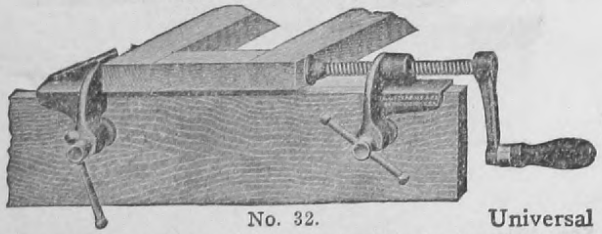


Nos. 2½A to 6A.

The **Perfection** Steel Bar Clamp is especially useful in all wide clamping, such as sashes, doors, blinds, counter tops, etc. The bar is made of high Carbon Manganese Steel. Clamp has Square Thread Steel Screw and malleable Crank Frame. The Tip and Slide have tempered Steel Dog. Japanned finish. The Bar, on Nos. 2A to 5A, is ¼x1½ inches, on No. 6A is ⅜x1¾ inches; the Screw on Nos. 2½A to 5A is ⅝ inch, on 6A is ¾ inch diameter.

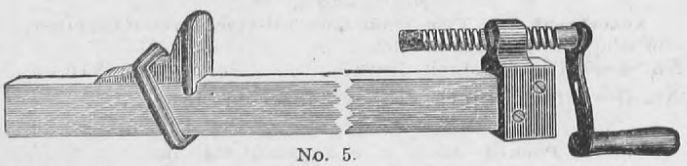
Nos.	**2½A**	**3A**	**4A**	**5A**	**6A**
Opens, inches	2½	3	4	5	6
Per Single Dozen	$22.50	24.00	27.00	30.00	51.00

UNIVERSAL CLAMPS



No. 32.

DOOR CLAMPS



No. 5.

Universal Clamps

These Clamps consist of two sections only, the head piece and the sliding jaw or tail piece; and may be used for work of any width. The jaws and cranks are of malleable iron and the sliding handles of the side screws are of steel. Screws are of steel and have deep, powerful machine cut square threads and heavy malleable ball and socket washers.

No. 32—For timber up to 1½ inches in thickness and 2 inches or more in width.....Per Single Dozen Sets, $24.00
No. 33—For timber up to 2 inches in thickness and 2 inches or more in width.....Per Single Dozen Sets, 30.00

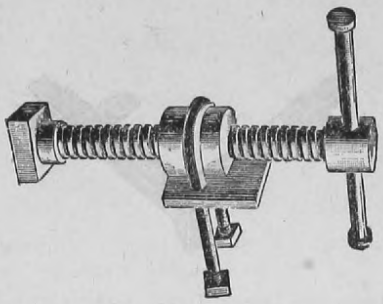
Door Clamps

These Clamps consist of two sections only, the head piece and the sliding tail piece.

No. 5—Japanned Door Clamp Irons only, **not mounted**.....Per Single Dozen Sets, $24.00

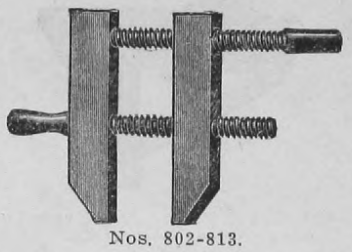
Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CLAMP HEADS



No. 11.

HAND SCREWS



Nos. 802-813.

No. 11—Clamp Heads only, 1 inch Wrought Screws, Iron Handle, as illustrated.....Per Single Dozen, $33.50

Hand Screws

Best Selected Hickory Spindles or Screws, thoroughly seasoned Maple or Beech Jaws.

Nos.	Diameter of Screw Inches	Length of Screw Inches	Length of Jaw Inches	Size of Jaw Inches	Will Open Inches	Per Single Dozen
802	1¼	24	20	2⅝ x2⅝	13¾	$32.00
805	1⅛	20	18	2⅜ x2⅜	10½	27.00
807	1	18	16	2¼ x2¼	9¼	23.50
809	⅞	16	14	2 x2	8¼	20.00
811	¾	14	12	1¾ x1¾	7¼	17.00
812	¾	12	10	1⅝ x1⅝	5½	14.50
813	⅝	10	8	1⅜ x1⅜	4½	12.00

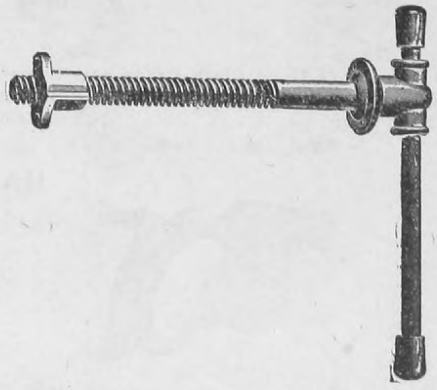
Packed—Nos. 802 to 809, One Dozen; Smaller Sizes, Two Dozen in a Case.

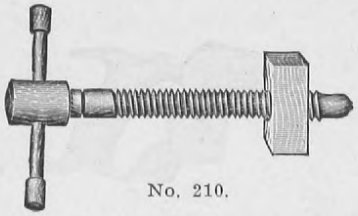
JORGENSON ADJUSTABLE CLAMPS

A single clamp will adjust to any of the above positions or any modifications of them. Works very rapidly, grips tightly, and combines neatness and durability.

Nos.	0	1	2	3	4	5
Length of Jaws, inches	8	10	11½	14	16	18
Opening Between Jaws, inches	4	6	8	10	12	14
Per Single Dozen	$13.20	15.60	17.40	19.20	22.80	26.40

BENCH SCREWS





No. 210.

Wood Bench Screws

No. 210—Wood Bench Screws, 2½ inches Diameter, 24 inches long, Regular V Threads, thoroughly seasoned Maple.....Per Dozen, $8.00

Packed—Two Dozen in a Case.

Iron Bench Screws.

Wrought Iron Bench Screws, Double Threads, Movable Collars, Wood Handles.

Inches	1	1⅛	1¼	1½
Per Dozen	$9.75	11.25	13.50	24.00

Packed—One Dozen in a Case.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BENCH BRACKETS

No. 203.

Stanley Bench Bracket. Used by Carpenters and cabinet makers or by anyone interested in this line of work where a bench is necessary. Made of iron, Japanned with strong clamp screw, well threaded and nickel plated.

No. 203—Stanley Bench Bracket.....Per Dozen, $4.20

Packed—Half Dozen in a Box.

PORTABLE BENCH DOGS

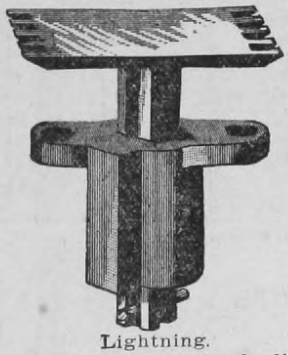
No. 202.

Stanley Portable Bench Dog. Convenient for all kinds of work requiring the use of a Bench Dog, especially where a well appointed work bench is not available. Made entirely of metal, blued finish and sharpened points.

No. 202—Stanley Bench Dog.....Per Dozen, $2.40

Packed—Half Dozen in a Box.

BENCH STOPS

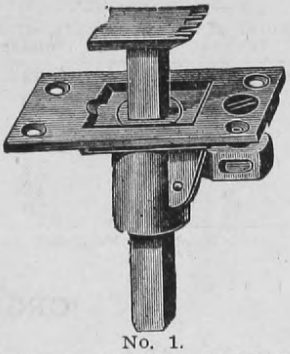


Lightning.

Works entirely from friction, simply lift it to raise and press to lower it. No screws, will not clog, and works in perfect vertical position.

Lightning Bench Stops.....Per Dozen, $6.00

Packed—Half Dozen in a Box.



No. 1.

Wrought Steel Square Spindle and Working Plate, Malleable Iron Body. The Clamping Screw requires only one-half turn to operate Cam Lever. Very durable and useful.

No. 1—Morrill's Perfect Bench Stops..Per Dozen, $11.00

Packed—Half Dozen in a Box.

SAW SCREWS

No. 1.

No. 2.

Atkins Oval Head Plain Brass Saw Screws.

No. 1—Small Size.....Per Dozen, $0.70

No. 2—Large Size.....Per Dozen, .80

Packed—Half Gross in a Box.

No. 10.

No. 20.

Atkins Eagle Medallion Saw Screws.

No. 10—Small Size .....Per Dozen, $1.20

No. 20—Large Size .....Per Dozen, 1.30

Packed—Half Gross in a Box.

HAND SAW HANDLES

No. 58.

No. 53.

Orders should state for what length of saw, handles are wanted.

No. 58—Beechwood, Varnished Edges.....{For 26 inch Hand Saws.....Per Dozen, $1.80 / For Panels Saws from 18 to 24 in....Per Dozen, 1.80}

	For Saws—Inches,	18	20	22	24	26	28
Without Screws	Per Dozen,	$4.85	4.85	5.20	5.20	6.10	6.40
No. 53—Atkins, Applewood, Varnished Edges	Per Dozen,	3.00	3.00	3.25	3.25	4.00	4.25
No. D8—Disston, Applewood, Varnished Edges							

Packed—One Dozen in a Box, **without** Screws.

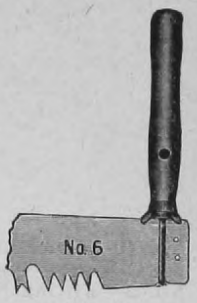
Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CROSS CUT SAW HANDLES

One Man.
Supplementary.

One Man.

No. 11.



No. 6.

Supplementary Handles for One Man Cross-Cut Saws.....Per Dozen, $2.00

One Man Cross-Cut Saw Handles, not Bored, without Screws.....
.....Per Dozen, 3.75

Packed—Half Dozen in a Box.

Handles are of Selected Air-Dried Hardwood.

No. 11—14 inches long, Reversible, Extra Heavy Cast Steel Clasp and Washer, Malleable Iron Bolt..Per Pair, $0.32
No. 6—10 inches long, Cast Steel Patent Swivel Socket, Extra Heavy Cold Drawn Steel Loop, Spot Electric Welded .....Per Pair, .32

Packed—No. 11, 100 Pairs; No. 6, 150 Pairs in a Box.

Nos. 8S and 8.

No. 3.

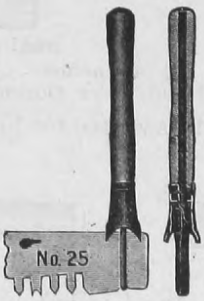
No. 5.

Handles are of Selected Air-Dried Hardwood.

No. 8S—7½ inches long, Cast Steel Socket and Washer. Extra Heavy Cold Drawn Steel Loop, Spot Electric Welded .....Per Pair, $0.42
No. 8—10 inches long, Cast Steel Socket and Washer. Extra Heavy Cold Drawn Steel Loop, Spot Electric Welded .....Per Pair, .42
No. 3—10 inches long, Malleable Iron Swivel Socket, Extra Heavy Cold Drawn Steel Loop, Spot Electric Welded .....Per Pair, .42
No. 5—14 inches long, Strong Malleable Iron Bracket, Extra Heavy Cold Drawn Steel Loop, Spot Electric Welded .....Per Pair, .52

Packed—No. 8S, 3 and 5, 50 Pairs; No. 8, 100 Pairs in a Box.

No. 20.



No. 25.

No. 28.

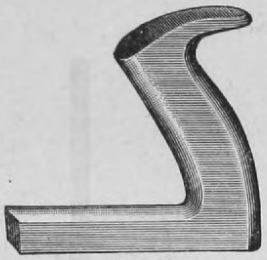
Handles are of Selected Air-Dried Hardwood.

No. 20—9 inches long, High Grade Steel Ferrule Socket, with swivel feature. Extra heavy Cold Drawn Steel Loop, Spot Electric Welded.....Per Pair, $0.46
No. 25—12 inches long, Extra Heavy Malleable Iron Socket, Washer and Loop. Handle is reinforced by heavy Machine Bolt running through the entire center.....Per Pair, .64
No. 28—8 inches long, Pressed Steel Ferrule and Swivel Collar. Cold Drawn Steel Loop and Bolt, Spot Electric Welded. Malleable Iron Combination Nut. Bolt extends clear through handle and screws into combination nut on upper end of handle .....Per Pair, .64

Packed—Nos. 20, 25 and 28, 50 Pairs in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

PLANE HANDLES



No. 10.

Nos. 2, 4, 5 and 26.

No. 10—Common Jack Plane Handles.....Per Dozen, $0.60
Bailey Plane Handles—For Bailey and Bed Rock Iron Smooth, Jack and Jointer Planes. Stained and Varnished.
No. 2—Fitting Nos. 2 and 602 Planes.....Per Dozen, $2.40
No. 4—Fitting Nos. 3 and 4 also 603 and 604, inclusive.....Per Dozen, 2.40
No. 5—Fitting Nos. 4½ to 8 and 604½ to 608, inclusive.....Per Dozen, 2.40
Bailey Plane Handles—For Bailey Wood Bottom Jack and Jointer Planes. Finished in the Natural Wood and Varnished.
No. 26—Fitting Nos. 26 to 33, inclusive.....Per Dozen, $1.20
Packed—Nos. 2, 4, 5 and 26, Half Dozen; No. 10, One Dozen in a Box.

AUGER HANDLES

No. 216A.

No. 216A—Common Hickory Auger Handles, Shellac Polished, Assorted Sizes..Per Dozen, $0.80

Packed—In Open Stock.

No. 60.

No. 60—Peck's Auger Handles, Iron Bound, strong and durable, adjustable to all sizes of Augers.....Per Dozen, $5.60

Packed—Half Dozen in a Box.

The chuck of this Ratchet Auger Handle will hold almost every size of Auger and Bit Shanks in the market. It opens wide enough to take in Auger Shanks with the nuts on. It can be made "Fixed" so as to be used like a common auger handle, or by using the ratchet it can be operated with both handles, and without shifting the hands.

No. 4.

In cramped places, one handle is taken off and placed at a right angle with the other as seen in the cut. The wood on the detachable handle revolves. The metal part of the handle is polished and nickel plated. It also answers the purpose of a ratchet drill.

No. 4—Pratt's Ratchet Auger Handles.....Per Dozen, $48.00
Packed—One-twelfth Dozen in a Box.

TOOL HANDLES

ADZE EYE HAMMER

Extra, All White Hickory.

Inches	14
Per Dozen	$1.00

ADZE EYE HAMMER

Buhl Special Extra, Oiled and Varnished Hickory.

Inches	14
Per Dozen	$1.50

No. 1—Adze Eye Hickory Hammer Handles, 14 inch, Assorted for Nos. 1 to 3 Hammers.....Per Dozen, $0.65

RIVETING HAMMER

Extra, All White Hickory.

Inches	12
Per Dozen	$1.00

MACHINISTS' HAMMER

Extra, All White Hickory.

Inches	14	16	18	20	22	24	26
Per Dozen,	$1.00	1.20	1.30	1.40	1.50	1.60	2.00

SHINGLING HATCHET

Extra, All White Hickory.

Inches	14	15
Per Dozen	$1.10	1.20

BROAD OR BENCH HATCHET

Extra, All White Hickory.

Inches	16	18
Per Dozen	$1.30	1.50

Packed—Buhl Special Extra—One Dozen in a Box; All Others in Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AXE HANDLES

SINGLE BIT

Second Growth Michigan or Northern Ohio All White Hickory.

Buhl Special Oval Hand Shaved, 34 and 36 inch..... Per Dozen, $5.50
Buhl Michigan Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 5.00
No. 01—Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 4.80
Imperial Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 3.70
Buhl Extra Oval Hand Shaved, 34 and 36 inch Single Bit **Oak** Axe Handles..... Per Dozen, 4.50

Packed—Two Dozen in a Crate.

Selected All White Hickory.

No. 1—Oval Turned, 34 and 36 inch..... Per Dozen, $3.00
No. 2—Oval Turned, 34 and 36 inch..... Per Dozen, 2.50
No. 3—Oval Turned, 34 and 36 inch..... Per Dozen, 1.70
XXXX Oval Turned, 34 and 36 inch Single Bit **Oak** Axe Handles..... Per Dozen, 3.50

Packed—Two Dozen in a Crate.

BOYS' AND BOY SCOUT

Extra Oval Hand Shaved, Second Growth All White Hickory.

Boys' Axe Handles, 28 inches long..... Per Dozen, $3.30
Boy Scout Axe Handles, 14½ inches long..... Per Dozen, 2.50

Packed—Boys, Two Dozen in a Crate; Boy Scout, Half Dozen in a Box.

DOUBLE BIT

Second Growth Michigan or Northern Ohio All White Hickory.

Buhl Special Oval Hand Shaved, 34 and 36 inch..... Per Dozen, $5.00
Buhl Michigan Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 4.80
No. 01—Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 4.20
Imperial Oval Hand Shaved, 34 and 36 inch..... Per Dozen, 3.70
Buhl Extra Oval **Hand Shaved,** 34 and 36 inch Double Bit **Oak** Axe Handles..... Per Dozen, 4.50
XXXX Oval **Turned,** 34 and 36 inch Double Bit **Oak** Axe Handles..... Per Dozen, 3.30

Packed—Two Dozen in a Crate.

TIE BROAD AXE HANDLES

All White Hickory, Single Bit Axe Handle Pattern, For Hewing Ties, Etc.

Buhl Michigan "Duluth" Tie Broad Axe Handles, 32 inch. { Right Hand ..... Per Dozen, $5.00
{ Left Hand ..... Per Dozen, 5.00

Packed—Two Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOUSE CARPENTERS' ADZE HANDLES

Extra, 34 inch, All White Hickory, House Carpenters' Adze Handles ..... Per Dozen, $4.50

Packed—Two Dozen in a Crate.

SHIP CARPENTERS' ADZE HANDLES

Extra, 34 inch, All White Hickory, Ship Carpenters' Adze Handles ..... Per Dozen, $4.50

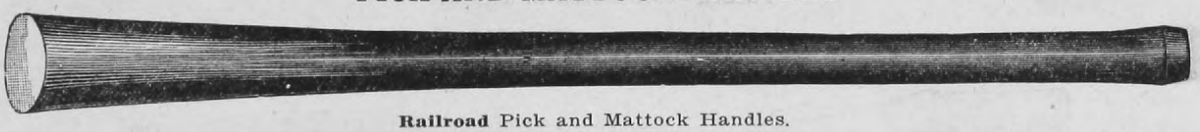
Packed—Two Dozen in a Crate.

SLEDGE HANDLES

Extra, All White Hickory, Swell End Sledge Handles.....	Inches	30	32	34	36
	Per Dozen	$2.50	2.80	3.00	3.30

Packed—Six Dozen in a Crate.

PICK AND MATTOCK HANDLES



Railroad Pick and Mattock Handles.

No. 4X—36 inch, First Quality, Second Growth All White Hickory ..... Per Dozen, $5.50
Extra —36 inch, Second Growth White Ash ..... Per Dozen, 3.50
No. 1 —36 inch, First Growth All White Hickory ..... Per Dozen, 3.70
No. 01—36 inch, Second Growth White Ash ..... Per Dozen, 2.50
No. 2 —36 inch, Second Quality All White Hickory ..... Per Dozen, 1.60

Packed—Three Dozen in a Crate.

POLL PICK HANDLES

Extra, 36 inch, Second Growth All White Hickory, Poll Pick Handles ..... Per Dozen, $4.00

Packed—Two Dozen in a Crate.

COAL MINERS' PICK HANDLES

Extra, 34 inch, Second Growth All White Hickory, Coal Miners' Pick Handles ..... Per Dozen, $3.50

Packed—Two Dozen in a Crate.

STONE OR CONCRETE PICK HANDLES

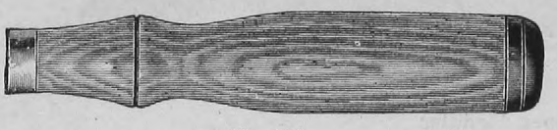
Extra, 34 inch, All White Hickory, Stone or Concrete Pick Handles ..... Per Dozen, $4.00

Packed—Six Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHISEL HANDLES

TANGED FIRMER



No. 300.

Maple, Leather Tipped, Seamless Brass Ferrules.

No. 300—Size..	1	2	3	4	Assorted
Length, inches .	5 ¾	6	6 ¼	6 ½	Nos.
Diam., inches ..	1 ⅛	1 3/16	1 ¼	1 5/16	1 to 4
Per Dozen	$1.40	1.50	1.80	2.20	1.70

Packed—One Dozen in a Box.

SOCKET FIRMER

No. 310.

Maple, Leather Tipped.

No. 310—Size..	1	2	3	4	Assorted
Length, inches .	5 ½	5 ¾	6 ¼	6 ¼	Nos.
Diam., inches ..	1 1/16	1 ⅛	1 ¼	1 5/16	1 to 4
Per Dozen	$0.90	1.00	1.40	1.70	1.30

Packed—One Dozen in a Box.

No. 618—Maple, Leather Tip, **Butt Chisel** Handles, Assorted Regular.....Per Dozen, $1.80

Packed—One Dozen in a Box.

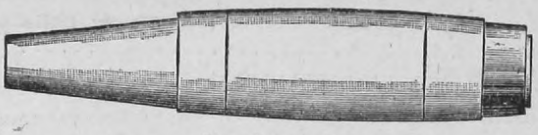
SOCKET FRAMING

No. 320.

Maple, Leather Tipped.

No. 320—Size	1	2	3	Assorted
Length, inches	5 ½	5 ¾	6 ½	Nos.
Diam., inches	1 3/16	1 5/16	1 7/16	1 to 3
Per Dozen	$1.10	1.50	2.00	1.50

Packed—One Dozen in a Box.



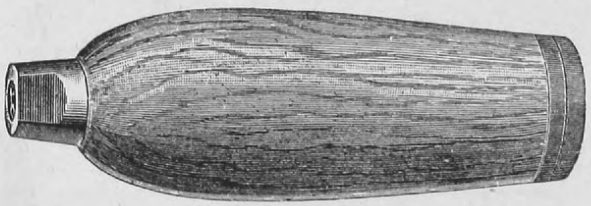
Nos. 71 to 75.

Hickory, with Iron Rings.

No. 71—Assorted 6 sizes .....Per Dozen, $0.50
No. 73—Assorted 4 Larger sizes ....Per Dozen, 1.10
No. 75—Assorted 2 larger sizes ....Per Dozen, 1.20

Packed—One Dozen in a Box.

PEGGING AWL HAFTS



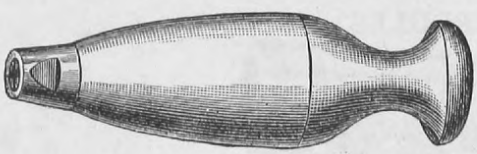
No. 6.

Hickory Pegging Awl Hafts.

No. 5—Patent, Plain Top, Steel Screw and Nut, with Wrench .....Per Dozen, $1.30
No. 6—Patent, Leather Top, Steel Screw and Nut, with Wrench .....Per Dozen, 1.40
No. 11—Common, Plain Top, Brass Ferrule.....Per Dozen, .75

Packed—Nos. 5 and 6, One Dozen; No. 11, Three Dozen in a Box.

SEWING AWL HAFTS

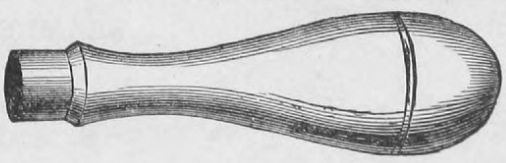


No. 6½.

No. 6½—Patent Sewing Awl Hafts, Applewood, Steel Screw and Nut, with Wrench..Per Dozen, $1.40

Packed—One Dozen in a Box.

BRAD AWL HANDLES



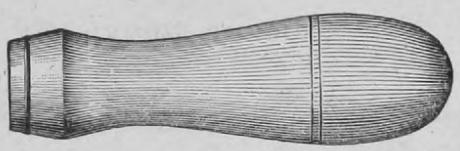
No. 25.

No. 25—Brad Awl Handle, Brass Ferrules, Assorted .....Per Dozen, $0.80

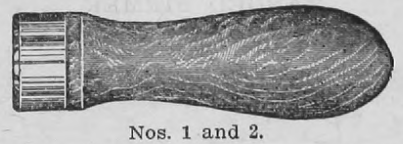
Packed—Three Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SOLDERING COPPER HANDLES



No. 31.



Nos. 1 and 2.

Common Soldering Copper Handles

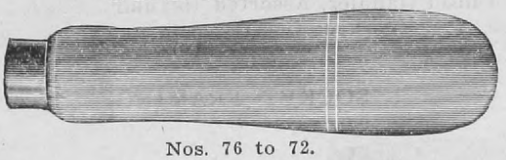
No. 31—Made of Soft Wood, with Wire Ferrules.....Per Dozen, $1.00

"Arrow Brand" Soldering Copper Handles

Made of Hardwood, with tin cap ferrule which covers the handle all over to prevent it from burning. The ferrule is crimped into a groove in the handle to prevent it from coming off.

No. 1—Large Size, for 4, 5 and 6 pound Coppers.....Per Dozen, $0.90
No. 2—Small Size, for 1, 2 and 3 pound Coppers.....Per Dozen, .85

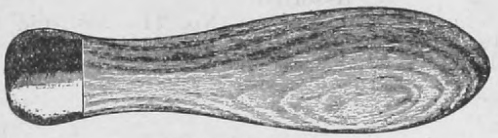
FILE HANDLES



Nos. 76 to 72.

Heavy Polished Seamless Steel Ferrules.

Nos.	76	75	74	73	72
Size, inches	4x1	4¼x1⅛	4½x1¼	4¾x1⅜	5x1½
For Files, inches	6	8	10	12	14
Per Dozen	$0.32	.36	.40	.45	.50
Per Gross	$.....	.....	.....	.....	.....



Nos. 4 to 00.

Nicholson, Made of Birchwood, with Heavy Spun Brass Ferrules.

Nos.	4	3	2	1	0	00
Length, inches	4	4½	4¾	5⅛	5½	6
Diameter, inches	15/16	1⅛	15/16	17/16	1⅝	111/16
For Files, inches	6	8	10	12	14	16
Per Dozen	$0.80	1.00	1.20	1.40	1.60	1.80

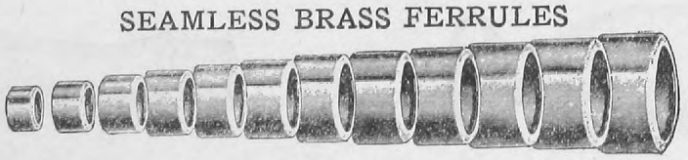
Packed—One Dozen in a Box.

Nos. 01 to 05.

Troy. Best File Handles, made of soft White Wood, with No. 20 Gauge Pressed Steel Ferrule. Ferrule has a circular groove fitting corresponding one in handle. At the end of the handle, the ferrule forms a cap, perforated with a slot, for its protection.

Nos.	01	02	03	04	05
Size, inches	4x⅞	47/16x111/16	4⅞x13/16	5⅛x1¼	6x1¼
For Files, inches	4 to 5	6 to 8	10 to 12	14 to 16	18 to 20
Per Dozen	$0.80	1.00	1.20	1.30	1.40
Per Gross	$.....	.....	.....	.....	.....

SEAMLESS BRASS FERRULES



Approximate Outside Diameter is given in inches below.

Nos.	00	0	1	2	3	4	5	6	7	8	9	10
Inches	1	15/16	⅞	13/16	¾	11/16	⅝	9/16	½	7/16	⅜	5/16
Per Gross	$1.50	1.30	1.10	.88	.75	.70	.65	.55	.45	.45	.45	.45

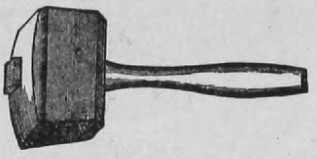
Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CARPENTERS' MALLETS

Nos. 2 and 3. Round, with Mortised Handles. Made of best selected Hickory.

Nos.	2	3
Size, inches	5½x3½	6x4
Per Dozen	$4.30	5.30



Nos. 9 to 13. Square, with Mortised Handles.

No. 9—Hickory, 6½x2¾x3¾ inches.	Per Dozen,	$4.90
No. 10—Hickory, 7x3x4 inches	Per Dozen,	5.90
No. 12—Lignum Vitae, 6½x2¾x3¾".	Per Dozen,	10.20
No. 13—Lignum Vitae, 7x3x4 inches.	Per Dozen,	12.30

No. 14.

Nos. 31 to 38.

No. 14—Round Hickory Mallet, 6 inches long, 4 inches in diameter, with Iron Rings and Mortised Handles.. Per Dozen $11.20

Round Lignum Vitae Mallets, made of unusually choice stock.

Nos.	Size Nos.	Size, Inches	Per Dozen	Nos.	Size Nos.	Size, Inches	Per Dozen
31	1	4 x6	$7.50	**35**	5	2½x4	$4.00
32	2	3½x5½	6.00	**36**	6	2¼x3¾	3.50
33	3	3 x5	4.50	**37**	7	2 x3½	3.30
34	4	2¾x4½	4.20	**38**	8	1½x3	3.20

RAWHIDE MALLETS

Nos. 302 to 305. Solid Rawhide, with Hardwood Handles.

Nos.	302	303	304	305
Size Nos.	2	3	4	5
Diameter, inches	1½	1¾	2	2¾
Length, inches	3¼	3⅜	3½	4¼
Weight, each, oz.	6	8	10	22
Per Dozen	$6.60	7.68	9.72	21.60

RAWHIDE FACED HAMMERS

Nos. 312 to 314. Malleable Iron Center, Rawhide Faces, Hardwood Handles.

Nos.	312	313	314
Size Nos.	2	3	4
Diameter, inches	1½	1¾	2
Weight, Each, lbs.	1⅞	2¼	4¼
Per Dozen	$16.08	19.20	27.84
Extra Faces, Per Dozen Prs.	4.32	5.52	7.68

STONE CUTTERS' MALLETS

Stone Cutters' Mallets, Selected Hickory.....

Weight, pounds	3½	4	4½
Per Dozen	$7.00	10.50	11.00

TINNERS' OR SHEET METAL WORKERS' MALLETS

Nos. 4 and 5. Round Hickory.

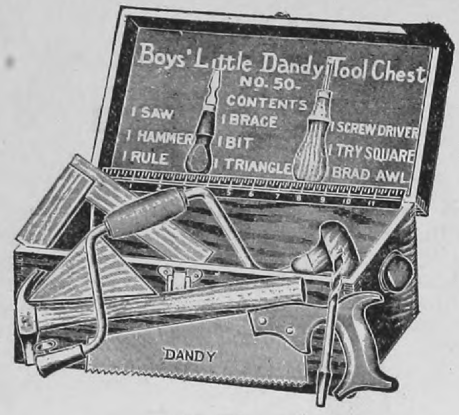
No. 4—Assorted, 2¼x5 to 2½x5½ . . . Per Dozen, $1.60
No. 5—Assorted, 2¾x6 to 3 x6½ . . . Per Dozen, 2.70

Nos. 40 and 50. Selected White Hickory.

No. 40—Assorted, 2¼x5 to 2½x5½ . . Per Dozen, $3.30
No. 50—Assorted, 2¾x6 to 3 x6½ . . Per Dozen, 4.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TOOL CHESTS



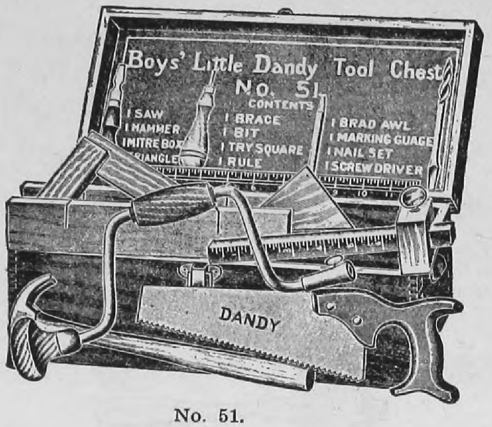
No. 50.

Boys' Dandy Tool Chests—Made of Chestnut, with Lock Corners, Dark Finish and provided with strong Brass Plated, Steel Strap Hinges. Outside Dimensions: 13x7x5½ inches.

No. 50—Complete with Nine Warranted Tools as illustrated .....Each, $2.67

Weight Each, about 4 lbs.

Packed—Six in a Crate, Weight about 35 lbs.



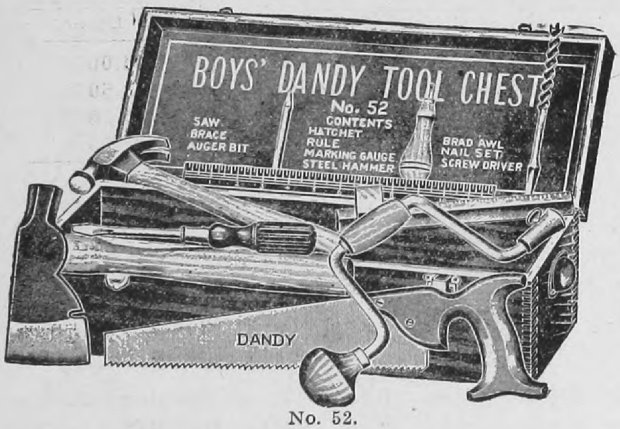
No. 51.

Boys' Dandy Tool Chests—Made of Chestnut, with Lock Corners, Dark Finish and provided with strong Brass Plated, Steel Strap Hinges. Outside Dimensions: 14½x7x5½ inches.

No. 51—Complete with Twelve Warranted Tools as illustrated.....Each, $3.00

Weight Each, about 6 lbs.

Packed—Six in a Crate, Weight about 45 lbs.



No. 52.

Boys' Dandy Tool Chests—Made of Chestnut, with Lock Corners, Dark Finish and provided with strong Brass Plated, Steel Strap Hinges. Outside Dimensions: 18½x7x5½ inches.

No. 52—Complete with Ten Warranted Tools as illustrated .....Each, $4.50

Weight Each, about 8 lbs.

Packed—Six in a Crate, Weight about 70 lbs.

No. 53.

Dandy Household Tool Chests—Made of Chestnut, with Lock Corners, Dark Finish and provided with strong Brass Plated, Steel Strap Hinges. Outside Dimensions: 25x7½x5½ inches.

No. 53.—Complete with Twelve Warranted Tools as illustrated.....Each, $7.00

Weight Each, about 11 lbs.

Packed—Six in a Crate, Weight about 85 lbs.

LITTLE WONDER TOOL KITS

Illustration of Tool Kit No. 60 Closed.
Little Wonder Tool Kit No. 60 is unique in design, useful, attractive and convenient to carry.

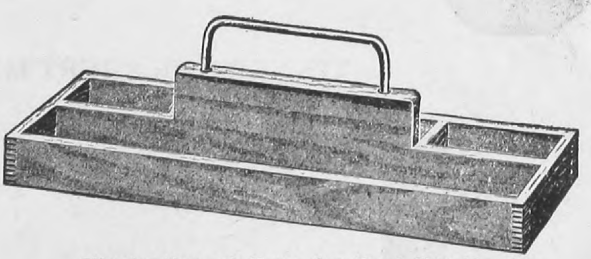


Illustration of Tray for Tool Kit No. 60.
Note that the Handle answers for both the Tray and the Chest. Handle Can be pushed down when shipped.

Note.—For illustration and list of tools see following page.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

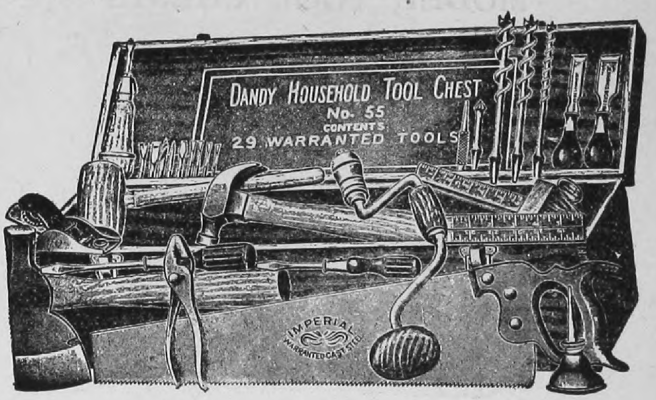
TOOL CHESTS

No. 54.

Dandy Household Tool Chest—Made of Chestnut, with Lock Corners and has strong Brass Plated Steel Hinges. Outside Dimensions: 25x7½x5½ inches.

No. 54—Tool Chest Complete with 15 Warranted Tools as illustrated.....Each, $8.00

Weight Each, about 13 lbs.
Packed—6 in a Crate, Weight about 100 lbs.



No. 55.

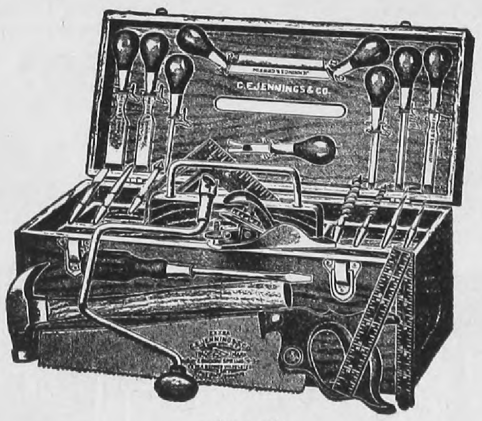
Dandy Household Tool Chest—Made of Dark Finish Chestnut with Lock Corners and has strong Strap Hinges. Outside Dimensions: 26x8x7 inches.

No. 55—Tool Chest Complete with 29 Warranted Tools as illustrated.....Each, $11.00

Weight Each, about 14 lbs.
Packed—6 in a Crate, Weight about 115 lbs.

TOOL KITS

"Little Wonder"



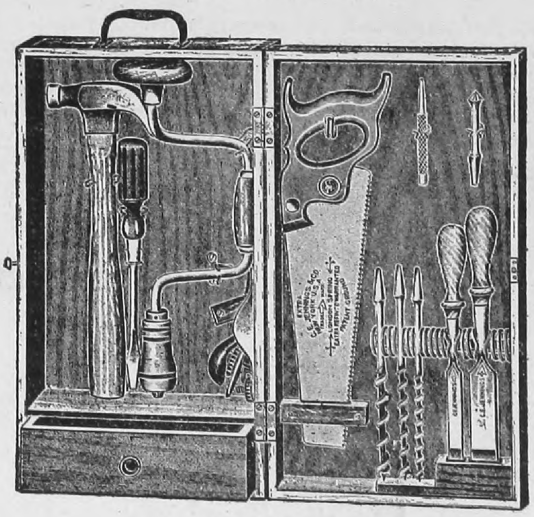
No. 60.

Little Wonder Tool Kit—Made of seasoned lumber handsomely finished. Has strong Strap Hinges and Suit Case Bolts. Outside Dimensions: 17x8x6⅞ inches.

No. 60—Little Wonder Tool Kit Complete with 22 Warranted Tools as Illustrated....Each, $12.00

Weight Each, about 11 lbs.
Packed—6 in a Crate, Weight about 80 lbs.

TOOL CABINETS



No. 98.

Tool Cabinet—Made of seasoned lumber handsomely finished. Outside Dimensions: 16¾x9¾x5¼ inches.

No. 98—Tool Cabinet Complete with 12 Warranted Tools as illustrated.....Each, $12.00

Weight Each, about 11 lbs.
Packed—6 in a Crate, Weight about 98 lbs.

Contents of Tool Kit No. 60

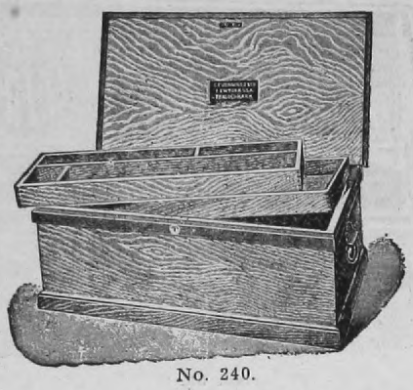
1 No. 0148 Knob Handle Chisel, ¼ inch.
1 No. 0148 Knob Handle Chisel, ½ inch.
1 No. 0148 Knob Handle Chisel, ¾ inch.
1 No. 0148 Knob Handle Chisel, 1 inch.
1 No. 0148 Knob Handle Scratch Awl.
1 No. 0148 Knob Handle Screw Driver, 2½ inch
1 No. 0148 Knob Handle Tack Claw.
1 No. 48 Knob Handle Draw Shave.
1 No. 1½C Screw Driver,. 5 inch.
1 Saw.
1 Brace.
2 Auger Bits.
2 Gimlet Bits.
1 Screw Driver Bit.
1 Countersink.
1 Square Reamer.
1 Forged Steel Hammer.
1 Block Plane.
1 Try Square.
1 Two-ft. Rule.

Contents of Tool Cabinet No. 98

1 Steel Hammer.....1 Saw.....1 Nail Set
1 Screw Driver.....1 Brace.....1 Countersink
1 Block Plane.....2 Chisels.....3 Auger Bits

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MODEL TOOL CHESTS



No. 240.

CARPENTERS' TOOL CASES

No. 35.

Empty "Model" Tool Chests

Made of selected Chestnut, filled and varnished. Each Chest has two trays and a lock and key. Corners are not dovetailed as shown in cut. Outside dimensions 22x10½x8½ inches.

No. 240—Model Tool Chest, **Empty**, without Tools.....Each, $6.00

Packed—Four in a Crate. Weight about 125 lbs.

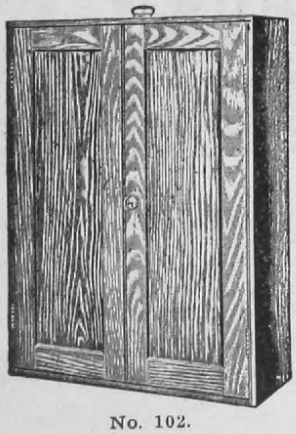
Carpenters' Tool Cases

Selected Hardwood, handsomely finished, Paneled Sides. Outside Dimensions: Length, 34¼ inches; Height 17 inches; Width, 6 inches. Inside Dimensions. Length 33 inches; Height 15¾ inches; Width, 5 inches. Inside Dimensions of Removable Tray; Length, 32½ inches; Height, 1¾ inches; Width, 4¼ inches. Fitted with Brass Lock, Leather Handle with Rings for Strap to pass over shoulder, Metal Clasps and Metal Corners, Saw Rack for holding four saws, including a 28 inch Rip Saw. Hooks for Brace and Coping Saws, Wood Button for Try Square. Partition Tray for Bits, Chisels and small tools. Has space in bottom to hold Planes, Levels Etc., and will take a Steel Square with an 18 inch tongue.

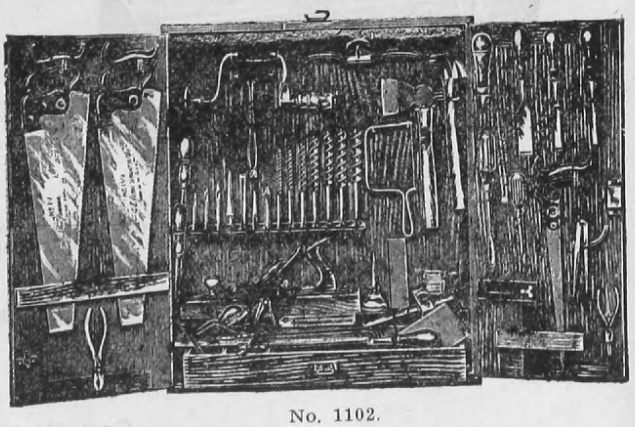
No. 35—Carpenters' Empty Tool Cases.....Each, $10.00

Packed—Six in a Crate. Weight about 160 lbs.

CARPENTERS' TOOL CABINETS



No. 102.



No. 1102.

Carpenters' Upright Tool Cabinets

Made of Chestnut, paneled and nicely finished. Outside Dimensions: Height, 28⅞ inches; Width, 24⅞ inches; Depth, 8 3/16 inches. Will accommodate 46 Tools.

No. 102—Carpenters' Upright Tool Cabinets, **Empty**, without Tools.....Each, $18.00

No. 1102—Carpenters' Upright Tool Cabinets, Complete with 46 Tools as illustrated.....Each, 48.00

Packed—One in a Crate.

Weight of No. 1102 Not Crated 35 lbs., Crated about 60 lbs.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOL CHESTS

No. 01.

Made of Chestnut, paneled and nicely finished. Outside Dimensions: Length 20⅝ inches, Width 13 inches, Height 10⁷⁄₁₆ inches. Inside Dimensions as follows: Receptacle under Lid, 18x10¼x3⅛ inches. First Drawer, 16⅞x9x1⁵⁄₁₆ inches. Second Drawer, 16⅞x9x2½ inches. Space under second drawer, 1 inch deep. Fitted with Brass Cylinder Lock, Nickel Plated Drawer Pulls and Drop Handles, Metal Elbow to support lid and Patent Device for locking all drawers automatically by closing lid.

No. 01—Machinists' Tool Cases.....Each, $14.00

Packed—One in a Case.

MACHINISTS' TOOL CASES

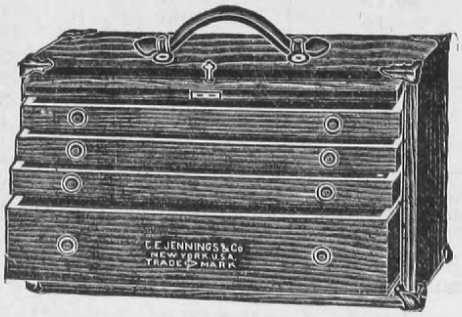
No. 74, Open.

No. 74, Closed.

Made of Chestnut, handsomely finished. Fitted with Brass Cylinder Lock, with two flat keys, Leather Handle and Metal Corners. Lid locks at bottom and when open can be slid back over the drawers like the lid of a sectional book-case. Five Drawers, Outside Dimensions: Length 16 inches, Width 9 inches, Height 10⅝ inches. Inside Dimensions as follows: Two Top Drawers, 6¾x6⅝x1 inch. Next Two Drawers, 14x6⅝x1 inch. Bottom Drawer, 14x6⅝x2½ inches. Receptacle under bottom drawer 1 inch deep.

No. 74—Machinists' Tool Cases.....{With **Unlined** Drawers .....Each, $14.00
{With **Lined** Drawers .....Each, 17.00

Packed—Four in a Crate.



No. 75, Open.

No. 75, Closed.

Made of Chestnut, handsomely finished. Fitted with Brass Cylinder Lock, with two flat keys, Leather Handle and Metal Corners. Lid locks at bottom and when open can be slid back over the drawers like the lid of a sectional book-case. Four Drawers, Outside Dimensions: Length 19 inches, Width 9 inches, Height 11⅛ inches. Inside Dimensions as follows: Bottom Drawer, 17x6¾x3⅛ inches. Other Drawers, 17x6¾x1 inch. Receptacle under bottom drawer 1 inch deep.

No. 75—Machinists' Tool Cases.....{With **Unlined** Drawers .....Each, $14.00
{With **Lined** Drawers .....Each, 17.00

Packed—Four in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ADJUSTABLE STENCIL LETTERS

Machine Cut from Spring Brass, neat in design and finish, and will last a life time. Can be joined together, forming any name in a few minutes.

Stencil Letters in Sets

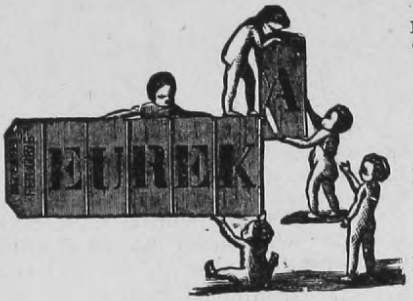
Each Set boxed, with Ink and Brush.

No. 2—Set of 55 Letters, ¾ inch .....Per Set, $2.50

No. 3—Set of 55 Letters, 1 inch .....Per Set, 2.70

No. 4—Set of 55 Letters, 1½ inch .....Per Set, 3.30

Packed—One Set in a Box.



Very convenient for the Farmer to Brand Sacks, Implements, etc. Also used extensively by business men generally.

Stencil Letters in Bulk

1 inch Letters.....Per 100, $3.50

Stencil Ink

No. 6—Blue Ink in Tin Boxes.. .....Per Dozen, 1.60

Stencil Brushes

No. 1—Stencil Brushes..... .....Per Dozen, 1.70

STEEL LETTERS AND FIGURES

Size Inches	Machine Made				Hand Cut	
	No. 20—Letters		No. 30—Figures		No. 120—Letters	No. 130—Figures
	Per Set of 28	Single, Each	Per Set of 9	Single, Each	Per Set of 28	Per Set of 9
3/32	$2.70	$0.15	$0.90	$0.15	$4.50	$1.50
⅛	2.70	.15	.90	.15	4.50	1.50
3/16	3.75	.18	1.25	.18	6.00	2.00
¼	4.50	.20	1.50	.20	7.00	2.35
5/16	5.25	.25	1.75	.25	8.50	2.85
⅜	7.50	.35	2.50	.35	10.00	3.35
½	13.50	.50	4.50	.50	14.00	4.70

Note.—Hand Cut Steel Letters and Figures are made especially for us from special steel, carefully hardened and tempered, made in Gothic style which gives clear and well defined impressions. Especially adapted for use on Steel, Iron, Brass and other Hard Metals or on Wood.

Assortment of Steel Letters and Figures

Machine Made—Put up in neat cabinets for the convenience of the retail trade. **Contains** three assortments of sizes 1/16, ⅛ and ¼ inch.

2—Only Letter A
2—Only Letter B
2—Only Letter C
2—Only Letter D
2—Only Letter E
2—Only Letter F
3—Only Letter G
2—Only Letter H
2—Only Letter I
3—Only Letter J
2—Only Letter K
2—Only Letter L
2—Only Letter M
2—Only Letter N
5—Only Letter O
2—Only Letter P
2—Only Letter Q
2—Only Letter R
2—Only Letter S
2—Only Letter T
2—Only Letter U
2—Only Letter V
2—Only Letter W
2—Only Letter X
2—Only Letter Y
2—Only Letter Z
2—Only Letter &
3—Only Figure 1
2—Only Figure 2
2—Only Figure 3
3—Only Figure 4
3—Only Figure 5
3—Only Figure 6
2—Only Figure 7
3—Only Figure 8

No. 2—Cabinet Assortment—Contents as above.....Each, $40.00

Note.—Special stamps made to order according to specifications.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CARPENTERS' AND MACHINISTS' APRONS

No. 3

No. 600½.

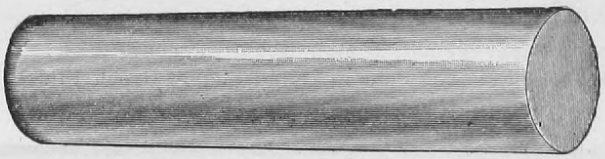
No. 2.

No. 3—Carpenter's Cravenette Cloth Waterproof Aprons, for carpenters, shipping clerks, electricians, printers, etc.....Per Dozen, $2.50

No. 600½—Kokomo Carpenters' Aprons, made of Heavy Duck, with Two 8x8½ inch Pockets and a 2½x5 inch Center Pocket, Width 29 inches. Pockets reinforced at corners with leather buttons.....Per Dozen, 4.50

No. 2—Machinists' Cravenette Cloth Waterproof Aprons, for machinists, grocers, butchers, automobile and buggy washers, mechanics, etc.....Per Dozen, $7.50

RAILROAD CHALK CRAYONS



Four inches Long, **One** inch Diameter.

Railroad Chalk Crayons.....	Colors	White	Red	Blue
	Per Gross	$2.00	2.40	2.40

Packed—One Gross in a Box.

CARPENTERS' CHALK

Carpenters' Chalk.

"Half Gross" in a Box...	White	Red	Blue
Per Gross	$1.60	2.00	2.00

Packed—Half Gross in a Box.

"One Dozen" in a Carton	White	Red	Blue
Per Gross	$2.00	2.50	2.50

Packed—12 Cartons (One Gross) in a Case.

SCHOOL CRAYONS

White School Crayons.....Per Gross, $.....
Red School Crayons.....Per Gross, ...

Packed—One Gross in a Box.

LUMP CHALK

White Lump Chalk in Barrels of about 300 lbs. .....Per Pound, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHIPPING CRAYONS

For all heavy marking purposes. Used by Freight Houses, Hardware Stores, Shoe Factories, Newspapers, Paper Mills, Grocers, Butchers, etc. It takes the place of the old-fashioned Pot and Brush, which dirties everything it comes in contact with. Will mark on anything, is water-proof and indelible.

No. 620—Soft, Black, Paper Covered.....Per Gross, $4.00
No. 621—Soft, Blue, Paper Covered.....Per Gross, 4.00

Packed—One-Twelfth Gross in a Box.

CHECKING CRAYONS

For use in R. R., Express, Telegraph and General Office work. And in stores for marking packages and all light shipping work. Marks on Wood, Leather, Cloth, Glass, Tin, Earthen-ware, Paper, etc. This Crayon is water-proof and indelible.

No. 0720—Soft, Black, Paper Covered.....Per Gross, $3.50
No. 0721—Soft, Blue, Paper Covered.....Per Gross, 3.50
No. 0731—Hard, Blue, Paper Covered.....Per Gross, 4.00

Packed—One-Twelfth Gross in a Box.

"CHECKING PENCILS"

No. 792. Blaisdell Hardware Pencils. No. 795.

For Marking Glass, Cutlery, Brass, Silver, Gold and all Polished Metals. Absolutely Smooth and Free from Grit.

No. 792—Large Soft Black Lead, Paper Pencil, Round Shape, Green Finish.....Per Gross, $22.80
No. 795—Extra Large Soft Black Lead, Paper Pencil, Round Shape, Green Finish.....Per Gross, 25.20

Packed—Half Gross in a Box.

No. 0315.

No 0315—Very Soft Black Lead, Round Shape, Extra Large Diameter, Yellow Finish, Silver Stamped.....Per Gross, $9.00

Packed—Half Gross in a Box.

No. 403.

No. 403—Soft Lead, Hexagon Shape, Orange Finish, Gold Stamped.....Per Gross, $10.50

Packed—Half Gross in a Box.

No. 675.

No. 674—Royal Black, **Black** Lead, Round Shape, Silver Stamped, Gilt Cap with Black Enameled Band.....Per Gross, $10.50
No. 675—Royal Blue, **Blue** Lead, Round Shape, Silver Stamped, Gilt Cap with Black Enameled Band.....Per Gross, 10.50
No. 676—Royal Red, **Red** Lead, Round Shape, Silver Stamped, Gilt Cap with Black Enameled Band.....Per Gross, 10.50
No. 678—Royal Green, **Green** Lead, Round Shape, Silver Stamped, Gilt Cap with Black Enameled Band.....Per Gross, 10.50

Packed—Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COPYING PENCILS

No. 853P.

No. 853P—Violet Copying Lead, Round Shape, Polished Mauve Color, Silver Stamped, with Nickel Protectors ..... Per Gross, $20.00

Packed—Half Gross in a Box.

No. 956.

No. 956—Medium Hard Copying Lead, Round Shape, Polished, Yellow Finish, with Purple Tips or Mouthpieces, Silver Stamped ..... Per Gross, $16.00

Packed—Half Gross in a Box.

LUMBER PENCILS

No. 521.

Dixon's Hexagon Shape Lumber Pencils.

No. 365—Soft Black Lead, Paper Covered ..... Per Gross, $11.00
No. 520—Red Lead, Paper Covered ..... Per Gross, 19.50
No. 521—Hard Blue Lead, Paper Covered ..... Per Gross, 19.50

Packed—Half Gross in a Box.

No. 837.

Eagle Hexagon Shape Lumber Pencils.

No. 836—Hard Blue Lead, Paper Covered ..... Per Gross, $16.00
No. 837—Red Lead, Paper Covered ..... Per Gross, 16.00
No. 838—Soft Blue Lead, Paper Covered ..... Per Gross, 16.00
No. 839—Green Lead, Paper Covered ..... Per Gross, 16.00
No. 840—Yellow Lead, Paper Covered ..... Per Gross, 16.00

Packed—Quarter Gross in a Box.

LUMBER AND METAL WORKERS' CRAYONS

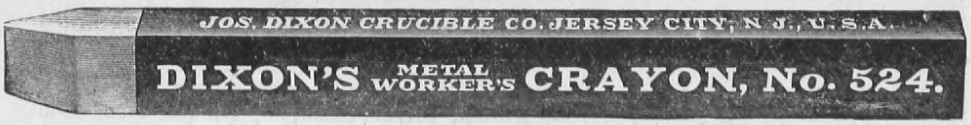
No. 321. Reduced Size Cut.

Zelnicker, Made especially for marking high grade finish and dark lumber such as Mahogany, Walnut, etc., also largely used by iron and steel works, railroads, etc. Makes a permanent non-staining mark.

No. 321—Zelnicker Hard White, Lumber and Metal Workers Crayons ..... Per Gross, $14.00

Packed—Quarter Gross in a Box.

METAL WORKERS' CRAYONS



No. 524.

No. 524—Sawed out of solid Soapstone, Flat Shape, Chisel Point, 3/16 x 1/2 x 5 inches ..... Per Gross, $4.80
No. 540—Sawed out of solid Soapstone, Square Shape, Pointed, 1/4 x 5 inches ..... Per Gross, 3.50
No. 541—Sawed out of solid Soapstone, Round Shape, 1/4 inch Diameter, 5 inches long ..... Per Gross, 4.50

Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LEAD PENCILS

Nos. 025-035.

Buhl's True Blue

A high grade Pencil made specially for us, with a Special Grade or Quality of Lead not found in the regular line of Pencils. Gold Stamped.

No. 025—No. 2 5/10 Lead, Octagon Shape, Blue Finish, Gilt Tips, Round Rubbers.....Per Gross, $9.00
No. 030—No. 3 Lead, Octagon Shape, Blue Finish, Gilt Tips, Round Rubbers.....Per Gross, 9.00
No. 035—No. 3 5/10 Lead, Octagon Shape, Blue Finish, Gilt Tips, Round Rubbers.....Per Gross, 9.00

Packed—One Gross in a Box.

Nos. 175-180.

Dixon's Eldorado Pencils

Recommended for the Exacting Requirements of Draughtsmen, Engineers, Surveyors, Artists, Architects and to all who appreciate Quality in Pencils. Hexagon Shape, Yellow Finish, Stamped in Gold, Packed in Handsome Dozen Boxes Lithographed in Colors. Pencils so high in grade and with leads so smooth, tough and enduring, that they easily equal the finest produced anywhere.

Nos.	175	176	177	178	179	180
Grades of Hardness	HB	F	H	2H	3H	4H
Comparative to	2	2½	3	3½	4	5
Per Gross	$21.60	21.60	21.60	21.60	21.60	21.60

Packed—One Dozen in a Carton; Half Gross in a Box.

No. 1802.

No. 1802—No. 2 Lead, Hexagon Shape. Green, Hand Finished, Gold Stamped, Gilt Tip, Round Rubbers.....Per Gross, $10.00
No. 1803—No. 3 Lead, Hexagon Shape. Green, Hand Finished, Gold Stamped, Gilt Tip, Round Rubbers.....Per Gross, 10.00

Packed—One Dozen in a Carton; Half Gross in a Box.

Nos. 718 and 719.

No. 718—No. 2 Lead, Hexagon Shape, Ebony Finish, Gold Stamped, Nickel Tips, Round Rubbers..Per Gross, $8.00
No. 719—No. 3 Lead, Hexagon Shape, Ebony Finish, Gold Stamped, Nickel Tips, Round Rubbers..Per Gross, 8.00

Packed—Half Gross in a Box.

No. 720.

No. 720—No. 2 Lead, Round Shape, Satin Finish, Gold Stamped, Nickel Tips, Round Rubbers....Per Gross, $6.50

Packed—Half Gross in a Box.

No. 313.

No. 313—No. 2 Lead, Traveler, Round Shape, Maroon Finish, Silver Stamped, Nickel Tips, Round Rubbers.....Per Gross, $6.00
No. 315—No. 2 Lead, Tip Top, Round Shape, Assorted Finishes, Silver Stamped, Nickel Tips, Round Rubbers.....Per Gross, 4.50

Packed—Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LEAD PENCILS

No. 109.

No. 109—No. 2 Lead, Octagon Shape, Yellow Finish, Nickel Tips, Gold Stamped, Round Rubbers..Per Gross, $5.00

Packed—Half Gross in a Box.

No. 30.

No. 30—No. 2 Lead, Hexagon Shape, Red Finish, Gold Stamped, Nickel Tips, Round Rubber.....Per Gross, $4.50

Packed—Half Gross in a Box.

No. 55.

No. 55—No. 2 Lead, Round Shape, Black Finish, Gold Stamped, Nickel Tips, Round Rubber.....Per Gross, $3.50

Packed—One Gross in a Box.

No. 268.

No. 268—Polished Cedar, Round Shape, Blind Stamped, Inserted Rubber Plug.....Per Gross, $2.70
No. D—Plain Cedar, Round Shape, Blind Stamped, **no** Rubber .....Per Gross, 1.60

Packed—One Gross in a Box.

Nos. 1040 and 1042.

No. 1040—No. 2 Lead, Tapering Shape, Maroon Finish, Best Quality, Silver Stamped, Inserted Rubber Tablet .....Per Gross, $11.00
No. 1402—No. 3 Lead, Tapering Shape, Maroon Finish, Best Quality, Silver Stamped, Inserted Rubber Tablet .....Per Gross, 11.00

Packed—Half Gross in a Box.

"Eagle Shorthand"

No. 272.

No. 272—No. 2 Lead, Round Shape, Natural Polish, Silver Stamped, **no** Rubber.....Per Gross, $10.00

Packed—Half Gross in a Box.

"Eagle Diagraph"

No. 817.

No. 817—No. 2 Lead, Round Shape, Natural Polish, Silver Stamped, Nickel Tips, Round Rubber..Per Gross, $7.00
No. 818—No. 3 Lead, Round Shape, Natural Polish, Silver Stamped, Nickel Tips, Round Rubber..Per Gross, 7.00

Packed—Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LEAD PENCIL ASSORTMENTS

EAGLE

No. 81.

DIXON'S

No. 435.

Eagle Assortment

This Assortment consists of the following Pencils with Nickel Tips and Inserted Rubbers: 3 Dozen Arrow, No. 2 Lead, Assorted Finishes, Round Shape; 2 Dozen Express, No. 2 Lead, Black Finish, Hexagon Shape; 1 Dozen Express, No. 2 Lead, Yellow Finish, Hexagon Shape.

No. 81—Assortments of Eagle Pencils, as illustrated above.....Per Assortment, $3.00

Packed—Each Assortment (Half Gross) in a Box.

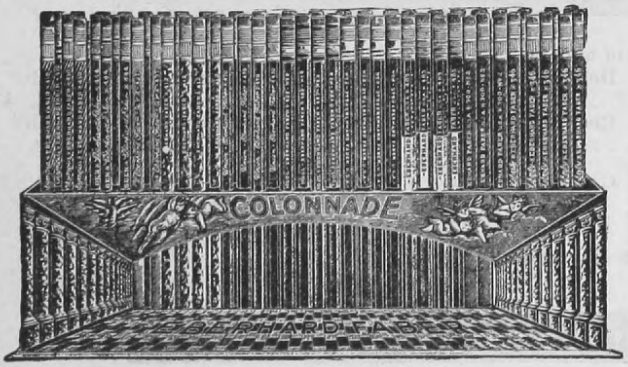
Dixon's Movie Assortments.

A Hexagon Shape Revolving Drum containing the following Pencils, with Gilt Tips and Inserted Rubbers, 1½ Dozen each Round and Hexagon Pencils, including Anglo-Saxon, Ticonderoga and Cabinet styles in Assorted Finishes.

No. 435—Assortment of Dixon's Pencils, as illustrated above.....Per Assortment, $2.20

Packed—Each Assortment (One-Quarter Gross) in a Box.

FABER'S COLONNADE



No. 450.

FABER'S CLIPTIC

No. 497.

Faber's Colonnade Assortment

This assortment contains Six Dozen Pencils, assorted in Round and Hexagon. There are Seven varieties of Pencils, all exceptionally attractive and in various finishes, including Red, Green, Blue, Pink, Lavender, Black, Yellow and Red, White and Blue. The Pencils all have Metal Tips, either Gilt or Nickel Plated, with Rubbers.

The box is of oblong shape with upper and lower platforms supporting the pencils in an upright position. The front of the box is cut out in the shape of an arch, showing the pencils through an opening. The remaining portion is beautifully lithographed in colors to represent a Colonnade, the pencils showing through the opening, aiding in carrying out the effect.

No. 450—Assortment of Faber's Pencils, as illustrated above.....Per Assortment, $4.00

Packed—Each Assortment (Half Gross) in a Box.

Faber's Cliptic Assortment

This assortment consists of Two Dozen, Round Fluted Pencils contained in a Flat Folding Double Easel Display Box. Assorted in Yellow, Green and Blue Finishes, provided with Nickel Tips, Red Rubbers and each Pencil Fitted with a Nickel Plated Clip.

No. 497—Cliptic Assorted Pencils, as illustrated above.....Per Gross, $8.00

Packed—Half Gross in an Outer Container.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

PEN AND PENCIL ASSORTMENTS

EAGLE DUCHESS

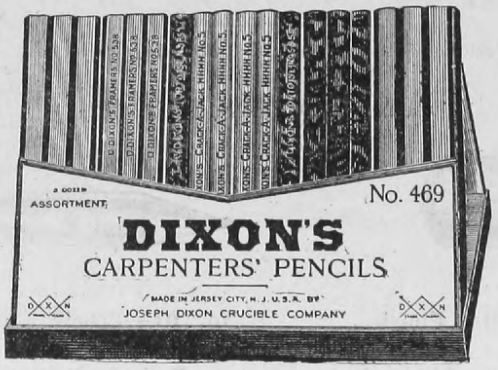
No. 919.

This Assortment contains 3 high grade Lead Pencils, 1 Pocket Pencil with Pen and Rubber, 1 Pen Holder with Steel Pen and 1 Circular Eraser.

No. 919—Assortment, as illustrated above.....Per Dozen, $4.00

Packed—Each Assortment in a Floral Designed Box, with Hinged Cover.

CARPENTER PENCIL ASSORTMENTS



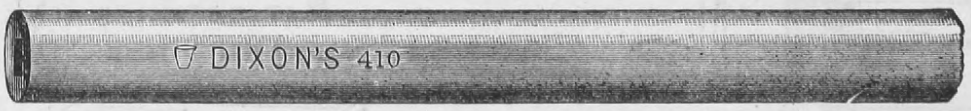
No. 469.

This Assortment contains the following 7 inch Carpenters' Pencils: 1 dozen, No. 997, Bright Red Finish, Black Bevel; ½ dozen, No. 588, Yellow Finish, Oval Shape; ½ dozen, No. 585, Tortoise Finish, Beveled; ½ dozen No. 538, Maroon Finish, Beveled; ½ dozen, No. 508, Mottled Finish, Oval Shape.

No. 469—Assortment of Dixon's Carpenters' Pencils, as illustrated above.....Per Assortment, $2.20

Packed—Each Assortment (One-Quarter Gross) in a Box.

CARPENTERS' PENCILS



Dixon's Oval Shape Carpenter's Pencils, Polished Cedar, Blind Stamp.

Nos.	410	411	412
Inches	7	9	12
Per Gross	$5.00	6.50	8.50

Packed—Half Gross in a Box.

Buhl Wolverine, Beveled Edge Carpenter's Pencils, Maroon Finish, Gold Stamp.

Nos.	511	512
Inches	7	9
Per Gross	$9.00	11.00

Packed—Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EAGLE PROPELLING PENCILS

No. 828.

Spear, with **Propel** and **Repel** movement. A practical Pencil for general requirements. Contains Black Leads.

No. 828—Tan Finish, with Three Extra Leads.....Per Gross, $20.00

Packed—One-twelfth Gross in a Box, with Twelve Small Metal Boxes, each containing Three Extra Leads.

No. 830.

Torpedo, with **Propel** and **Repel** movement. A practical Pencil containing Black Leads and having an ingenious device at the end holding an extra supply of leads.

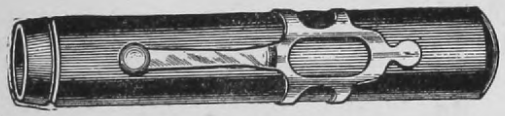
No. 830—Black Vulcanite Rubber, Highly Finished and Engraved, Length, 6 inches, with Five Extra Leads .....Per Dozen, $4.00

Packed—One Dozen in a Box.

EXTRA LEADS

No. 1830—Extra Leads for No. 830 Pencils, 5 in a Tube, 12 Tubes in a Box.....Per Dozen Boxes, $1.20

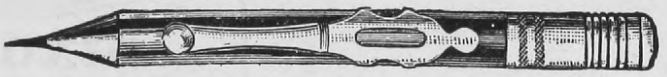
PEN AND PENCIL CLIPS



No. 60.

No. 60—Pen Clips, Tempered Steel, Gilt Finish.. .....Per Gross, $6.00

Packed—Quarter Gross on a Card in a Display Box.

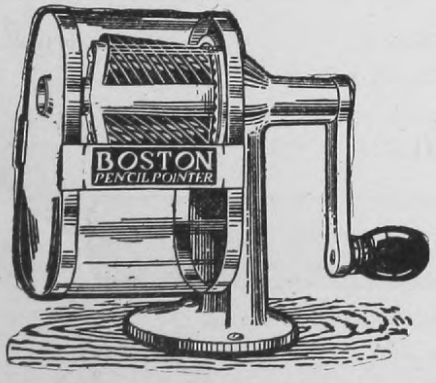


No. 61.

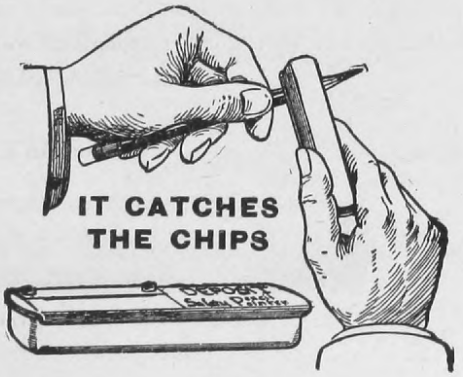
No. 61—Pencil Clips, Tempered Steel, Nickel Finish .....Per Gross, $6.00

Packed—Quarter Gross on a Card in a Display Box.

PENCIL POINTERS



No. 100.



See-Rite.

Boston

Boston Pencil Pointer, Cutters are Cylindrical, Special Tool Steel, hardened, tempered and accurately ground. The Receptacle is transparent, clean and sanitary, as it retains all waste material.

No. 100—Regular Point..... Each, $1.50
No. 100L—For making a long point—For Architects, Draftsmen, etc..... Each, 1.50
No. 150—Regular Point Adjustable to all sizes of Pencils..... Each, 2.00

Packed—Each in a Separate Carton.

See-Rite

See-Rite Pencil Pointer. Blades are of the best grade Razor Steel finely tempered. By loosening the screws slightly, the adjustable blade may be shifted forward or back to make it cut fast or slow as desired.

See-Rite—Pencil Pointer .....Per Dozen, $1.50

Packed—One Dozen on a Display Card; One Gross in a Box.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MARKING AND MORTISE GAUGES

Marking, Gauge, Beechwood, Boxwood Thumb Screw, Oval Bar, Marked.

Per Dozen

No. 61—With Fixed Steel Point.....$1.30
No. 62—With Adjustable Steel Point..... 2.70

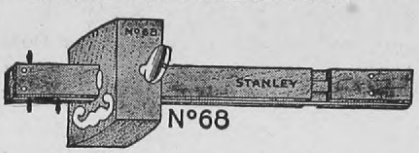
Packed—One Dozen in a Box.

Patent Marking Gauge, Polished, Plated Head, Oval Bar, Marked, Adjusting Steel Point.

Per Dozen

No. 64—Beechwood, Boxwood Thumb Screw.....$3.70
No. 65—Boxwood, Brass Thumb Screw and Shoe.. 7.60

Packed—No. 64, One Dozen; No. 65, Half Dozen in a Box.

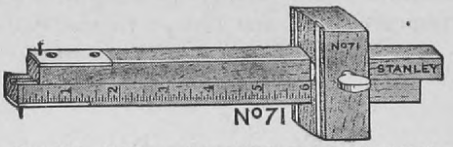


Mortise Gauge, Polished Beechwood, Plated Head, Adjustable Wood Slide, Brass Thumb Screw and Shoe, Oval Bar, Marked.

Per Dozen

No. 68—With Fixed Steel Points.....$6.90

Packed—Half Dozen in a Box.



Patent Double Gauge (Marking and Mortise), Polished Beechwood, Plated Head and Bars, Brass Thumb Screws and Shoes, Oval Bars, Marked.

Per Dozen

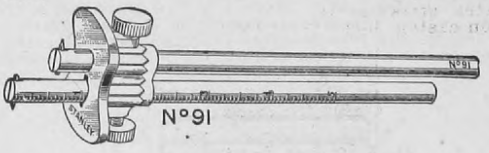
No. 71—With Fixed Steel Points.....$8.60

Packed—Half Dozen in a Box.

Patent Marking and Mortise Gauge, Rosewood, Plated Head, Improved Screw Slide, Brass Thumb Screw and Shoe, Oval Bar, Marked.

No. 77—With Fixed Steel Points.....Per Dozen, 14.60

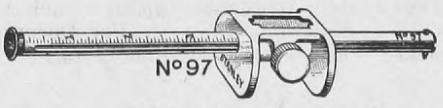
Packed—Half Dozen in a Box.



Made entirely of Metal. The Steel Points are adjustable and are attached very near the end of the bars, to admit of being used close up into a rabbet or corner. The Head of the marker can be turned over for a broad or narrow bearing as desired.

No. 90—Marking Gauge, Nickel Plated.....Per Dozen, $ 6.30
No. 91—Marking and Mortise Gauge, Nickel Plated.....Per Dozen, 12.30

Packed—One-Twelfth Dozen in a Box.



Made entirely of Metal, with Double Faced Head, Nickel Plated. The Bars have a Steel Point near one end to permit of being used close up into a rabbet or corner and Roll Point on opposite end for use over knots, across the grain or where a fine sharp mark is desired. No. 98 has the head countersunk so either bar can be set flush when used as a single Gauge.

No. 97—Marking and Roller Gauge..... Per Dozen, $10.30
No. 98—Marking, Mortise and Roller Gauge..... Per Dozen, 15.80

Packed—One-Twelfth Dozen in a Box.

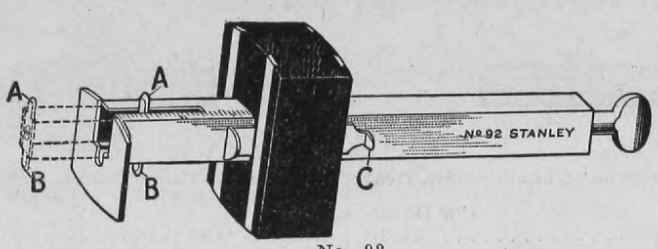
Steel Bars, Nickel Pated, Double Faced Rosewood Heads, with Brass Face Plates. The Bars have a Steel Point near one end to permit of being used close up into a rabbet or corner and Roll Point on opposite end for use over knots, across the grain or where a fine sharp mark is desired. No. 198 has the head countersunk so either bar can be set flush when used as a single gauge.

No. 197—Marking and Roller Gauge..... Per Dozen, $11.90
No. 198—Marking, Mortise and Roller Gauge..... Per Dozen, 17.40

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUTT AND RABBET GAUGES



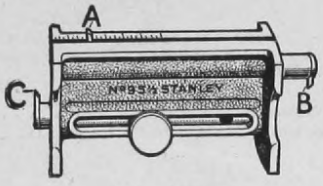
No. 92.

This Gauge has two Brass Bars, one movable within the other. Two Steel Blades or Markers at the end of the inner bar can be moved to any position by means of thumb screw at opposite end of gauge.

No. 92—Improved Butt and Rabbet Gauge, Polished Rosewood Stock .....Per Dozen, $23.30

Packed—One-twelfth Dozen in a Box.

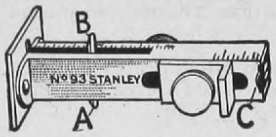
BUTT GAUGES



No. 95½.

No. 95½—Old Style, Iron Body, Steel Bars, Nickel Plated, Graduated up to 1½ inches by 16ths .....Per Dozen, $11.80

Packed—One-twelfth Dozen in a Box.



No. 93.

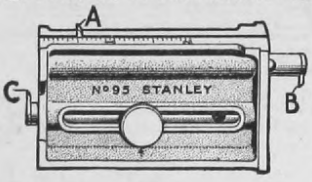
No. 93—Steel Head, Brass Slide, Nickel Plated, Graduated up to 2 inches by 16ths. Per Dozen, $15.50

Packed—One-twelfth Dozen in a Box.

GENERAL DESCRIPTION.

Nos. 95½, 93, 95 and 94.

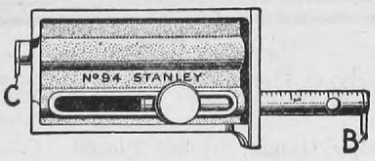
These Gauges have Three Cutters purposely arranged so that no change of setting is necessary when hanging several doors. In reality these tools comprise Rabbet, Marking and Mortise Gauges of a scope sufficient for all door trim, including lock plates, strike plates, etc. They will indicate the three measurements to be marked in hanging doors, that is, location of butt on casing, location of butt on door and thickness of butt on both casing and door. All Bars are locked by set screws.



No. 95.

No. 95—Improved Butt Gauge, Iron Body, Steel Bars, Nickel Plated, Graduated up to 2 inches by 16ths .....Per Dozen, $16.20

Packed—One-twelfth Dozen in a Box.

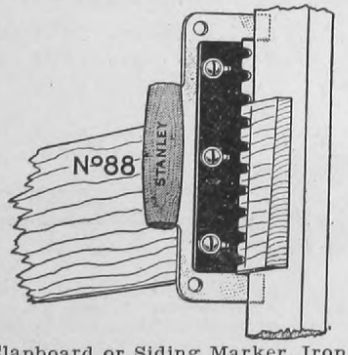


No. 94.

No. 94—Patent Butt Gauge, Iron Body, Steel Bars, Nickel Plated, Graduated up to 2 inches by 16ths .....Per Dozen, $17.80

Packed—One-twelfth Dozen in a Box.

SIDING MARKERS

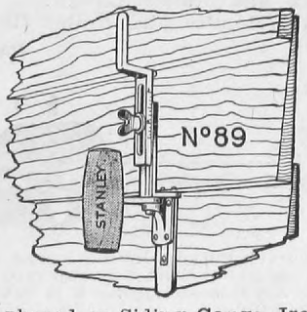


Adjustable Clapboard or Siding Marker, Iron Stock, Nickel Plated, Hardwood Handle, Blued Tool Steel Blade.

No. 88—Length 8¾ inches, Width 4 inches..... .....Per Dozen, $10.10

Packed—One-twelfth Dozen in a Box.

SIDING GAUGES.



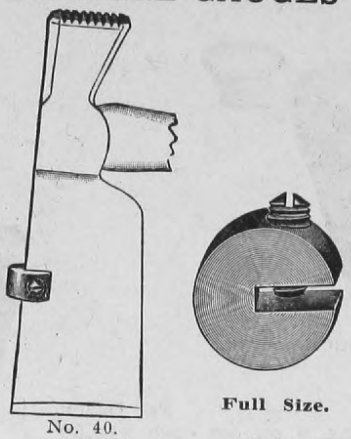
Adjustable Clapboard or Siding Gauge, Iron Stock, Nickel Plated, Hardwood Handle. Gauge graduated in 8ths.

No. 89—Length 8¾ inches, Width 2½ inches.. .....Per Dozen, $10.10

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHINGLE GAUGES



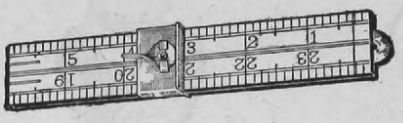
No. 40. **Full Size.**

Made of Cold Rolled Steel, White Nickel Finish.

No. 40—Shingle Gauge, ¾ x 7/16 inch, with Headless Set Screws. . . . . Per Dozen, $3.00

Packed—One Dozen on a Display Card.

RULE GAUGES

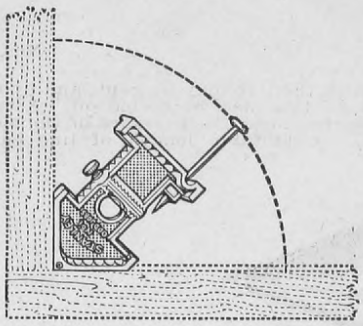


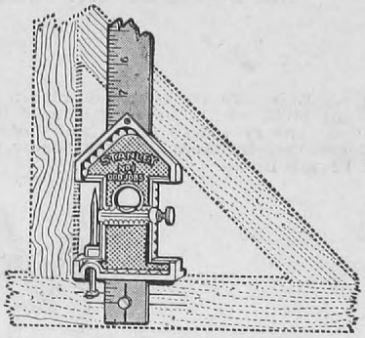
HANDY.

Handy Rule Gauges, Clamps on any Standard One Inch Rule and can be adjusted or removed in an instant, making a Handy Marking Gauge. . . . . Per Dozen, $2.00

Packed—One Dozen in a Box.

ODD JOBS





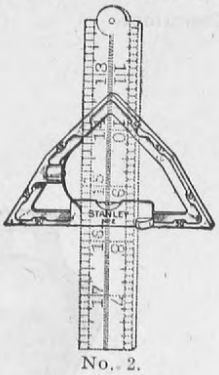
No. 1.

A mechanic who has this tool to use on his rule can do all ordinary jobs with only a saw, hammer and plane. It contains a Level, Plumb, Try Square, Mitre Square, Bevel, Scratch Awl, Depth Gauge, Marking Gauge, Mitre Gauge, Beam Compass and a One Foot Rule, graduated in 16ths. All parts are carefully machined.

No. 1—Stanley Odd Jobs, Nickel Plated, Length, 4 inches. . . . . Per Dozen, $13.00

Packed—One-twelfth Dozen in a Box.

3-ANGLE RULE TOOLS



No. 2.

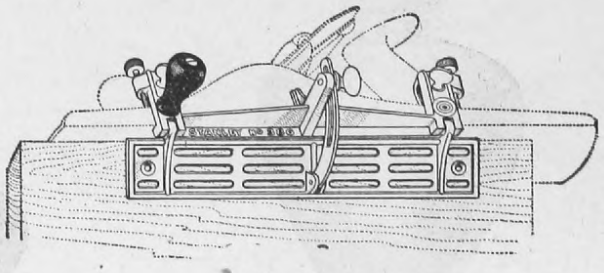
3-Angle Rule Tools

A light, handy little pocket tool for Carpenter and Mechanics. May be used as a Plumb, Level, Square, T-Square, Mitre Square, 30 degree Square and a Marking Gauge.

No. 2—Stanley 3-angle Rule Tool, Nickel Plated. . . . . Per Dozen, $9.30

Packed—One-twelfth Dozen in a Box.

JOINTER GAUGES



No. 386

Jointer Gauges

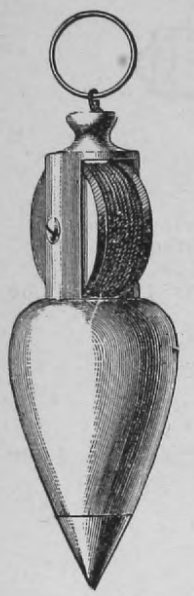
Stanley Jointer Gauge. Designed for use in connection with all sizes of Iron Jack or Jointer Planes. This Tool will enable the workman to plane bevels of any angle between 30 and 90 degrees, or to square up the edges of boards with extreme accuracy. Made of Metal, Nickel Plated.

No. 386—Stanley Jointer Gauge. . . . . Each, $2.30

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

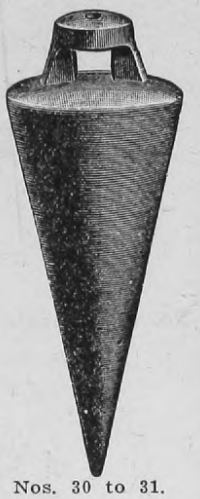
PLUMB BOBS



No. 2.

Nos. 5 and 6.

Nos. 5 and 6, Cap Removed.

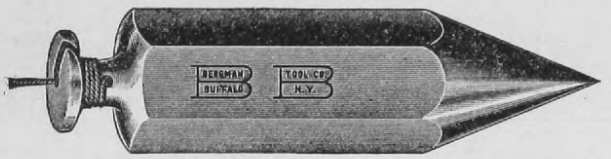


Nos. 30 to 31.

	Per Dozen
No. 5—Cast Brass, Screw Top, Steel Pointed, Weight, 6 ounces each	$10.50
No. 6—Cast Brass, Screw Top, Steel Pointed, Weight 11½ ounces, each	14.50
No. 30—Japanned Iron, Adjusted Top, Weight 12 ounces each	1.70
No. 31—Japanned Iron, Adjusted Top, Weight 24 ounces each	2.90
Packed—Half Dozen in a Box.	Each
No. 2—Bronze Metal, Steel Pointed, Adjustable, Weight 13 ounces each	$2.80

Packed—One in a Box.

No. 2—Plumb Bobs are constructed with a reel at the upper end, upon which the line may be kept; and by dropping the Bob with a slight jerk, while the ring is held in the hand, any desired length of line may be reeled off. A spring, which has its bearing on the reel, will check and hold the Bob firmly at any point on the line. The pressure of the spring may be increased or decreased, by means of the screw which passes through the reel. A suitable length of line comes already reeled on each Plumb Bob.

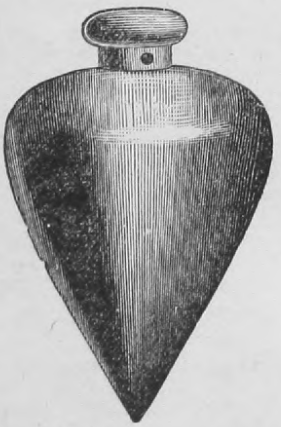


Nos. 14 to 18.

Made from High Carbon Hexagon Steel, with Tempered Point, Nickel Plated. Can be dropped to any required depth and held securely by a tapered slot. 7½ feet of Braided Linen Twine furnished with each bob.

Hold Fast Plumb Bobs..... Nos.	**14**	**16**	**18**
Weight each, ounces	4	6	8
Per Dozen	$5.00	5.50	6.00

Packed—Each in a Separate Box, Half Dozen in a Container.



Half Size Cut of No. 0 and Style of No. 00.

Half Size Cut of No. 1.

Half Size Cut of No. 02.

No. 0—Japanned Iron, Weight 2 pounds 10 ounces each, Adjusted Top	Per Dozen,	$5.50
No. 00—Japanned Iron, Weight 1 pound 2 ounces each, Adjusted Top	Per Dozen,	2.40
No. 1—Japanned Iron, Weight, 9 ounces each, Staple Top	Per Dozen,	1.50
No. 02—Japanned Iron, Weight, 9½ ounces each, Adjusted Top	Per Dozen,	1.50

Packed—No. 0, Loose; No. 00, Half Dozen; Nos. 1 and 2, One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY CARPENTERS' PLUMBS AND LEVELS

No. 102.

No. 102—Level only, Arch Top Plate, Two Side Views, Polished, Assorted 10 to 18 inches... .....Per Dozen, $4.80

Packed—In Open Stock.

No. 104.

No. 104—Plumb and Level, Arch Top Plate, Two Side Views, Polished, Assorted 12 to 18 inches .....Per Dozen, $6.60

Packed—In Open Stock.

No. 0.

Plumb and Level, Arch Top Plate, Two Side Views, Polished.

No. 00—Non-Adjustable, Assorted 18 to 22 inches.....Per Dozen, $ 8.40
No. 0—Non-Adjustable, Assorted 24 to 30 inches.....Per Dozen, 9.60
No. 1X—Adjustable, Assorted 24 to 30 inches .....Per Dozen, 11.40

Packed—In Open Stock.

No. 2.

No. 2—Adjustable Plumb and Level, Square Top Plate, Two Brass Lipped Side Views, Polished, Assorted 24 to 30 inches.....Per Dozen, $13.80

Packed—In Open Stock.

No. 3.

No. 3—Adjustable Plumb and Level, Square Top Plate, Two Side Views, Polished and **Tipped**, Assorted 24 to 30 inches.....Per Dozen, $15.00

Packed—In Open Stock.

No. 5.

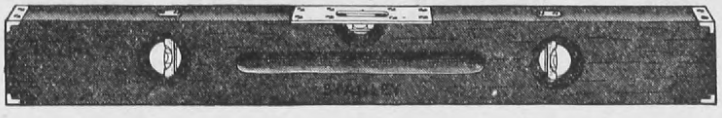
No. 5—Adjustable Plumb and Level, **Triple** Stock, Square Top Plate, Two Brass Lipped Side Views, Polished and **Tipped**, Assorted 24 to 30 inches.....Per Dozen, $19.80

Packed—In Open Stock.

No. 30.

No. 30—Patent Adjustable Plumb and Level, Square Top Plate, Improved **Duplex** Side Views, Polished and **Tipped**, Assorted 24 to 30 inches.....Per Dozen, $18.00

Packed—One-twelfth Dozen in a Box.



No. 13.

Victor Adjustable Plumb and Level, Square Top Plate, Polished and **Tipped.**

No. 13—Hardwood, Two Side Views, Assorted 24 to 30 inches.....Per Dozen, $18.00
No. 15—Hardwood, **3 Ply**, Two Brass Lipped Side Views, Polished and **Tipped**, Assorted 24 to 30 inches.....Per Dozen, 24.00

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY CARPENTERS' PLUMBS AND LEVELS

No. 98—9 inch.

No. 98—12 inch.

Brass Bound Rosewood Adjustable Plumb and Level, with **Ground Glasses,** Square Top Plate, Two Brass Lipped Side Views, Brass Plumb Rings, Polished.

No. 98—Plumb and Level	Inches	6	9	12	18
	Per Dozen	$24.00	30.00	33.00	42.00

Packed—One-twelfth Dozen in a Box.

No. 93.

Brass Bound Mahogany Adjustable Plumb and Level, Square Top Plate, Polished, Assorted 24 to 30 inches.

No. 93—Proved Glasses, Two Plain Side Views.....Per Dozen, $36.00
No. 95—Ground Glasses, Two Brass Lipped Side Views, Brass Plumb Rings.....Per Dozen, 48.00

Packed—One-twelfth Dozen in a Box.

SAND'S CARPENTERS' PLUMBS AND LEVELS

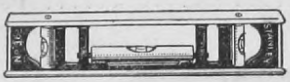
Nos. S118 and S126.

Sand's Walnut Levels are very high grade. A rugged, practical every day Level made for hard use. Finished in the natural wood. Work either edge or end up.

No. S118—Two Plumbs and Two Levels	Inches	18	20	24
	Per Dozen	$21.00	21.00	21.00
No. S126—Two Plumbs and Two Levels	Inches	26	28	30
	Per Dozen	$24.00	24.00	24.00

Packed—One-twelfth Dozen in a Box.

STANLEY METALLIC PLUMBS AND LEVELS



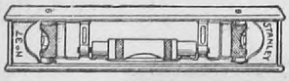
No. 36. 6 and 9 inch.

No. 36. 12, 18 and 24 inch.

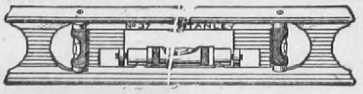
Japanned, Nickel Plated Trimmings, Proved Glasses, Two Plumbs.

No. 36—Inches	6	9	12	18	24
Per Dozen	$15.00	18.00	21.00	24.00	27.00

Packed—One-twelfth Dozen in a Box.



No. 37. 6 and 9 inch.

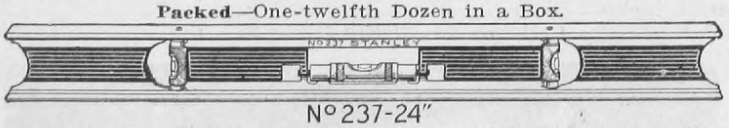


No. 37. 12, 18 and 24 inch.

Nickel Plated throughout, Ground Glasses, Eclipse Covers, Two Plumbs.

Inches	6	9	12	18	24
No. 37—With Flat Bottom.....Per Dozen,	$24.00	30.00	36.00	42.00	48.00
No. 37G—With Grooved Bottom...Per Dozen,	24.00	30.00	36.00	42.00	48.00

Packed—One-twelfth Dozen in a Box.



Stanley Aluminum Plumbs and Levels. On account of their light weight, great strength and the fact that they will not rust or warp, makes them especially adapted for carpenters' use. Provided with Proved Glasses.

Inches	12	18	24
No. 237—With Flat Bottom.....Per Dozen,	$42.00	51.00	60.00
Inches	12	18	24
No. 237G—With Grooved Bottom.....Per Dozen,	$42.00	51.00	60.00

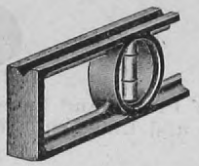
Packed—One-twelfth Dozen in a Box.

Note.—In the Nos. 36, 37 and 237 Series both the Plumb and Level Glasses are set in a Metal Case. The bottom of each case is machined so as to fit accurately on supports cast in the frame of the Level. The Case is held firmly on the supports by means of cone centers which engage each end of the case.

Digitized by
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

SAND'S CARPENTERS' AND MACHINISTS' ALUMINUM LEVELS

No. S18.



No. S18V.

Sand's Aluminum Levels are the Standard of accuracy and will work either End or Edge up. Easy to read in dark places. Made of Aluminum which will not rust, warp, split or crack. The No. 18 is also made with a "V" bottom making it very convenient for leveling up shafting, piping, etc., and is equally useful on flat surface.

No. S18 —Two Plumbs and Two Levels, Length 18 inches, 1 1/16 inches thick.....Per Dozen, $54.00
No. S18V—With "V" Bottom, otherwise the same as No. 18 .....Per Dozen, 54.00

Packed—One-twelfth Dozen in a Box.

No. S24.

No. S24—Two Plumbs and Two Levels, Length 24 inches, 1 1/8 inches thick.....Per Dozen, $60.00

Packed—One-twelfth Dozen in a Box.

No. S28.

No. S28—Four Plumbs and Two Levels, Length 28 inches, 1 1/8 inches thick.....Per Dozen, $66.00

Packed—One-twelfth Dozen in a Box.

No. S30.

No. S30—Four Plumbs and Two Levels, Length 30 inches, 1 1/8 inches thick.....Per Dozen, $72.00

Packed—One-twelfth Dozen in a Box.

MACHINISTS' SMALL IRON LEVELS

No. 38½

No. 39½.

Machinists' Small Iron Levels, fitted with Proved Glasses set solid in Plaster. Top Plate is entirely separate from the glass.

No. 38½—Length, 4 inches, Nickel Plated.....Per Dozen, $5.00
No. 39½—Length 6 inches, Nickel Plated.....Per Dozen, 6.00

Packed—Half Dozen in a Box.

POCKET LEVELS

No. 41.

Straight Edge Pocket Levels, can be attached to any Straight Edge or Carpenter's Square.

No. 41—Japanned Iron Body, Brass Top Plate.. .....Per Dozen, $1.68

Packed—One Dozen in a Box.

No. 31.

Hexagon Pocket Levels, Nickel Plated, with Proved Glasses. Very handy for leveling up clocks, cameras, etc.

No. 31..	Inches	2½	3	3½	4
	Per Dozen....	$4.20	5.10	6.00	7.20

Packed—Half Dozen in a Box.

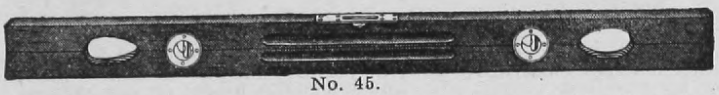
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY MASONS' PLUMBS AND LEVELS

No. 35.

No. 35—Masons' Plumb and Level, with Non-Adjustable Plumb, Adjustable Level, and opening for use of Plumb Bob and Line, Square Top Plate, Two Side Views, Polished, Length 42 inches.....Per Dozen, $21.00

Packed—In Open Stock.



No. 45.

Adjustable Mason's Plumb and Level, Two Plumbs and openings for use of Plumb Bob and Line, Square Top Plate Brass Plumb Rings, Polished, Length, 48 inches. Proved Glosses.

No. 45½—Two Plain Side Views, 1 1/16 inches thick.....Per Dozen, $32.00

No. 45 —Two Brass Lipped Side Views, 1⅜ inches thick.....Per Dozen, 36.00

Packed—In Open Stock.

Nos. 47 and 48.

Masons' Plumb and Level, with Two Levels and Four Plumbs so arranged that no matter how the tool is taken up, one or more of them are available with which to level or plumb. Proved Glosses.

No. 47—Four Plumbs, Two Levels and Two Hand-holes, Length 42 inches, 1¼ inches thick.....Per Dozen, $36.00

No. 48—Four Plumbs, Two Levels and Two Hand-holes, Length 48 inches, 1¼ inches thick.....Per Dozen, 39.00

Packed—In Open Stock.

SAND'S MASONS' PLUMBS AND LEVELS

No. S42.

Made of Aluminum which will never rust, warp, split or crack. Length 42 inches.

No. S42—Four Plumbs and Two Levels, 1⅛ inches thick.....Per Dozen, $90.00

Packed—One-twelfth Dozen in a Box.

No. S1-A.

No. S1-A—Two Plumbs and Two Levels, Bob-hole, Hand hole and Scribe, Length 48 inches, 1⅜ inches thick .....Per Dozen, $29.00

Packed—In Open Stock.

No. S1.

No. S1—Two Plumbs and one Top Level, Two Side Views, Bob-hole, Hand-hole and Scribe, Length 48 inches, 1⅜ inches thick.....Per Dozen, $30.00

Packed—In Open Stock.

No. S3-A.

No. S3-A—Four Plumbs, Two Levels and Two Hand-holes, Length 48 inches, 1⅜ inches thick...Per Dozen, $39.00

Packed—In Open Stock.

No. S7.

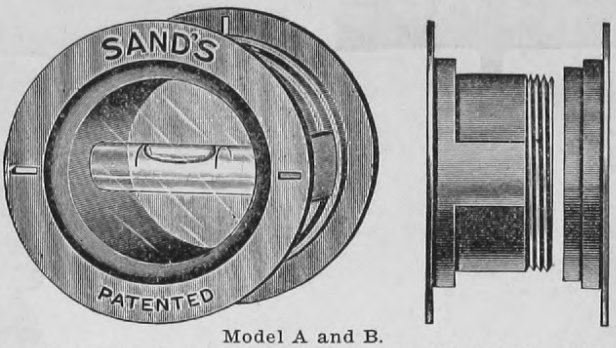
No. S7—Four Plumbs, Two Levels and Two Hand-holes, Full Brass Bound, Length 48 inches, 1⅜ inches thick .....Per Dozen, $72.00

Packed—In Open Stock.

Note—The Wood used in Nos. S1-A, S1, S3-A and S7 Levels is carefully selected thoroughly air-dried White Pine. All Sand's Masons' Levels are finished with 3 coats of Weather-proof Paint.

Digitized by Google Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SAND'S STRAIGHT EDGE LEVEL CASES



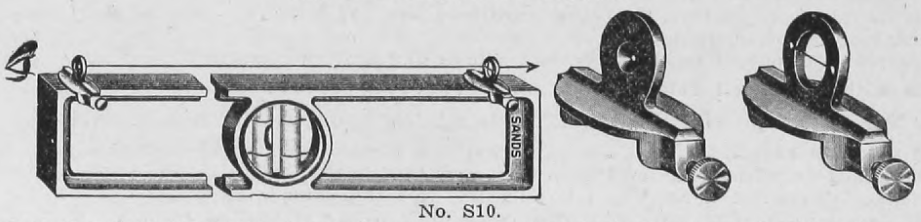
Model A and B.

Made of high grade Aluminum. Can be used on any length Straight Edge from ⅞ inch to ¼ inch thick by simply drilling a hole 1¾ inch diameter. When fastened to Straight Edge they are dust, dirt and waterproof.

Model A—Sand's Straight Edge Cases with Single Glass.....Per Dozen, $ 7.80
Model B—Sand's Straight Edge Cases with Double Glass.....Per Dozen, 10.20

Packed—One Dozen in a Carton.

SAND'S LEVEL SIGHTS



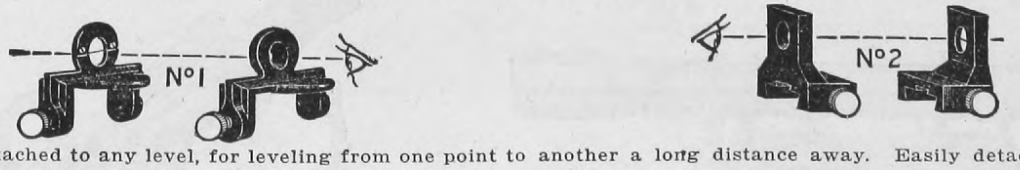
No. S10.

Sights are die cast, therefore absolutely accurate, and are a convenient means for leveling from one given point to another at a long distance away.

No. S10—Level Sights—For use on Sand's Carpenters' Aluminum and Wood Levels.....Per Dozen Pairs, $9.00

Packed—One-twelfth Dozen Pairs in a Box.

IMPROVED LEVEL SIGHTS

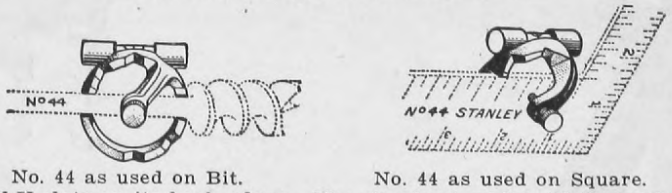


Can be attached to any level, for leveling from one point to another a long distance away. Easily detached when not in use.

No. 1—For use on Wood Levels..Per Dozen Pairs, $9.00 | **No. 2**—For use on Iron Levels...Per Dozen Pairs, $9.00

Packed—One-twelfth Dozen Pairs in a Box.

BIT AND SQUARE LEVELS



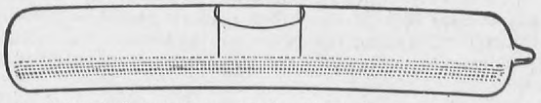
No. 44 as used on Bit. No. 44 as used on Square.

This Tool has three pairs of V slots on its back edges. The shank of a bit will lie in these slots, either vertical or at an angle of 45 degrees, and boring can be done with perfect accuracy. It can also be attached to a carpenter's square, making it an accurate Plumb or Level.

No. 44—Bit and Square Level, Brass Frame.....Per Dozen, $3.60

Packed—One-twelfth Dozen in a Box.

PROVED LEVEL GLASSES



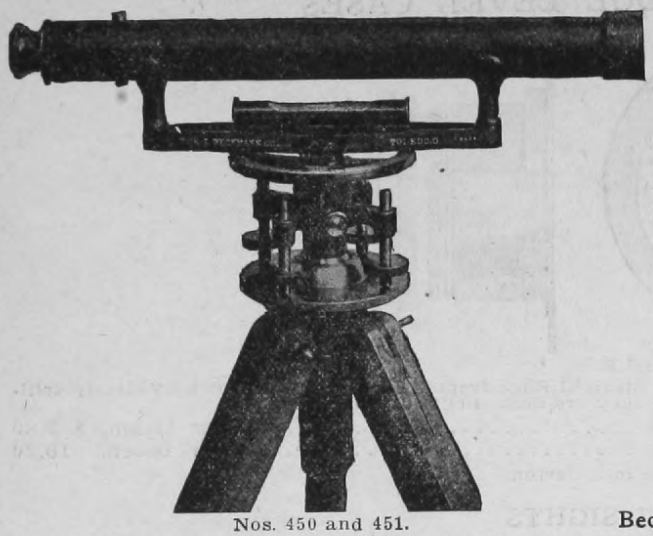
Made of extra thick tubing. By a patented process, each glass is marked at its highest, or crowning point, by two indelible lines. The owner can thus easily set the glass in its proper position.

Inches	1¼	1½	1¾	2	2½	3	3½	4	Assorted
Per Dozen	$.....	.....	.....	.....	.....	.....	.....	.....	1¾, 3 and 3½ inch $.....

Packed—One-twelfth Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SURVEYING AND ENGINEERING INSTRUMENTS



Nos. 450 and 451.

Beckmann

Nos. 425 and 426.

Drainage Levels, for farmers, ditchers, landscape gardeners, etc. 12 inch Telescope, magnifying power 18 diameters. Graduated Level Vial, sensitive enough to tell a variation of ¼ inch in a distance of 100 feet after being leveled up. The instrument is constructed of Bronze Metal, revolves on a spindle and is always kept in a level plane.

No. 450—Complete with Hardwood Tripod..... Each, $25.00

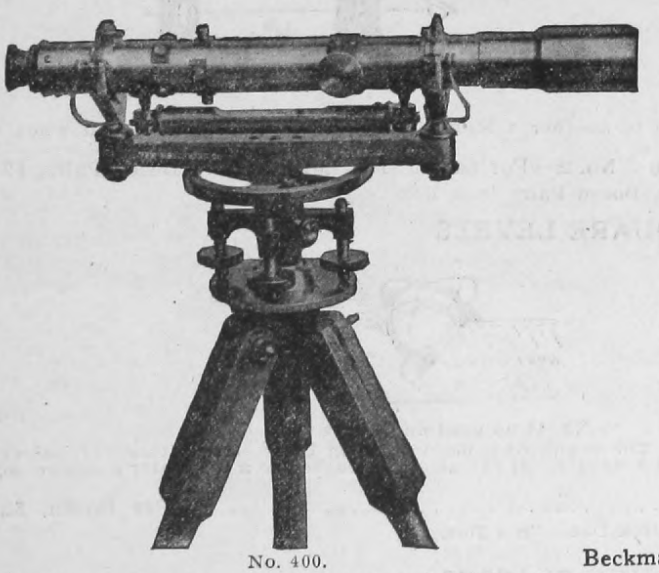
No. 451—Same as No. 14, except with Horizontal Circle reading to degrees for turning angles.....Each, 30.00

Contractor's and Builders' Levels, for bricklayers, millwrights, farmers, landscape gardeners, etc. 12 inch Telescope, magnifying power **20** diameters, with Rack and Pinion Movement to objective, Dust Cap, Sun Shade and Adjustable Eye-piece for focusing cross-hairs. Graduated Level Vial tells slightest variation after leveling up.

No. 425—Complete with Plumb Bob, Adjusting Pins, Metal Trivit and Hardwood Tripod.....Each, $35.00

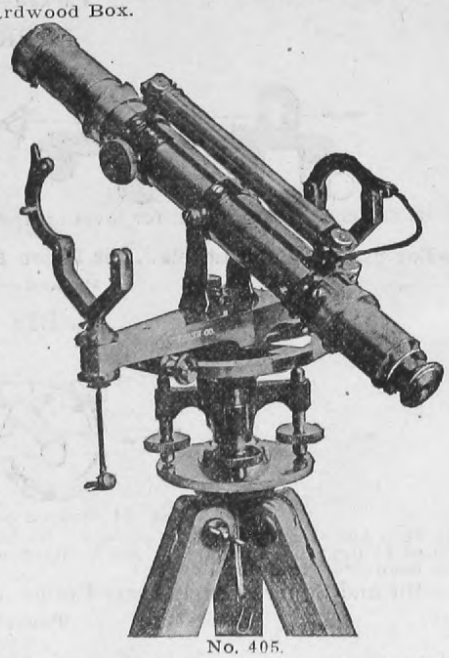
No. 426—Same as No. 20, except with Horizontal Circle, divided to degrees and reading by vernier (attached to spindle) to 5 minutes. Circle is reversible for purpose of setting same at zero at any given point..Each, 40.00

Packed—Each Instrument in a Neat Hardwood Box.



No. 400.

Beckmann



No. 405.

Architect's Levels, especially designed for leveling walls, laying out angles, giving lines and levels for buildings, grading streets, sewers, drains, etc. 12 inch Telescope, magnifying power **22** diameters, with 1⅛ inch Aperature, Rack and Pinion Movement to objective, Dust Guard, Sun Shade, Dust Cap and Adjustable Eye-piece for focusing cross-hairs. Graduated Level Vial tells slightest variation after leveling up. Horizontal Circle, 4½ inch, divided to degrees reading by vernier (attached to spindle) to five minutes. Circle is reversible for the purpose of setting same at zero at any given point. Has Four Leveling Screws.

No. 400—Complete with Plumb Bob, Adjusting Pins, Metal Trivit and Hardwood Tripod.....Each, $45.00

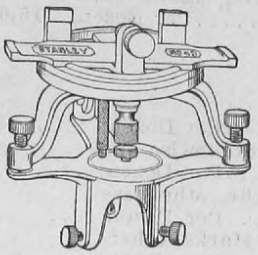
No. 405—Convertible Architects' Level, same as No. 13, except with a patent arrangement by which vertical sights to the extent of 45 degrees in either direction, and horizontal angles between two points not in the same plane can be taken..... Each, 55.00

Packed—Each Instrument in a Neat Hardwood Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

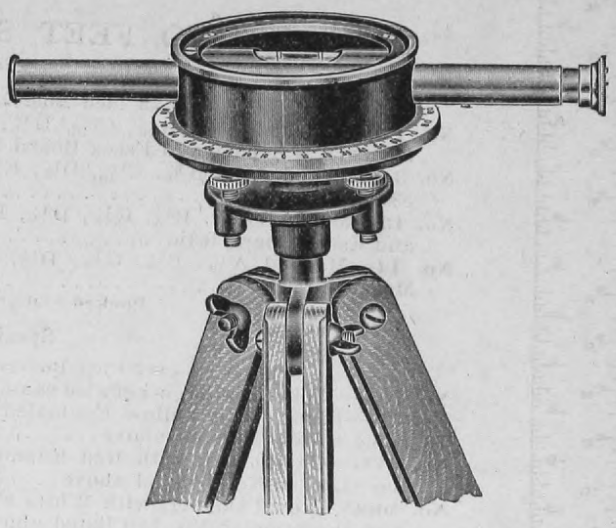
LEVELS AND LEVELING STANDS

LEVELING STANDS



No. 48.

FARM LEVELS



No. 2.

Stanley Leveling Stand. For determining levels from a given point to one at a distance. Can be attached to a stake and adjusted to a horizontal position even though the stake may not be exactly perpendicular.

No. 48—Leveling Stand, Nickel Plated.....Each, $2.00

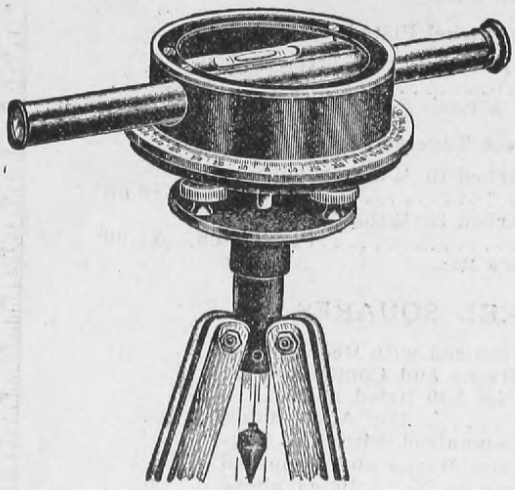
Packed—One in a Box.

Bostrom Farm Level. Designed for all kinds of Drainage work, Irrigating work, Terracing land, Road Building, House Foundation work, Grading of all kinds, setting out Orchards, Running Fences, getting Angles and every sort of Farm work requiring a Level. Telescope is "Achromatic" giving a clear field, thus enabling one to read the cross on the Target at a distance of over 400 yards.

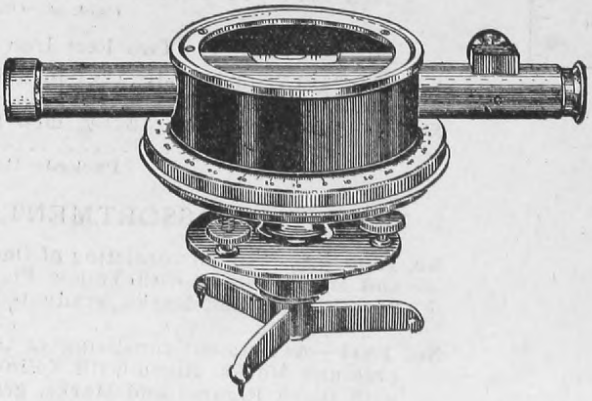
No. 2—Farm Level, Complete with Hardwood Tripod, Target and Target Rod.....Each, $18.00

Packed—One in a Box.

BUILDERS' LEVELS



No. 3.



No. 4.

Bostrom Builders' Level. Made entirely of Brass, highly lacquered and finished. Graduated circle is divided into 360 degrees numbered from zero to 90 degrees in both directions. Telescopes are Achromatic giving a clear field, enabling one to accomplish accurate work at a long range.

Note—Nos. 3 and 4 Builders' Levels are of the same construction, except the No. 4 Turret is made deeper so as to accommodate a large tube for stronger Telescope, the Telescope has a larger Object Lens with over 50 per cent greater magnifying power, and the focusing slide on the Telescope has a rack and pinion movement enabling a more delicate focusing.

No. 3—Builders' Level, Complete with neat Oak Box, Tripod, Graduated Rod, Target and Plumb Bob...Each, $25.00
No. 4—Builders' Level, Complete with neat Oak Box, Tripod, Graduated Rod, Target and Plumb Bob...Each, 30.00

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TWO FEET STEEL SQUARES

Polished

24x2 inch Bodies, 16x1½ inch Tongues

No. 100—Marked A1/16, B⅛, C1/16, D⅛, E1/12 and 1/100, F1/32, G1/12, H1/10, Brace Measure, 8 Square and Essex Board Measure.....Per Dozen, $21.00

No. 3—Marked A1/16, B¼, C1/16, D¼, E¼, F¼, G1/12, H¼, Brace Measure and Essex Board Rule.....Per Dozen, 17.00

No. 13—Marked A⅛, B¼, C⅛, D¼, E¼, F 1 in., G¼, H¼, Brace Measure and Essex Board Rule.....Per Dozen, 15.50

No. 14—Marked A⅛, B¼, C⅛, D¼, E¼, F 1 in., G¼, H¼, Essex Board Measure.....Per Dozen, 15.00

Packed—Quarter Dozen in a Box.

Special Finishes

24x2 inch Bodies, 16x1½ inch Tongues.

No. 103—Nickel Plated, otherwise same as No. 3 listed above...Per Dozen, $.....

No. 3B—Blued, with Yellow Enameled Figures and Marks, otherwise the same as No. 3 listed above.....Per Dozen, ...

No. 3VG—Galvanized, with Red Enameled Figures and Marks, otherwise the same as No. 3 listed above.....Per Dozen, ...

No. 100C—Royal Copper, with White Enameled Figures and Marks, otherwise the same as No. 100 listed above.....Per Dozen, ...

Packed—Quarter Dozen in a Box.

Eighteen Inch Steel Squares, Polished

No. 18—18x1½ inch Body, 12x1 inch Tongue, Marked in ¼ths, 8ths, 12ths and 16ths.....Per Dozen, $15.00

Packed—Half Dozen in a Box.

Fifteen Inch Steel Squares, Dull Nickel Finish

No. 881—15x1¼ inch Body, 8x1 inch Tongue, Marked in ½, ¼ths and 8ths .....Per Dozen, $8.00

Packed—One Dozen in a Box.

One Foot Steel Squares, Polished

12x1½ inch Bodies, 8x1 inch Tongues.

No. 10—Marked A⅛, B¼, C⅛, D¼, E1/12, F¼, G1/12, H¼.....Per Dozen, $11.00

No. 12—Marked A1/16, B⅛, C1/16, D⅛, E1/12, F⅛, G1/12, H⅛.....Per Dozen, 12.50

Packed—Quarter Dozen in a Box.

One Foot Light Steel Squares, Nickel Plated

No. 127—12x1 inch Body, 7x1 inch Tongue, Marked in 1/16ths, ⅛ths and ¼ths .....Per Dozen, $.....

Packed—One Dozen in a Box.

Two Feet Iron Squares, Not Tapered

No. 22—24x1½ inch Body, 12x1 inch Tongue, Marked in ⅛ths on both sides .....Per Dozen, $10.00

No. 24—24x2 inch Body, 12x1½ inch Tongue, Marked in ⅛ths on both sides .....Per Dozen, 11.00

Packed—Half Dozen in a Box.

ASSORTMENT OF STEEL SQUARES

No. 1000—Assortment consisting of One each, Galvanized with Red Figures and Marks, Blued with Yellow Figures and Marks and Coppered with Blue Figures and Marks, graduated same as No. 100 listed above.....Per Assortment, $.....

No. 1004—Assortment consisting of One each, Galvanized with Red Figures and Marks, Blued with Yellow Figures and Marks and Coppered with Black Figures and Marks, graduated same as No. 3 listed above.....Per Assortment, ...

Packed—Each Assortment (One-Quarter Dozen) in a Box.

Explanation of the Letters used on this page to show how squares are marked.

Face of Square.

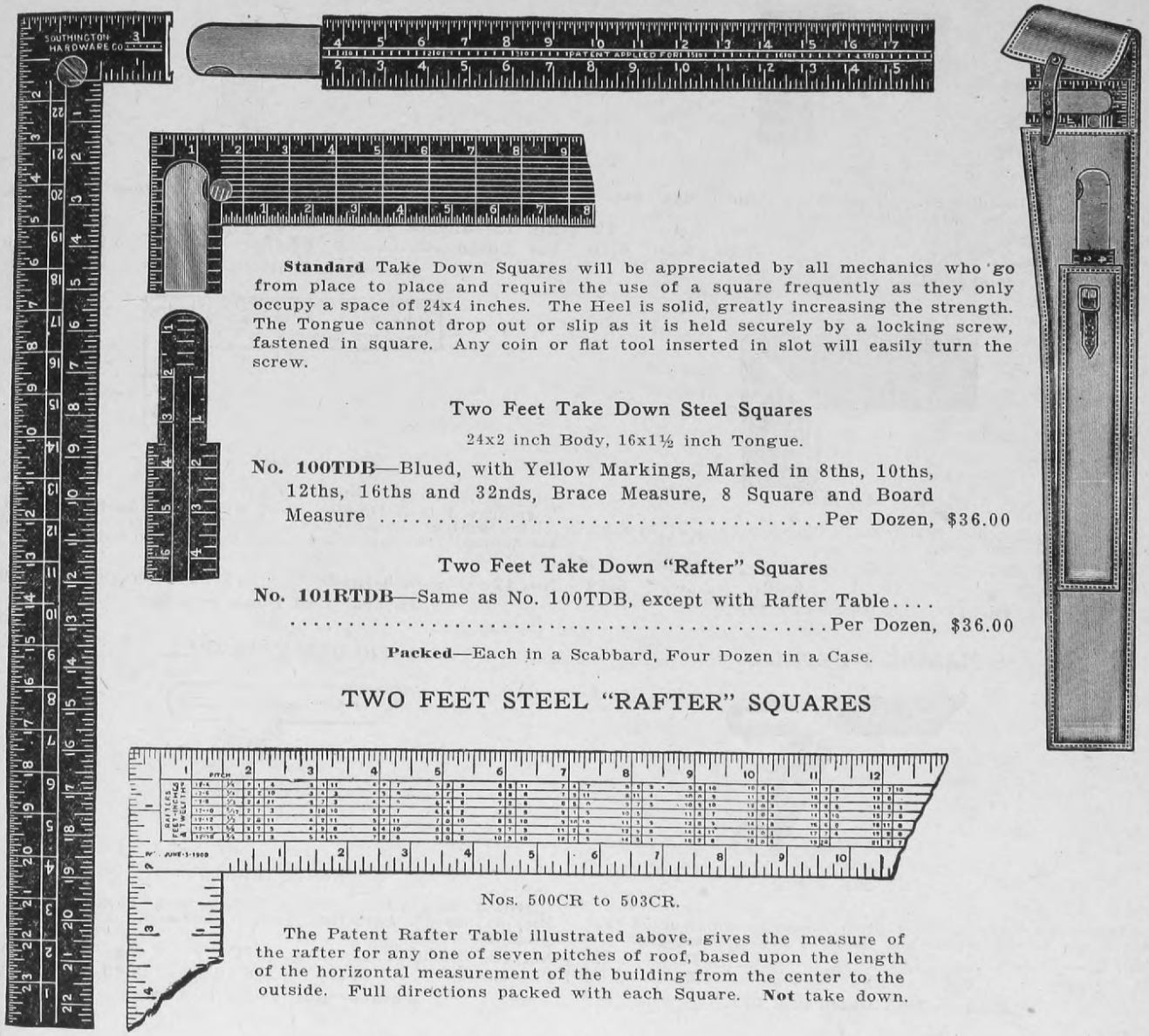
A—Face of Body, Outside.
B—Face of Body, Inside.
C—Face of Tongue, Outside.
D—Face of Tongue, Inside.

Back of Square.

E—Back of Body, Outside.
F—Back of Body, Inside.
G—Back of Tongue, Outside.
H—Back of Tongue, Inside.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TAKE DOWN STEEL SQUARES



Standard Take Down Squares will be appreciated by all mechanics who go from place to place and require the use of a square frequently as they only occupy a space of 24x4 inches. The Heel is solid, greatly increasing the strength. The Tongue cannot drop out or slip as it is held securely by a locking screw, fastened in square. Any coin or flat tool inserted in slot will easily turn the screw.

Two Feet Take Down Steel Squares

24x2 inch Body, 16x1½ inch Tongue.

No. 100TDB—Blued, with Yellow Markings, Marked in 8ths, 10ths, 12ths, 16ths and 32nds, Brace Measure, 8 Square and Board Measure .....Per Dozen, $36.00

Two Feet Take Down "Rafter" Squares

No. 101RTDB—Same as No. 100TDB, except with Rafter Table.... .....Per Dozen, $36.00

Packed—Each in a Scabbard, Four Dozen in a Case.

TWO FEET STEEL "RAFTER" SQUARES

Nos. 500CR to 503CR.

The Patent Rafter Table illustrated above, gives the measure of the rafter for any one of seven pitches of roof, based upon the length of the horizontal measurement of the building from the center to the outside. Full directions packed with each Square. **Not** take down.

TWO FEET TRIMMING AND RAFTER SQUARES

24x2 inch Body, 16x1¾ inch Togue.

No. 500CR—Royal Copper with White Figures and Marks, Marked A1/16, B⅛, C1/16, D⅛, E1/12, F1/32, G1/12, H1/10, Brace Measure and Patent Rafter Table.....Per Dozen, $.....

No. 503R—Polished Body, Marked A1/16, B¼, C1/16, D¼, E1/12, F¼, G1/12, H¼, Brace Measure and Patent Rafter Table.....Per Dozen, ...

No. 503PR—Electro Plated Copper, with White Enameled Figures and Marks, otherwise the same as No. 503R.....Per Dozen, ...

No. 503CR—Royal Copper, with White Enameled Figures and Marks, otherwise the same as No. 503R.....Per Dozen, ...

Packed—Quarter Dozen in a Box.

Explanation of the Letters used on this page to show how squares are marked.

Face of Square.

A—Face of Body, Outside.
B—Face of Body, Inside.
C—Face of Tongue, Outside.
D—Face of Tongue, Inside.

Back of Square.

E—Back of Body, Outside.
F—Back of Body, Inside.
G—Back of Tongue, Outside.
H—Back of Tongue, Inside.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

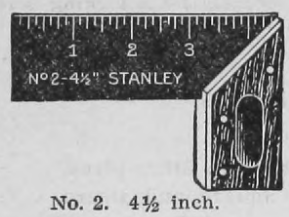
IMPROVED TRY SQUARES

No. 20. 3 inch.

Rosewood Handle, Brass Face Plate, Blued Steel Blade, graduated in 8ths. Square Inside and Out.

No. 20—Inches.	4½	6	7½	9	10	12
Per Dozen.....	$2.70	3.60	4.15	5.10	5.50	6.70

Packed—Half Dozen in a Box.



No. 2. 4½ inch.

Rosewood Handle, Blued Steel Blade, graduated in 8ths. Square Inside and Out.

No. 2—Inches.....	4½	6	7½	9
Per Dozen.....	$5.40	6.00	7.20	8.40

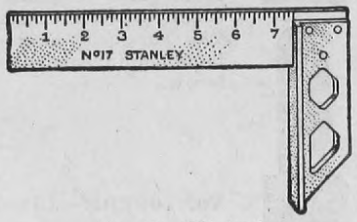
Packed—Half Dozen in a Box.

No. 12. 2 inch.

Improved Iron Handle, Steel Blade, graduated in 8ths, Nickel Plated. Square Inside and Out.

No. 12—Inches.....	4	6	8	10
Per Dozen.....	$3.40	3.95	5.00	6.40

Packed—Half Dozen in a Box.



No. 17. 7½ inch.

Improved Iron Handle, Steel Blades, graduated in 8ths, Nickel Plated. Square Inside and Out. Especially adapted for Manual Training Schools, can be hung up out of way.

No. 17—7½ inch Blade.....Per Dozen, $7.70

Packed—Half Dozen in a Box.

SLIDING T BEVELS.

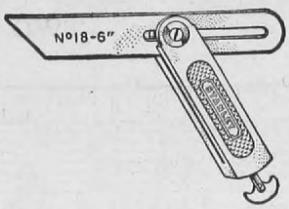
No. 25. 6 inch.

Rosewood Handle, Blued Steel Blade, so constructed that blade can be secured at any point by moving the lever.

No. 25—Inches.....	6	8	10	12
Per Dozen.....	$3.95	4.30	4.65	5.00

Packed—Half Dozen in a Box.

FLUSH T BEVELS.



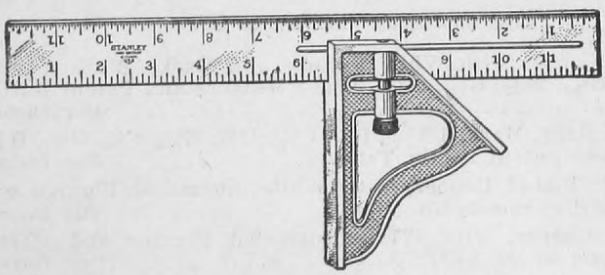
No. 18. 6 inch.

Milled Iron Handle, Steel Blade with Parallel Edges, Nickel Plated. Adjusting Thumb Screw stops blade from slipping.

No. 18—Inches	6	8	10
Per Dozen	$6.60	8.40	9.10

Packed—Half Dozen in a Box.

STANLEY ADJUSTABLE TRY AND MITRE SQUARES



No. 21.

Stanley Adjustable Try and Mitre Square. One of the handiest tools in a Carpenters' Kit. The Blade is adjustable and as it can be reversed, provides any size of Try or Mitre Square within the capacity of the tool. The edges of the Blade are machined, graduated in 8ths, 16ths and 32nds of inches and the tool is square inside and out. Both Handle and Blade are Nickel Plated.

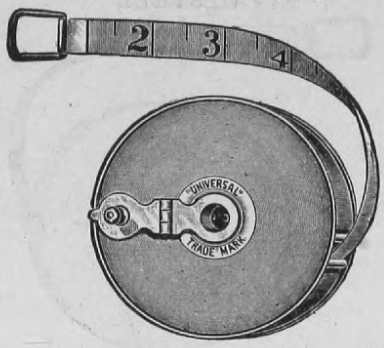
No. 21—Inches.....	6	9	12
Per Dozen	$6.60	7.80	9.25

Packed—One-twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MEASURING TAPES

UNIVERSAL COTTON



Nos. 710 to 716.

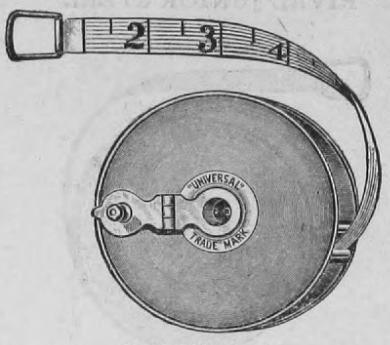
Askin—½ inch Cotton Tape, Waterproof Coated; Brass Bound Case with Cream Enameled Sides. Brass Folding Handles, Rings and Trimmings.

Marked Feet and Inches.

Nos.	710	713	714	715	716
Feet	25	50	66	75	100
Per Dozen	$3.75	5.00	6.00	7.50	9.00

Packed—Half Dozen in a Box.

UNIVERSAL LINEN CORDED



Nos. 730 to 736.

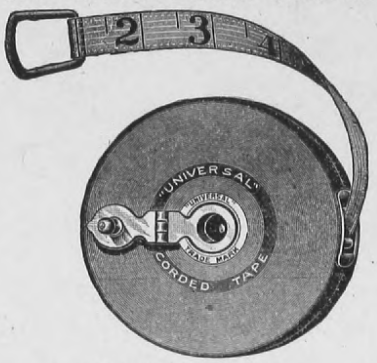
Extra Grade— ½ inch Linen Corded Tape, Waterproof Coated; Brass Bound Case with Maroon Enameled Sides. Brass Folding Handles, Rings and Trimmings.

Marked Feet and Inches.

Nos.	730	733	734	735	736
Feet	25	50	66	75	100
Per Dozen	$5.00	8.00	9.00	10.00	12.50

Packed—Half Dozen in a Box.

UNIVERSAL LINEN CORDED



Nos. 933 to 946.

Linen Corded Tape, Waterproof Coated; **Bend Leather Case,** made of Russet Leather, nicely finished in natural color. Brass Folding Handles and Trimmings.

Nos.	933	944	945	946
Width of Tape, inch.	½	⅝	⅝	⅝
Feet	50	66	75	100
Per Dozen	$14.00	17.00	18.00	20.00

Packed—Half Dozen in a Box.

METALLIC

Nos. 503L to 506L.

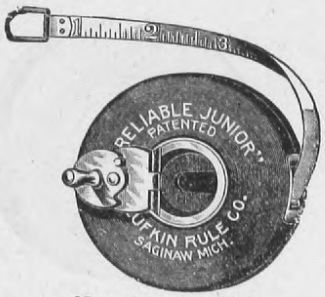
⅝ inch Best Woven Linen Tape with Metallic Warp. Hard Leather Case, Brass Folding Handles and Trimmings.

Marked Feet and 12ths, with Links on Back.

Nos.	503L	504L	505L	506L
Feet	50	66	75	100
Each	$2.60	3.00	3.30	4.20

Packed—One in a Box.

RELIABLE JUNIOR STEEL



Nos. 100 and 103.

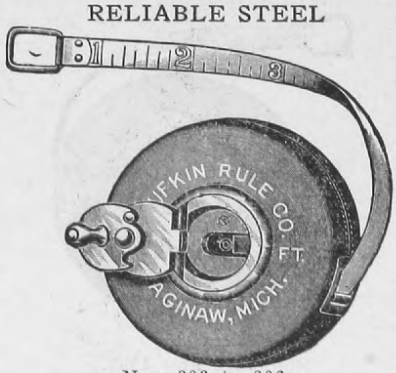
¼ inch Steel Tape, Hard Leather Case, Double Folding Flush Handle, Nickel Plated Trimmings. Opened by pressing on opposite side.

Marked Feet, Inches and 16ths. One Side Only.

Nos.	100	103
Feet	25	50
Each	$3.75	4.60

Packed—One in a Box.

RELIABLE STEEL



Nos. 203 to 206.

⅜ inch Steel Tape, Hard Leather Case, Double Folding Flush Handle, Nickel Plated Trimmings. Opened by pressing on opposite side.

Marked Feet, Inches and 8ths. Links on Back.

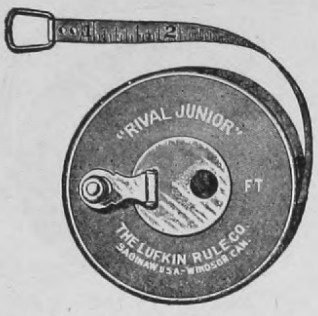
Nos.	203	204	205	206
Feet	50	66	75	100
Each	$7.20	9.20	10.40	12.80

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MEASURING TAPES

RIVAL JUNIOR STEEL



Nos. 1240 and 1243.

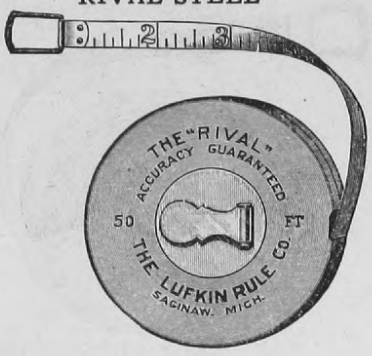
¼ inch Steel Tape, Nickel Plated Steel Case, Folding Flush Handle.

Marked Feet, Inches and 16ths. One Side Only.

Nos.	1240	1243
Feet	25	50
Each	$2.50	3.00

Packed—One in a Box.

RIVAL STEEL



Nos. 240 to 246.

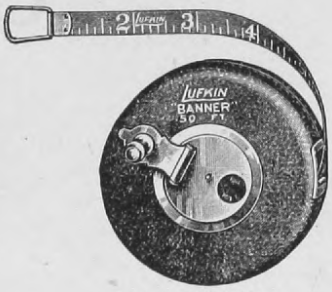
⅜ inch Steel Tape, Nickel Plated Steel Case, Folding Flush Handle.

Marked Feet, Inches and 8ths. One Side Only.

Nos.	240	243	244	245	246
Feet	25	50	66	75	100
Each	$2.75	3.40	4.25	4.50	5.75

Packed—One in a Box.

BANNER STEEL



Nos. 550-556.

⅜ inch Steel Tape, Cases made of Steel, covered with handsome mottled black "Auto Leather" which is extraordinarily durable. **Graduated** One Side only, in Feet, Inches and 8ths.

Nos.	550	553	555	556
Feet	25	50	75	100
Each	$2.30	2.85	3.70	4.75

Packed—One in a Box.

CHALLENGE JUNIOR STEEL

Nos. 1260 and 1263.

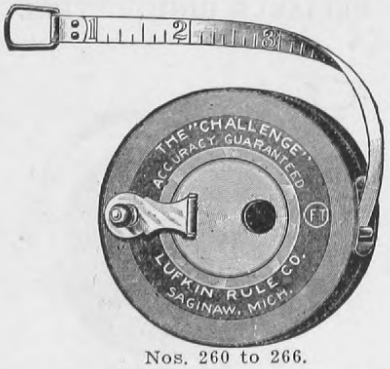
¼ inch Steel Tape, Hard Leather Case, Folding Flush Handle, Nickel Plated Trimmings.

Marked Feet, Inches and 16ths. One Side Only.

Nos.	1260	1263
Feet	25	50
Each	$3.00	3.50

Packed—One in a Box.

CHALLENGE STEEL



Nos. 260 to 266.

⅜ inch Steel Tape, Hard Leather Case, Folding Flush Handle, Nickel Plated Trimmings.

Marked Feet, Inches and 8ths. One Side Only.

Nos.	260	263	264	265	266
Feet	25	50	66	75	100
Each	$3.25	4.00	5.00	5.25	6.75

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POCKET MEASURING TAPES

UNIVERSAL

No. 165.

¼ inch Painted Tape, marked inches and 8ths. Nickel Plated Spring Wind Case with Center Stop. Retails for 10 cents each.

No. 165—60 inch Universal Pocket Tapes.....
.....Per Dozen, $2.00

Packed—One Dozen in a Display Box.

MARVEL

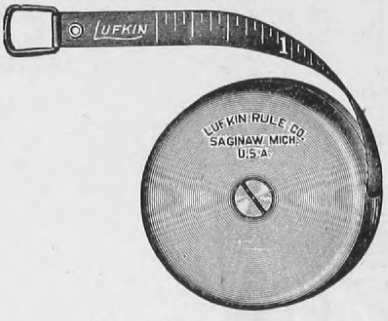
No. 3143.

¼ inch Steel Tape, marked inches and 16ths. Nickel Plated Spring Wind Case, with Center Stop. Retails for 25 cents each.

No. 3143—36 inch Marvel Pocket Tapes.....
.....Per Dozen, $4.50

Packed—One Dozen in a Leatherette Display Box.

STEEL



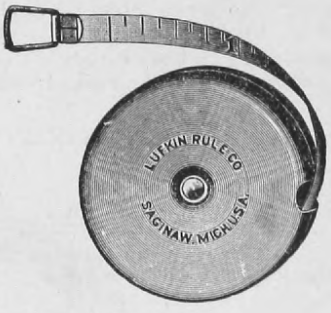
Nos. 143 to 146.

¼ inch Steel Tape, marked inches and 16ths. Round Edge Nickel Plated Brass Cases, Spring Wind with Center Stop.

Nos.	143	145	146
Length, inches	36	60	72
Per Dozen	$7.00	9.00	10.00

Packed—Half Dozen in a Box.

LINEN



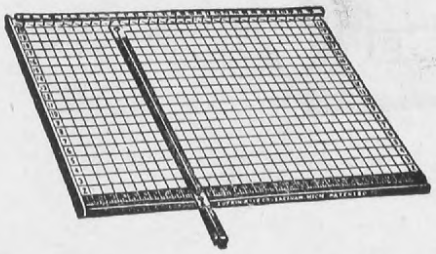
Nos. 173-176.

¼ inch Enameled Linen Tape, marked inches and 8ths. Round Edge Nickel Plated Brass Cases, Spring Wind with Center Stop.

Nos.	173	175	176
Length, inches	36	60	72
Per Dozen	$3.50	4.50	5.00

Packed—Half Dozen in a Box.

GLASS BOARDS



Lower Side of Straight Edge.

Upper Side of Straight Edge.

Perfection Glass Board with Improved Adjustable Straight Edge. A modern device for cutting glass mathematically accurate, in inches or fractions of inches as desired. The Board is made of narrow strips of well seasoned lumber, ruled both ways in even inches, with a steel rule at the front graduated in inches and 8ths. The Straight Edge is fitted with a very simple device by which it can be moved forward or backward, and can be held securely at any desired point by means of a set screw. Several lights of glass can be cut at one time.

Size, inches	24x36	30x48	36x54	42x60	48x72
Each	$15.00	18.00	21.00	24.00	27.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MEASURING TAPE ASSORTMENTS

Assortment No. 20.

Case made of handsome Dark Oak, with glass front. Size 12½x17¼x2½ inches. The name and length of every tape is shown directly below, so that they can be seen instantly by the customer.

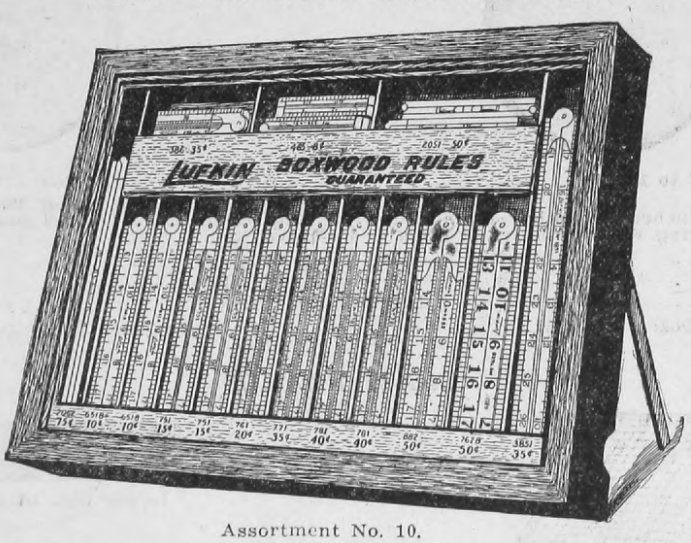
Contents of Display Case

Quantity	Nos.	Style	List Price
2 only	143	36 in. Pocket Steel....Per Dozen,	$7.00
2 only	145	60 in. Pocket Steel....Per Dozen,	9.00
2 only	173	36 in. Pocket Linen...Per Dozen,	3.50
2 only	175	60 in. Pocket Linen...Per Dozen,	4.50
1 only	263	50 ft. Challenge Steel.....Each,	4.00
1 only	1263	50 ft. Challenge Jr. Steel...Each,	3.50
1 only	1243	50 ft. Rival Jr. Steel.....Each,	$3.00
1 only	243	50 ft. Rival Steel .....Each,	3.40
1 only	503	50 ft. Metallic .....Each,	2.50
1 only	943	50 ft. Linen Corded...Per Dozen,	16.00
1 only	733	50 ft. Linen Corded...Per Dozen,	8.00
1 only	713	50 ft. Askin .....Per Dozen,...	5.00

No. 20—Tape Assortment as illustrated.....Per Assortment, $30.00

Packed—Each Assortment in a Separate Carton.

BOXWOOD RULE ASSORTMENTS



Assortment No. 10.

Case made of handsome Dark Oak, with glass front. Size 12½x17¼x2½ inches. Consists of a frame which stands in a reclining position, and a tray containing twelve different styles of the best selling Boxwood Rules.

Contents of Display Case

Quantity	Nos.		List Price
1½ Dozen	651B	(68).....Per Dozen,	$ 2.50
1 Dozen	751	(61).....Per Dozen,	3.00
¼ Dozen	761	(63).....Per Dozen,	4.00
¼ Dozen	771	(84).....Per Dozen,	6.50
1 Dozen	781	(62).....Per Dozen,	8.00
¼ Dozen	762B	(7).....Per Dozen,	11.00
¼ Dozen	882	(76).....Per Dozen,	$10.00
¼ Dozen	386	(32).....Per Dozen,	7.00
⅔ Dozen	465	(69).....Per Dozen,	1.75
1/6 Dozen	2051	.....Per Dozen,	10.00
¼ Dozen	3851	(66½).....Per Dozen,	6.00
1/12 Dozen	2062	.....Per Dozen,	16.00

No. 10—Rule Assortment as illustrated.....Per Assortment, $27.50

Packed—Each Assortment in a Separate Carton.

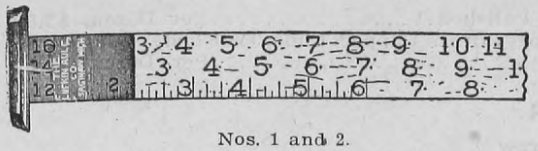
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HICKORY BOARD RULES

All our Board Rules are made of the very best selected second growth White Hickory with Burnt Figures. Extra heavy brazed heads, steel caps and brass shoulders. Every Rule is inspected and tested before being shipped.

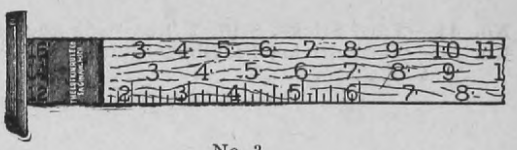
Note—All Board Rules listed on this page are marked on one side to measure 12, 14, and 16 ft., opposite side, 8, 10, and 18 ft. or 18, 20, and 22 ft.

In Ordering always state whether you want Rules marked 8 to 18 or 12 to 22 ft. For All Special Rules, an Extra Price will be charged.



Nos. 1 and 2.

Diamond Head.

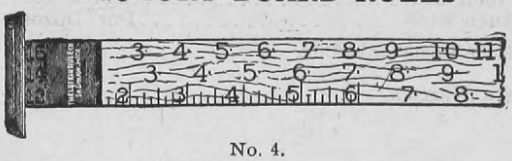


No. 3.

No. 1 —3 Tier, 3½ foot Inspectors' Board Rule, 1⅛ inches wide.....Per Dozen, $27.00
No. 2 —3 Tier, 3 foot Board Rule, 1⅛ inches wide.....Per Dozen, 25.00
No. 3 —3 Tier, 3 foot Board Rule, Short Brazed Head, 1⅛ inches wide.....Per Dozen, 23.00
No. 3D—Short Brazed Diamond Head, otherwise same as No. 3.....Per Dozen, 25.00

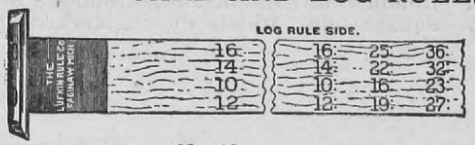
Note—Full lengths of Rules are given above, including 6 inch handle.

HICKORY BOARD RULES



No. 4.

HICKORY BOARD AND LOG RULES

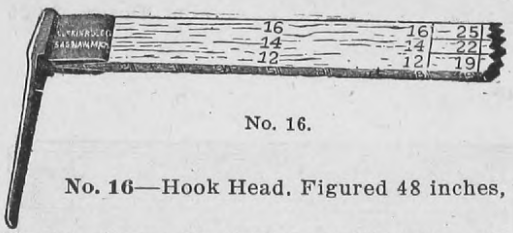


No. 13.

No. 4—3 Tier, 3 foot Board Rule, Patent Socket Steel Head, 1⅛ inches wide.....Per Dozen, $21.00
No. 13—4 Tier, 3 foot Board and Log Rule Combined, Doyle-Scribner Scale, Short Brazed Head, 1¼ inches wide.....Per Dozen, 28.00

Note—Full lengths of Rules are given, including 6 inch handle.

HICKORY LOG RULES

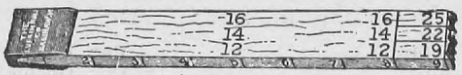


No. 16.

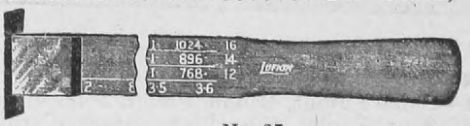
No. 15.

No. 16—Hook Head, Figured 48 inches, with 8 inch Handle { Doyle Scale .....Per Dozen, $27.00 / Scribner Scale .....Per Dozen, 27.00

No. 15—Square Head, Figured 36 inches, with 6 inch Handle.... { Doyle Scale .....Per Dozen, 23.00 / Scribner Scale .....Per Dozen, 23.00



No. 19.



No. 27.

No. 19—Plain Head, Figured 48 inches, with 8 inch Handle..... { Doyle Scale .....Per Dozen, $25.00 / Scribner Scale .....Per Dozen, 25.00

Flexible Log Rules

Made of Second Growth Hickory, same style as Board Rules, 4 Tier, with **Plain Brass Heads.** Marked one side inches and 12, 15 and 16 Foot Logs; other side 18, 20, 22 and 24 Foot Logs.

	Doyle Scale	Scribner Scale
No. 27—Figured 36 inches, with 6 inch Handle.....Per Dozen,	$37.20	$37.20

GAUGING RODS

No. 45.

No. 45—Gauging Rods, 3 feet long, Brass Point, 120 Gallons, Wine Measure.....Per Dozen, $7.00

WANTAGE RODS

No. 37.

No. 37—Wantage Rods, 12 Lines.....Per Dozen, $10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YARD STICKS

No. 41.

No. 41—Yard Sticks, **Stiff**, 1 inch wide and ¼ inch thick, Brass Tips, Polished.....Per Dozen, $3.50
No. 50—Yard Sticks, **Flexible**, ⅞ inch wide and 3/16 inch thick, Hickory, Brass Capped Ends, Polished.....Per Dozen, 4.50

BOXWOOD RULES

One Foot, Four Fold, Narrow

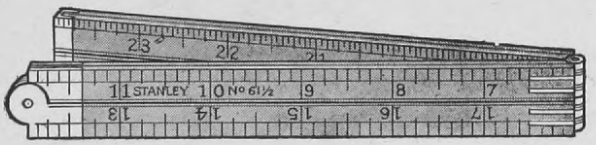
No. 69.

No. 65.

No. 69—Round Joint, **Middle** Plates, Marked 8ths and 16ths, ⅝ inch wide.....Per Dozen $1.75
No. 65—Square Joint, **Middle** Plates, Marked 8ths and 16ths, ⅝ inch wide.....Per Dozen, 2.00

Packed—No. 69, One Dozen; No. 65, Half Dozen in a Box.

Two Feet, Four Fold, Extra Narrow

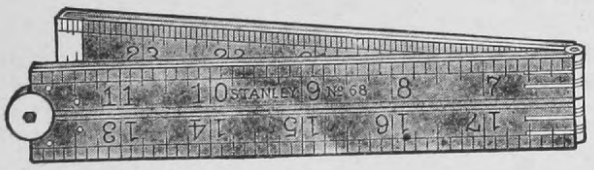


No. 61½.

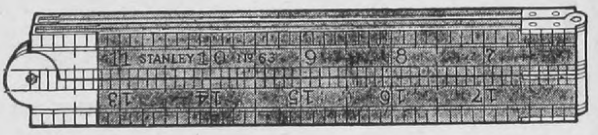
No. 61½—Square Joint, **Middle** Plates, Marked 8ths and 16ths, ¾ inch wide.....Per Dozen, $3.25

Packed—Half Dozen in a Box.

Two Feet, Four Fold, Narrow



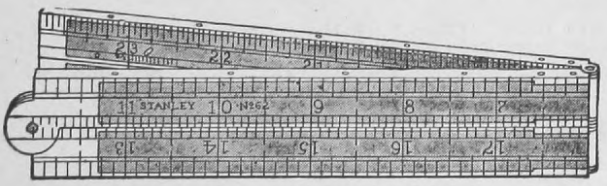
No. 68.



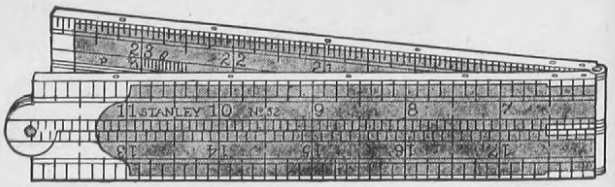
No. 63.

No. 68—Round Joint, **Middle** Plates, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, $2.50
No. 61—Square Joint, **Middle** Plates, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, 3.00
No. 63—Square Joint, **Edge** Plates, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, 4.00

Packed—No. 68, One Dozen; Nos. 61 and 63, Half Dozen in a Box.



No. 62.



No. 52.

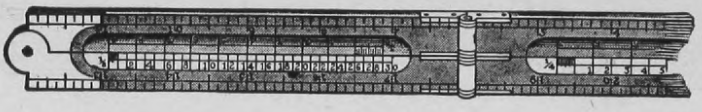
No. 84—Square Joint, **Half Bound**, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, $6.50
No. 62—Square Joint, **Full Bound**, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, 8.00
No. 51—Arch Joint, **Middle** Plates, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, 3.50
No. 52—Arch Joint, **Half Bound**, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, 7.25
No. 54—Arch Joint, **Full Bound**, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, 8.75

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BOXWOOD RULES

Architects', Two Feet, Four Fold

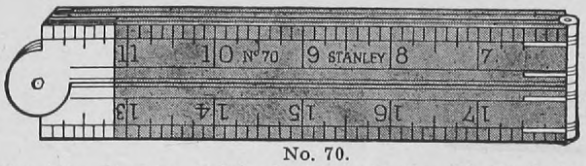


No. 53½.

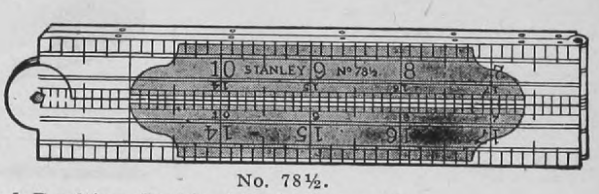
No. 53½—Arch Joint, Edge Plates, Marked 8ths, 10ths, 12ths and 16ths, with Inside Beveled Edges and Architects' Drafting Scale, 1 inch wide.....Per Dozen, $8.00

Packed—Half Dozen in a Box.

Two Feet, Four Fold, Broad



No. 70.



No. 78½.

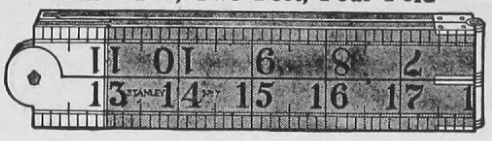
No. 70—Square Joint, **Middle** Plates, Marked 8ths, 16ths and Drafting Scales, 1⅜ inches wide.....Per Dozen, $ 4.00

No. 72½—Square Joint, **Full Bound**, Marked 8ths, 10ths, 16ths and Drafting Scales, 1⅜ inches wide.....Per Dozen, 9.00

No. 78½—Double Arch Joint, Full Bound, Marked 8ths, 10ths, 16ths and Drafting Scales, 1⅜ inches wide.....Per Dozen, 12.00

Packed—Half Dozen in Box.

Blindman's, Two Feet, Four Fold



No. 7.

Blindman's, Three Feet, Four Fold

No. 8.

With large Figures, easily read in places where light is poor.

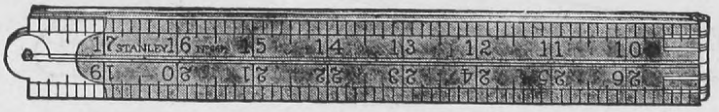
No. 7—Arch Joint, **Edge** Plates, Marked 8ths and 16ths, 1⅜ inches wide.....Per Dozen, $11.00

Packed—Half Dozen in Box.

No. 8—Square Joint, **Edge** Plates, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, $12.00

Packed—Half Dozen in Box.

Three Feet, Four Fold



No. 66½.

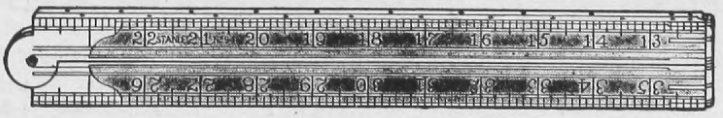
No. 66½—Arch Joint, **Middle** Plates, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, $ 6.00

No. 66¼—Arch Joint, **Edge** Plates, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, 7.00

No. 66¾—Arch Joint, **Full Bound**, Marked 8ths and 16ths, 1 inch wide.....Per Dozen, 15.00

Packed—Half Dozen in Box.

Carriage Maker's, Four Feet, Four Fold

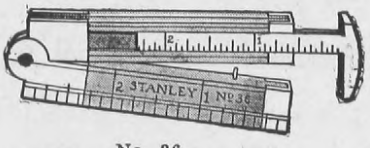


No. 94.

No. 94—Arch Joint, **Full Bound**, Marked 8ths and 16ths, 1½ inches wide.....Per Dozen, $26.00

Packed—Half Dozen in Box.

Six Inch, Two Fold, Caliper

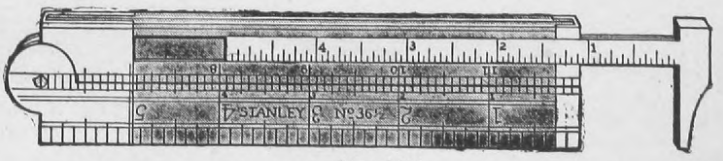


No. 36.

No. 36—Square Joint, Marked 8ths, 10ths, 12ths and 16ths, ⅞ inch wide.....Per Dozen, $4.50

Packed—Half Dozen in Box.

One Foot, Two Fold, Caliper



No. 36½.

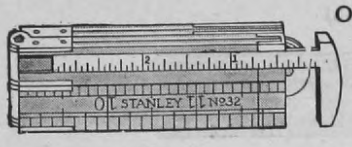
No. 36½—Square Joint, Marked 8ths, 10ths, 12ths and 16ths, 1⅜ inches wide.....Per Dozen, $6.50

Packed—Half Dozen in Box.

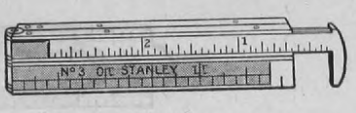
Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

BOXWOOD RULES

One Foot, Four Fold, Caliper



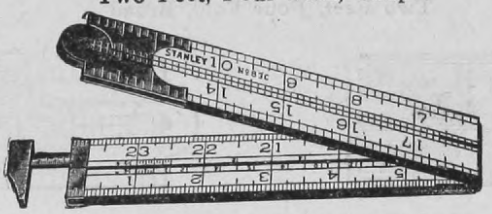
No. 32.



No. 3.

No. 32 —Arch Joint, **Edge** Plates, Marked 8ths, 10ths, 12ths and 16ths, 1 inch wide.....Per Dozen, $ 7.00
No. 32½—Arch Joint, **Full Bound,** Marked 8ths, 10ths, 12ths and 16ths, 1 inch wide.....Per Dozen, 10.00
No. 3 —Square Joint, **Full Bound,** Marked 8ths and 16ths, ⅝ inch wide.....Per Dozen, 12.00
Packed—Half Dozen in a Box.

Two Feet, Four Fold, Caliper

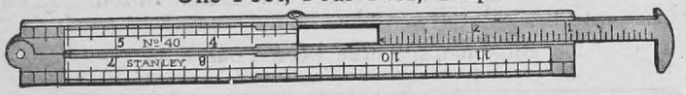


No. 83C.

No. 83C—Arch Joint, **Edge** Plates, Marked 8ths, 10ths and 16ths, Caliper in 32ds, 1⅜ inches wide. Per Dozen, $12.00
Packed—Half Dozen in a Box.

IVORY RULES

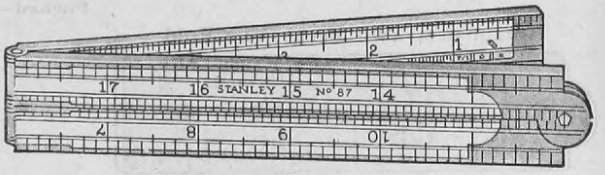
One Foot, Four Fold, Caliper



No. 40.

No. 40—Square Joint, German Silver, **Full Bound,** Marked 8ths and 16ths, ⅝ inch wide.....Per Dozen, $44.00
Packed—Half Dozen in a Box.

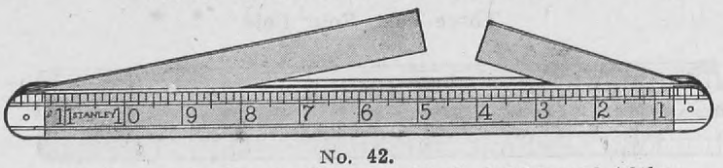
Two Feet, Four Fold



No. 87.

No. 87—Arch Joint, German Silver, Full Bound, Marked 8ths, 10ths, 12ths, 16ths and Drafting Scales, 1 inch wide.....Per Dozen, $80.00
Packed—Half Dozen in a Box.

SHIP CARPENTERS' BEVELS



No. 42.

No. 42—Ship Carpenters' Bevels, Boxwood, Double Tongue, Marked 8ths and 16ths.....Per Dozen, $4.00
Packed—One Dozen in a Box.

EXTENSION RULES

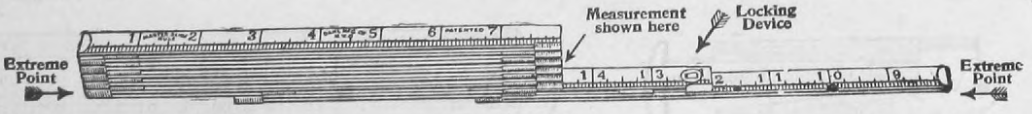
No. 480.

Made of Maple with Brass Trimmings. Very useful for accurately measuring the distance between two fixed points. Marked 8ths.

Nos.	240	360	480	510	612
Length, Feet	2 to 4	3-6	4-8	5-10	6-12
Per Dozen	$8.00	9.00	10.00	12.00	15.00

Packed—In Open Stock.

MASTER SLIDE RULES



Nos. 904-906.

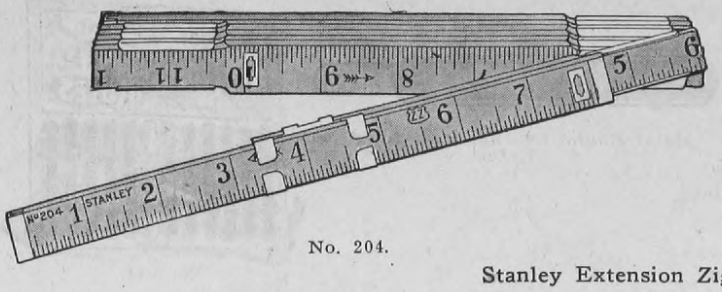
Made of selected boxwood, finished with waterproof lacquer; trimmed with solid Brass which makes it **Rust Proof.**

Nos.	904	905	906
Length, Feet	4	5	6
Per Dozen	$13.00	16.50	20.00

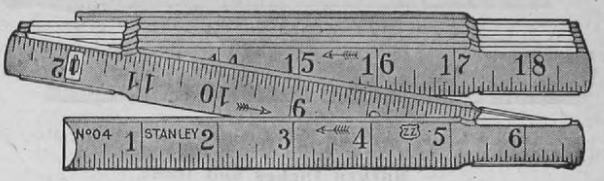
Packed—Half Dozen in a Box.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STANLEY "ZIGZAG" RULES



No. 204.



No. 04.

Stanley Extension Zigzag Rules

The Rules have an extra leg or Extension Slide, making the rule an inside caliper, with which inside measurements can be readily obtained up to the length of the rule plus the length of the extension. Concealed Joints, Patent Strike Plates, Six Inch Folds, ⅝ inch Wide. Finished in Yellow Enamel with Brass Plated Trimmings.

No. 204—Length 4 feet.....Per Dozen, $7.70 | **No. 206**—Length 6 feet.....Per Dozen, $9.90

Packed—Half Dozen in a Box.

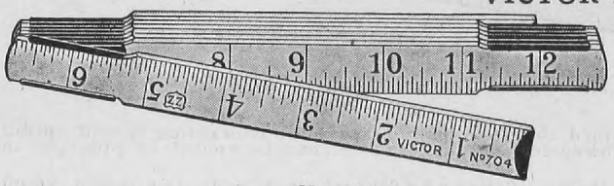
Stanley Zigzag Rules. Six Inch Fold, ⅝ Inch Wide, Concealed Joints, Brass Plated Trimmings.

Made of Flexible Hardwood with a stiff spring in each joint which holds the rule rigid when open, and Patent Direction Arrows which enable the user to tell from which end to start measuring. Fitted with Patent Strike Plates fastened to each section to prevent the wearing away of graduations when opening and closing.

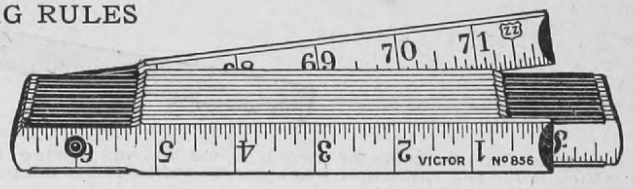
	Yellow Enameled.					White Enameled.			
Nos.	03	04	05	06	08	Nos.	104	105	106
Feet	3	4	5	6	8	Feet	4	5	6
Per Dozen	$3.30	4.40	5.50	6.60	8.80	Per Dozen	$4.80	6.00	7.20

Packed—Half Dozen in a Box.

VICTOR ZIGZAG RULES



No. 704.



No. 856.

Made of Flexible Hardwood, with a stiff spring in each joint to hold rule rigid when open.

Victor Zigzag Rules, Concealed Joints, Blued Trimmings

Four Inch Fold, 7/16 Inch Wide, "White Enameled."			Six Inch Fold, ⅝ Inch Wide, "Yellow Enameled."					
Nos.	642	643	Nos.	703	704	705	706	708
Feet	2	3	Feet	3	4	5	6	8
Per Dozen	$3.60	5.28	Per Dozen	$3.00	4.00	5.00	6.00	8.00

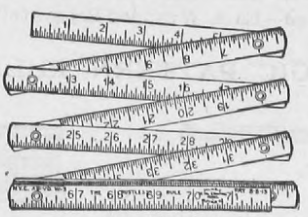
Six Inch Fold, ⅝ Inch Wide, Rivet Joints, Blued Trimmings

	Yellow Enameled.					White Enameled.				
Nos.	803	804	805	806	808	Nos.	853	854	855	856	858
Feet	3	4	5	6	8	Feet	3	4	5	6	8
Per Dozen	$2.70	3.60	4.50	5.40	7.20	Per Dozen	$3.00	3.96	4.92	6.00	7.92
Nos.	803F	804F	805F	806F	808F	Nos.	853F	854F	855F	856F	858F
Feet	3	4	5	6	8	Feet	3	4	5	6	8
Per Dozen	$2.70	3.60	4.50	5.40	7.20	Per Dozen	$3.00	3.96	4.92	6.00	7.92

Packed—One Dozen in a Box.

Note—With reference to **Style F.** The Numbers indicating the inches, 1, 2, 3, etc., commence on the inside of the rule allowing the rule to lie flat when open. The figures 12, 24, 36, etc., are made extra large.

RUSTLESS RULES



Nos. 954-956.

Rustless Rules are Strong, Durable and Permanent. The Strength is equal to that of a steel rule but unlike the steel, is not brittle and will not break. Made of Luminoy and will not rust.

Nos.	954	955	956
Feet	4	5	6
Per Dozen	$14.00	18.00	21.60

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FOLDING FLEXIBLE STEEL POCKET RULES

No. 1141.

Metal Bound Leather Case for Steel Rules.

No. 041.

⅜ inch Flexible Spring Steel Rule, with patent stop joints that hold rule true and rigid when extended.

Marked Inches and 16ths.

Nos.	Feet	Joints	Fold	Per Dozen
1131	1	3	4	$4.00
1132	2	3	4	8.00
1141	1	4	3	4.00
1142	2	4	3	7.50

Packed—One Dozen in a Box.

Metal Bound Leather Cases for Folding Steel Rules.

For Rules Nos.....	**1131**	**1132**	**1141**	**1142**
Per Dozen	$1.50	2.00	1.50	2.00

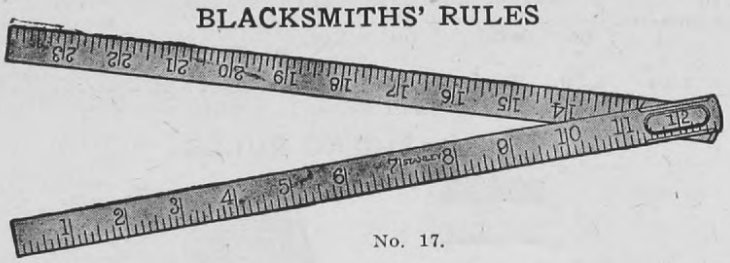
Packed—One Dozen in a Box.

Made of the finest quality Spring Steel, ⅜ inch wide. No. 28 Gauge and will bend to a Three Inch Circle. Retails for 10 cents each.

No. 041—1 Foot Steel Folding Pocket Rules, graduated in inches and 16ths. Each Rule put up in a Metal Bound Leather Case....Per Dozen, $1.50

Packed—One Dozen on an Attractive Display Card.

BLACKSMITHS' RULES



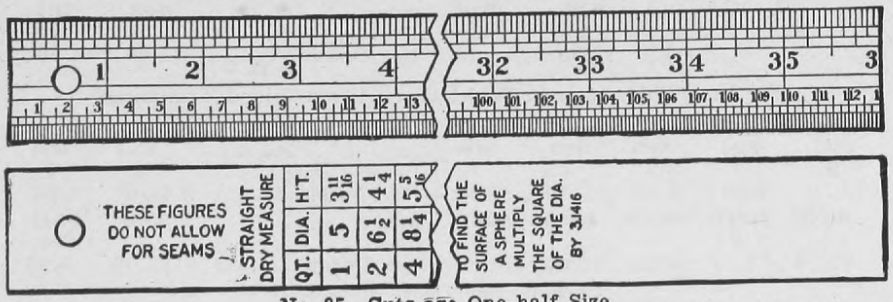
No. 17.

This Rule consists of two legs made from Spring Brass, joined together by a brass joint containing a stiff spring which holds the rule rigid when open. Particularly adapted for measuring hot metal, as it can be cooled by plunging in water without rusting.

No. 17—Blacksmiths' Spring Brass Rule, Two Feet, Two Fold, Marked 8ths and 16ths, ¾ inch wide. Per Dozen, $6.00

Packed—Half Dozen in a Box.

TINNERS' STEEL CIRCUMFERENCE RULES



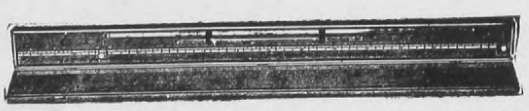
No. 95—Cuts are One-half Size.

This Rule embraces on one side a Circumference Rule, and on the opposite side a Table of Measurements, as follows: Liquid Measure—Flaring, ¼ pint to 5 gallons; Dry Measure—Flaring, ¼ bush. to 2 bush.; Cans—Pitched Top, 1 gal. to 10 gals.; Cans—Flat Top, 1 gal. to 200 gals.; Dry Measure—Straight, 1 qt. to 3 bush. The circumference of any given diameter can be determined accurately and at a glance. A tool that is indispensable to every tin shop.

No. 95—Tinners' Steel Circumference Rule, **36** inches long, 1¼ in. wide, No. 16 Gauge, Polished..Per Dozen, $32.00

Packed—Each Wrapped Separately.

MAGIC PATTERN RULES



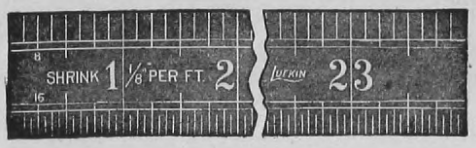
The Magic Pattern Rule consists of a Nickel Plated Steel Bar 4 feet long, 7/16 inch square, marked in circumference inches on the front and in inches and eights on the back, and two Slides with Set Screws, into which Trammel Points are fastened. It is provided with three Steel Ribbons of different gauges which may be used according to size of elbow wanted. The Chart is 19x23 inches in size, mounted on Linen, and contains, besides the elbow diagram, also rules for cutting all kinds of Flaring, Oval, Cylindrical, Cone-Shaped Vessels, etc., with the aid of the Magic Rule. Besides all this, the rule can be used for a straight Edge Rule, Circumference Rule and Trammel.

Magic Pattern Rule and Chart, Complete in Hinged Wooden Case .....Each, $7.50

Packed—Each in a Separate Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL SHRINKAGE RULES



No. 90E.

A first class flexible and practically indestructible rule, guaranteed accurate at all times. Made of Polished Steel, 3/64 inch thick, nicely tempered, 1⅛ inches wide. Bright surface with sunken figures and graduations, black and distinct. Graduated in 8ths and 16ths on both sides.

Nos.	90E	90F
Extreme Length, inches	24¼	24⅜
Shrink per foot, inch	⅛	3/16
Per Dozen	$24.00	24.00

BOXWOOD SHRINKAGE RULES

No. 30½E.

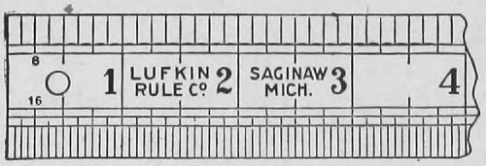
Pattern Makers' Boxwood Shrinkage Rules, 1½ inches wide. Graduated in 8ths, 10ths, 12ths and 16ths.

No. 30½E—Extreme Length 24¼ inches, Shrinkage per foot ⅛ inch.....Per Dozen, $18.00

No. 30½F—Extreme Length 24⅜ inches, Shrinkage per foot 3/16 inch.....Per Dozen 18.00

Packed—One Half Dozen in a Box.

STRAIGHT STEEL RULES



No. 062.

MACHINE DIVIDED STEEL RULES

Nos. 2204 and 2207.

Straight Steel Rules

Especially adapted for schools and manual training work. 1¼ inches wide, No. 16 Gauge. Graduated both sides in 8ths on upper edge and 16ths on lower edge.

No. 062—Feet	1	2	3	4
Per Dozen	$8.00	15.00	22.00	28.00

Machine Divided Steel Rules

Spring Tempered, with readable graduations. On account of the difficulty in reading the 64th graduations we number or figure same in every inch at the 8, 16, 32, 40, 48 and 56 points on rules up to 12 inches in length, which not only enables one to instantly read the desired graduation, but practically prevents the possibility of errors.

No. 2204—Graduated one side 8ths and 16ths, other side 32ds and 64ths. Ends on 2 to 12 inch rules graduated in 32ds.

Inches	2	3	4	6	9	12	18	24
Per Dozen	$3.00	4.20	5.40	7.80	12.00	15.00	24.00	30.00

No. 2207—Graduated on one side 16ths and 32ds, other side 64ths and 100ths.

Inches	2	3	4	6	9	12
Per Dozen	$3.00	4.20	5.40	7.80	12.00	15.00

MACHINE DIVIDED STEEL RULES

No. 2700.

No. 2110.

No. 2700—Machine Divided Steel Rules

English Pattern, Tempered. One rounded end with hole. 4 and 6 inch lengths, ¾ inch wide, No. 20 Gauge; 12 inch lengths, 1⅛ inch wide, No. 19 Gauge. **Graduated** one side only, first two inches in 32ds; Third Inch, first ¾ inch in 32ds, next quarter in 64ths and remainder of rule in 16ths on bottom edge only.

No. 2700—Inches	4	6	12
Per Dozen	$2.40	3.00	4.80

No. 2110—Machine Divided Steel Rules

Made of finest quality spring tempered Steel, very thin and flexible. 3 to 12 inch rules are ½ inch wide and 18 to 36 inch rules are ¾ inch wide and a trifle heavier. Graduated one side only in 32ds and 64ths.

No. 2110—Inches	3	4	6	9	12	18	24	36
Per Dozen	$4.20	5.40	7.80	12.00	15.00	24.00	30.00	60.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

SPRING TEMPERED RULES

No. 307.

No. 303.

No. 307—Starrett Spring Tempered Rules

3/64 inch thick, No. 18 Gauge, graduated in 64ths, 32ds, 16ths and 100ths.

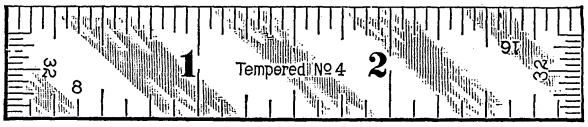
Length, inches	2	3	4	6	9	12	18	24
Width, inches	½	9/16	⅝	¾	⅞	1	1⅛	1¼
No. 307—Each	$0.30	.40	.50	.65	1.00	1.25	2.00	2.50

No. 303—Starrett Spring Tempered Rules

3/64 inch thick, No. 18 Gauge, graduated in 64ths, 32ds, 16ths and 8ths and 32ds on opposite sides of one end.

Length, inches	2	3	4	6	9	12	18	24
Width, inches	½	9/16	⅝	¾	⅞	1	1⅛	1¼
No. 303—Each	$0.30	.40	.50	.65	1.00	1.25	2.00	2.50

No. 403



No. 603.

No. 403—Starrett Spring Tempered Rules, with One Beveled Edge.

3/64 inch thick, No. 18 Gauge, graduated in 64ths, 32ds, 16ths and 8ths, 64ths on Beveled Edge and 32ds on opposite sides of one end.

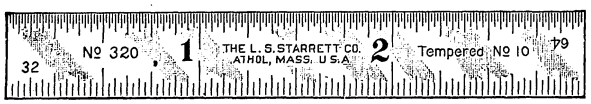
Length, inches	2	3	4	6	9	12
Width, inches	½	9/16	⅝	¾	⅞	1
No. 403—Each	$0.30	.40	.50	.65	1.00	1.25

No. 603—Starrett Spring Tempered Rules

3/64 inch thick, No. 18 Gauge, graduated in 64ths and 32ds on one side, 16ths and 8ths on other side and 32ds on both ends of one side.

Length, inches	2	3	4	6	9	12
Width, inches	½	9/16	⅝	¾	⅞	1
No. 603—Each	$0.30	.40	.50	.65	1.00	1.25

FLEXIBLE RULES



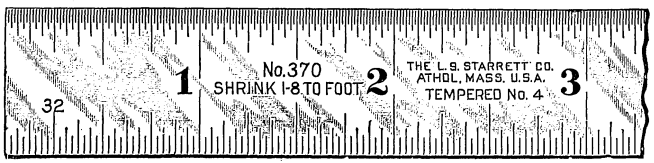
No. 320.

No. 320—Starrett Spring Tempered Flexible Rules

These are very thin spring tempered rules, graduated on one side only in 64ths and 32ds. Will easily conform to a 2 inch circle.

Length, inches	2	3	4	6	9	12
Width, inches	½	½	½	½	½	½
No. 320—Each	$0.30	.40	.50	.65	1.00	1.25

STEEL SHRINK RULES



No. 370.

No. 370—Starrett Spring Tempered Steel Shrinkage Rules

3/64 inch thick, No. 18 Gauge, graduated in 64ths, 32ds, 16ths and 8ths.

Length ..... Inches,	6	12	24
Width ..... Inches,	¾	1	1¼
No. 370—Shrink ⅛ to foot ..... Each,	$0.75	1.75	3.50
No. 373—Shrink and Standard ⅛ to foot ..... Each,	.75	1.75	3.50
No. 377—Double Shrink ¼ to foot ..... Each,	.75	1.75	3.50
No. 368—Shrink 5/16 to foot ..... Each,	.....	1.75	3.50
No. 369—Shrink ⅜ to foot ..... Each,	.....	1.75	3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

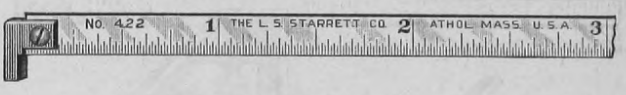
NARROW RULES

No. 330.

Starrett. Spring Tempered, 3/64 inch thick, No. 18 Gauge, about 3/16 inch wide, graduated one side in 64ths and other in 32ds.

Length, inches.....	4	6	9	12
No. 330—Each	$0.50	.65	1.00	1.25

NARROW HOOK RULES



No. 422.

Starrett. For taking measurements through holes as small as 3/8 inch; also for setting inside calipers. Graduated one side in 64ths and other in 32ds.

Length, inches.....	4	6	9	12
No. 422—Each	$0.75	.90	1.25	1.50

IMPROVED HOOK RULES

No. 419.

Starrett. Very convenient for taking measurements from round corners, through hubs of pulleys, setting inside calipers, etc. Graduated in 64ths, 32ds, 16ths, and 8ths and end graduation in 32ds.

Length, inches	6	9	12	18	24
No. 419—Each	$1.00	1.40	1.75	2.50	3.00

KEY SEAT RULES

Nos. 105A to 105F.

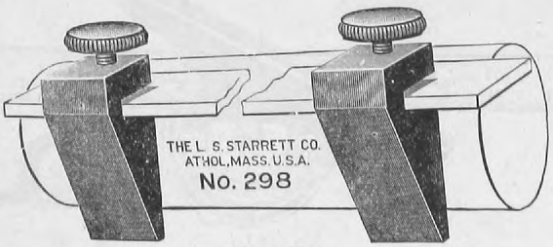
Auxiliary Straight Edges.

Starrett. The improved feature in this rule consists of a device for holding two straight edges in the form of a box square securely together. One of said straight edges is a spring tempered scale, with one edge beveled, graduated in 64ths, 32ds, 16ths and 8ths. The other is a plain straight edge with two clamps which are operated by knurled eccentrics clamping corner and edge of straight edge and scale together, which also allows each part to be used independently. Length 6 inches.

Starrett Patent Key Seat Rules	6 Inch		9 Inch
No. 105A—	Each, $2.25	**No. 105D**—Each,	$3.00
No. 105B—With **Plain** Auxiliary Straight Edge.....	Each, 2.75	**No. 105E**—Each,	3.75
No. 105C—With **Graduated** Auxiliary Straight Edge.....	Each, 3.00	**No. 105F**—Each,	4.25

Note. No. 105A will always be furnished unless otherwise ordered.

KEY SEAT CLAMPS

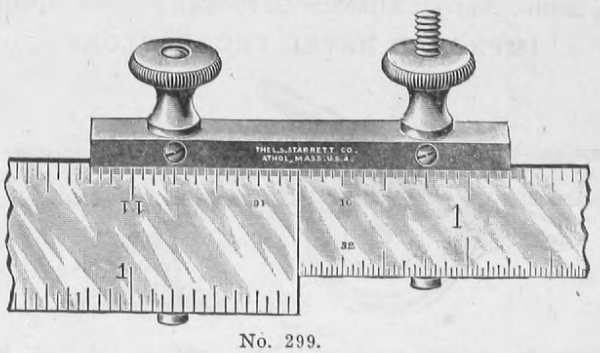


No. 298.

Starrett. Made of Steel, case hardened and ground accurate, designed to transform any common steel scale into a key seat rule. May be used with our combination square blades, or any straight rule with accurate results.

No. 298—Key Seat Clamps.....Per Pair, $0.60

RULE CLAMPS



No. 299.

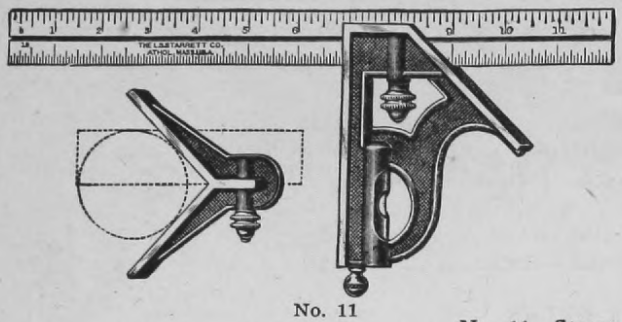
Starrett. Used to clamp two steel rules together, end to end, making one long rule. Rules may be of same or different widths up to 1¼ inches. Invaluable to mechanics whose tool chests will not hold rules longer than 12 inches.

No. 299—Rule Clamps, Highly Polished....Each, $0.50

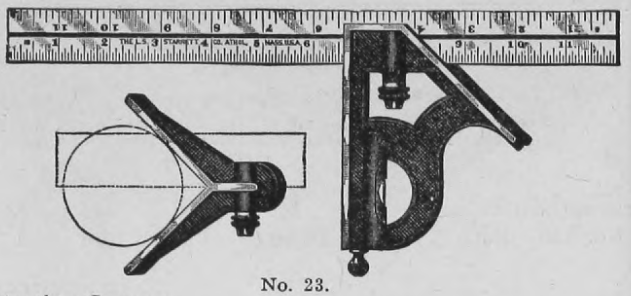
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

COMBINATION SQUARES



No. 11



No. 23.

No. 11—Starrett Combination Squares

A complete substitute for a whole set of Common Try Squares and one of the best Gauges made for transferring exact measurements or laying out work, used also as a depth gauge or to square out a mortise. Makes a perfect mitre square and with auxiliary Center Head forms a centering square, both inside and out. Hardened Steel Blades graduated in figures reading both ways in 64ths, 32ds, 16ths and 8ths. Other graduations on special order.

No. 11—Inches	4	6	9	12	18	24
Without Center Head ..... Each,	$0.75	1.00	1.25	1.50	2.25	2.75
With Center Head ..... Each,	1.25	1.50	1.75	2.00	2.75	3.25

Note.—Sent complete with Center Head unless otherwise ordered.

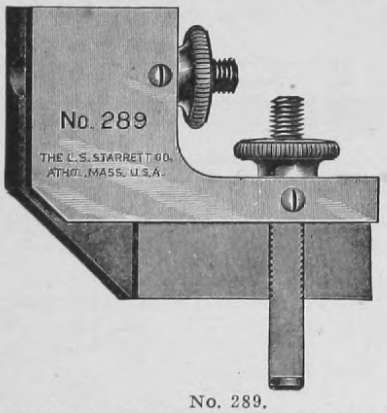
No. 23—Starrett Combination Squares

This Square is the same as the No. 11 described above except that the Blades are not hardened, graduated only in 64ths, 32ds, 16ths and 8ths.

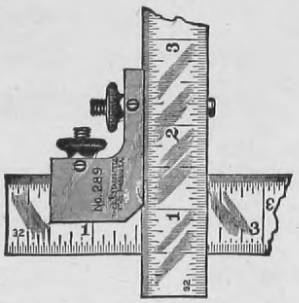
No. 23—Inches	6	9	12
Without Center Head ..... Each,	$1.00	1.25	1.50
With Center Head ..... Each,	1.50	1.75	2.00

Note.—Sent complete without Center Head unless otherwise ordered.

COMBINATION SQUARE ATTACHMENTS



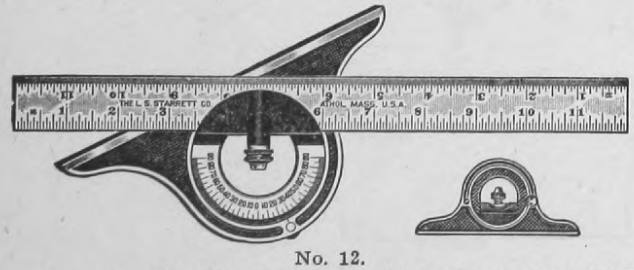
No. 289.



This Attachment is made to fit the 12, 18 and 24 inch blades of Nos. 11 and 23 Squares, and can be used in connection with any of our regular rules as wide as one inch, or with our No. 21 Steel Try Squares for laying out key seats, etc.

No. 289A—Starrett Attachments for Combination Squares $1\frac{1}{2}$ x $1\frac{25}{32}$ inches ..... Each, $0.85
No. 289B—Starrett Attachments for Combination Squares, $2\frac{5}{8}$ x $2\frac{3}{8}$ inches ..... Each, 1.00

IMPROVED BEVEL PROTRACTORS

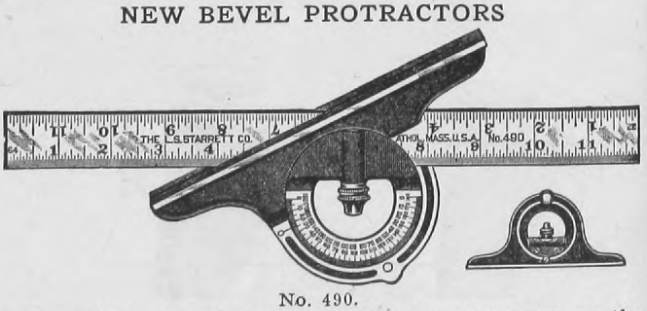


No. 12.

Starrett. An adjustable rule, held firmly at any point by a thumb nut, passes through a revolving turret which is nicely graduated in degrees from 0 to 90, both right and left, and can be accurately adjusted to show any angle. The Blades are hardened Steel graduated in figures reading both ways in 64ths, 32ds, 16ths and 8ths. The Head is 7 inches long.

No. 12—Complete .	Inches	9	12
	Each	$2.75	3.00

NEW BEVEL PROTRACTORS



No. 490.

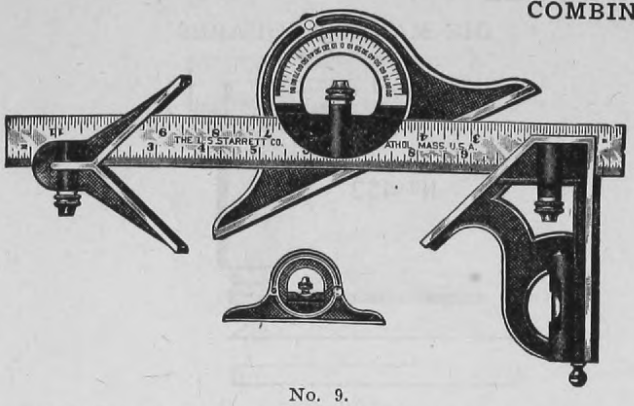
Starrett. This Tool is of the same general design as the No. 12 shown opposite, with the additional feature of having the head extend both sides of the blade. This greatly improves the usefulness of the tool, as the same angles may be transferred from either side of the frame without resetting. The **Turret** is graduated to read both ways from 0 to 180°.

No. 490—Complete	Inches ..	9	12	18
	Each ...	$3.50	3.75	4.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

COMBINATION SETS



No. 9.

Starrett. This Set consists of the No. 11 Combination Square described on the preceding page, with Center Head and 7 inch Bevel Protractor Head all on the No. 11 Scale. Each head may be instantly removed or replaced and used interchangeably with the Scale.

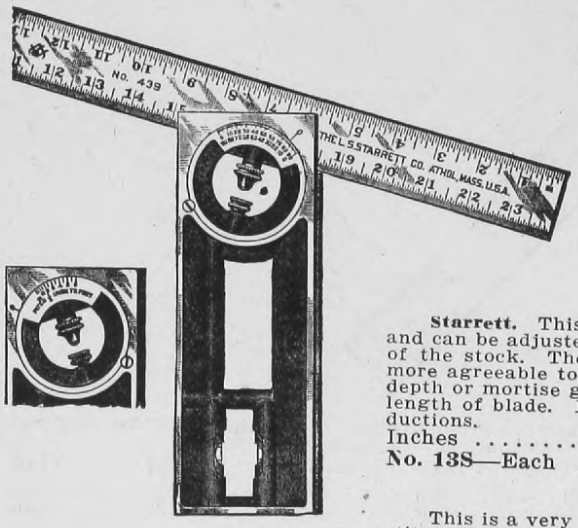
No. 9—Complete	Inches ...	9	12	18
	Each	$3.75	4.00	4.75

No. 435.

Starrett. This Set consists of the No. 11 Combination Square described on the preceding page and our new Reversible Protractor Head same as No. 490 shown below except that it is made with checked finish.

No. 435—Complete	Inches ...	9	12	18
	Each	$4.25	4.50	5.25

BUILDERS' COMBINATION TOOL

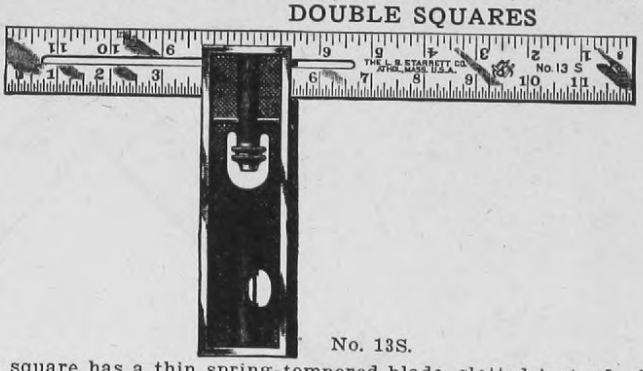


No. 439.

The Stock is 9 inches long, with either 18 or 24 inch blade, 1⅛ inches wide, graduated in 64ths, 32ds, 16ths and 8ths. This Blade is adjustable through the revolving turret, which is graduated on one side in degrees with two rows of figures reading either right or left, and on the other to show the pitch to foot, the graduations showing ½ inch pitch.

No. 439—Starrett Patent Builders' Combination Tool....	Inches	18	24
	Each	$6.00	7.00

DOUBLE SQUARES



No. 13S.

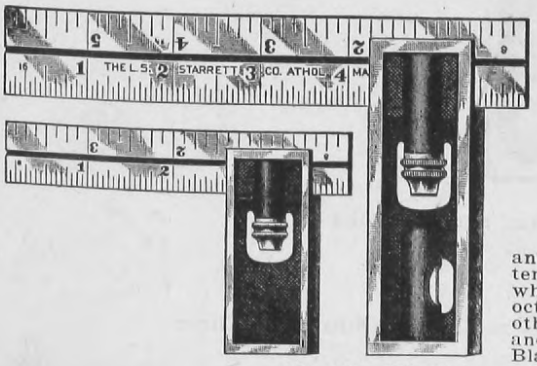
Starrett. This square has a thin spring-tempered blade, slotted instead of grooved, and can be adjusted to any length from nothing to full length of blade, using either side of the stock. The blades are nicely graduated and on account of their lightness are more agreeable to use than thick, heavy blades. This tool combines a level, a plumb, a depth or mortise gage, and a square with a blade of all lengths from the shortest to full length of blade. Its accuracy and finish are in keeping with the excellence of our productions.

Inches	4	6	9	12
No. 13S—Each	$1.25	2.00	3.00	4.00

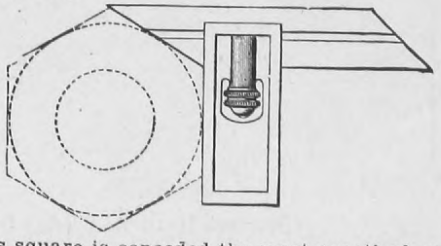
Starrett Patent Builders' Combination Tools

This is a very simple tool to handle, yet a masterpiece of combinations as it is a substitute for a full kit of try squares, a bevel protractor, pitch to foot indicator, a 24 inch level or plumb using the blade, and a 9 inch using the stock, and a complementary angle indicator, all in one simple compact tool, weighing with a 24 inch blade less than 3 pounds.

DOUBLE SQUARES



No. 13.



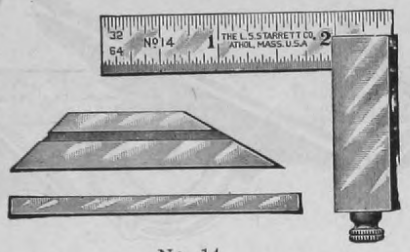
Starrett. This square is conceded the most practical one for Machinists' and fine Tool Makers' use ever offered. The Sliding Scale, shortened or extended full length, makes it more valuable than a full set of the common kind, while the extra bevel blade, as shown above, makes both the hexagon and octagon angles. Hardened Blade graduated in 64ths, 32ds, 16ths and 8ths; other graduations on special order. There is a level in the stock of the 6, 9 and 12 inch. **Bevel** Blades are made to fit only 4 and 6-inch sizes. Both Blades will be sent with the 4 and 6-inch unless otherwise ordered.

	Inches	4	6	9	12
No. 13—Patent Double Squares	With One Blade.....Each,	$1.25	2.00	3.00	4.00
	With Both Blades.....Each,	1.65	2.50	.....	.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

DOUBLE STEEL SQUARES



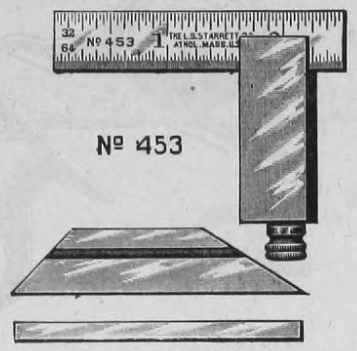
No. 14.

Starrett. This cut represents a double solid steel square, with our patent 2½ inch sliding scale, and is especially designed for fine tool makers. The rule being narrow and instantly adjusted to any length, however short, allows it to be used where it would be impossible to use any square with a fixed blade. The scale is graduated on one side only, in 32ds and 64ths.

Fitted to go with this stock, we make not only a bevel blade, but a very narrow straight one, about ⅛ inch wide, highly prized by die makers for squaring small holes, both of which blades will be sent with the square unless otherwise ordered.

No. 14A—Square Only ..... Each, $2.50
No. 14C—Complete with Bevel and Narrow Blade ..... Each, 3.10

DIE MAKERS' SQUARES

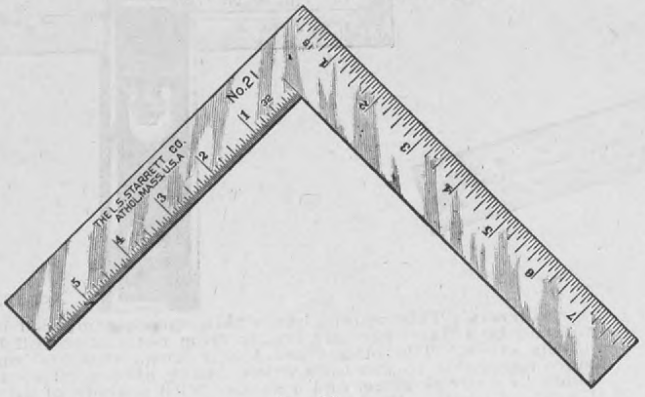


No. 453.

Starrett. Tool can be **adjusted at any angle** with the Beam. Makes an excellent gage for filing the clearance in dies, etc. By releasing the small screw the fulcrum pin is forced back, and the blade clamped firmly to its seat and then used as a regular square. Fitted to take the narrow and bevel blades, the same as No. 14 Square.

No. 453A—Square Only ..... Each, $3.00
No. 453C—Complete with Bevel & Narrow Blade ..... Each, 3.60

THIN STEEL TRY SQUARES

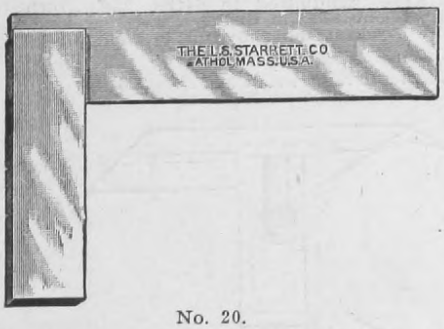


No. 21.

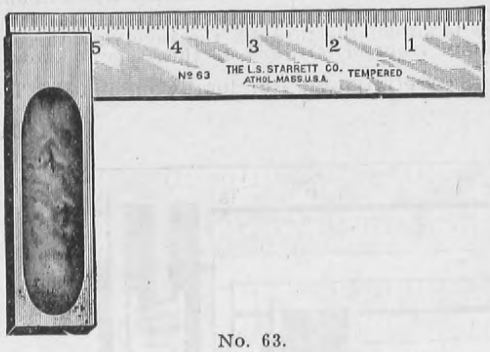
Starrett. For Machinists and Draughtsmen. The 2x1 and 3x2 inch are graduated one side 16ths and 64ths, and 32ds and 64ths on the other. The 4x3, 6x4 and 8x6 inch are graduated 16ths and 32ds on both sides.

	2x1	3x2	4x3	6x4	8x6
Inches					
Thickness, inch	1/20	1/20	1/16	1/16	1/16
No. 21, Each,	$1.25	1.75	2.25	3.25	4.25

STEEL SQUARES



No. 20.



No. 63.

Starrett Hardened Edge Solid Steel Squares, not Graduated

No. 20—Steel Squares	Inside of Beam, inches	2	3	4½	6
	Length of Beam, inches	1⅞	2⅜	3½	4⅝
	Each	$2.50	3.00	4.50	6.00

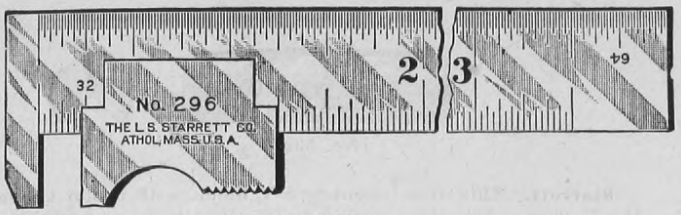
Starrett Hardened Steel Squares, Graduated in 32nds on One Side and 64ths on the Other

No. 63—Steel Squares	Length of Blade, inches	2	3	4	6
	Length of Beam, inches	1½	2	2¾	3¾
	Each	$1.75	2.50	3.75	5.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

SLIDE CALIPER RULES

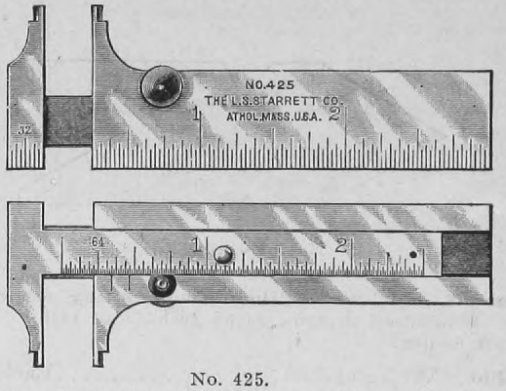


No. 296.

Starrett. A most convenient Tool for measuring small rods, tubing, etc., and in many cases will be found a substitute for a more expensive caliper square. The Thumb Piece slides in a groove on the reverse side. The Jaws are ½ inch deep. Graduated in 64ths, 32ds, 16ths and 8ths.

No. 296—Length 4 inches, Width ⅝ inch, Thickness 1/16 inch ..... Each,	$1.50

SLIDE CALIPER RULES

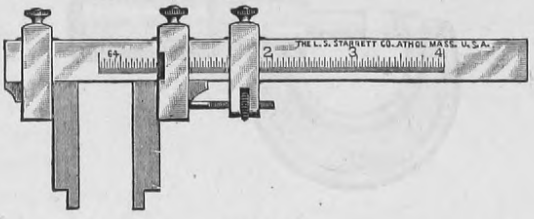


No. 425.

Starrett. Graduated in 32ds and 64ths. The improved clamping device is a valuable feature.

No. 425—Inches	3	5
Each	$2.50	3.50

CALIPER SQUARES



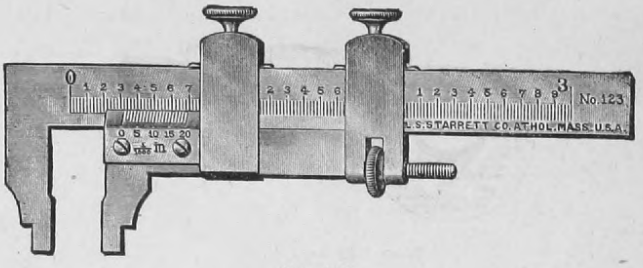
No. 25.

Starrett. For both inside and outside measure. The Beam is graduated in 64ths on one side and 100ths on the other.

Nos.	**25A**	**25B**
Inches	3	4
With Adjusting Screw ..... Each,	$5.00	6.50
Without Adjusting Screw.... Each,	4.25	5.50

Note—Always sent with Adjusting Screw unless otherwise ordered.

POCKET VERNIER CALIPERS

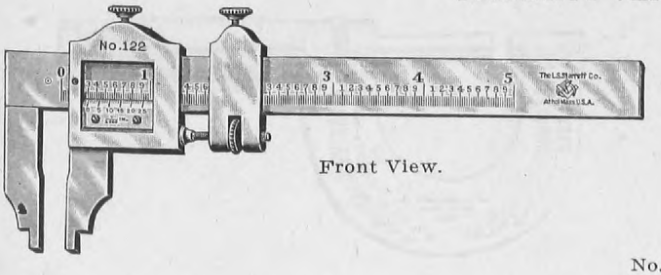


No. 123.

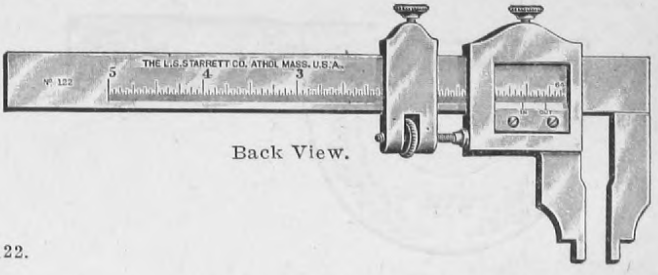
Starrett. For both inside and outside measure. The Beam is graduated in 1000ths on the front side and 64th on the back.

No.	**123**
Length of Jaw, inches.....	¾
Width of Jaw, inches	.250
Each	$12.50

STARRETT VERNIER CALIPERS



Front View.



Back View.

No. 122.

Starrett Vernier Calipers, for inside and outside measure, warranted accurate. Points are placed on the beams and slides for setting dividers to transfer distances and full directions for using the Vernier are sent with each caliper. Jaws are carefully hardened and accurately ground. Graduated on the front to read by means of the Vernier in 1000ths and on the back in 64ths. Put up in nicely finished, plush lined Wood Cases.

No. 122—Inches	4	6	9
Length of Jaw, inches.....	1 1/16	1 1/16	2 3/8
Width of Jaw, inch.....	.250	.250	.300
Each	$16.00	18.00	21.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

CENTER GAUGES

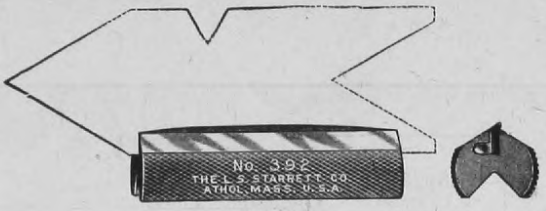
Nos. 390 and 391.

Starrett. For use in grinding and setting screw cutting tools. Graduated in 32ds, 24ths 20ths, and 14ths. The Angles are 60 degrees.

No. 390—Not Tempered.....Each, $0.25

No. 391—Spring Tempered.....Each, .35

CENTER GAUGE ATTACHMENTS

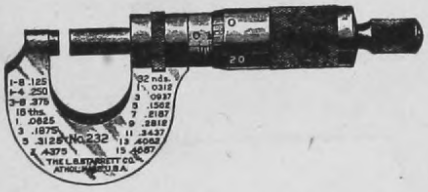


No. 392.

Starrett. This attachment is a V block with a slot above the V, containing a flat spring to frictionally hold the center gauge parallel with the block. Adapted to hold the gauges either by the side or by the end for testing work and will be greatly appreciated by all users.

No. 392—Center Gauge Attachments.....Each, $0.50

MICROMETERS

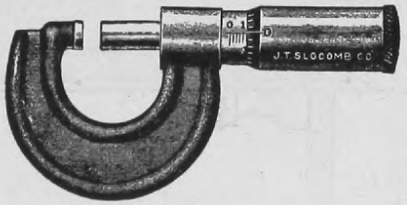


Nos. 232 and 232C.

Starrett. Half inch Micrometers, for measurements by thousandths up to one-half inch. Anvil is shortened for use in places where the ordinary anvil is too long to be inserted. Has Lock Nut and Ratchet Stop.

No. 232 —In Pasteboard Box.....Each, $5.50

No. 232C—In Leather Case.....Each, 6.15

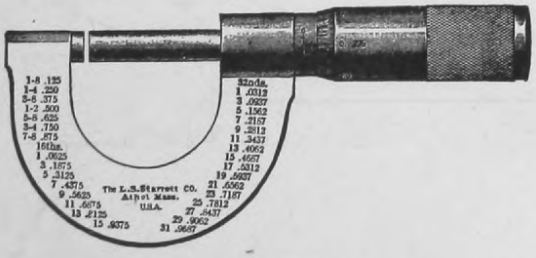


No. 22.

Slocomb. Half Inch Micrometer, for measurements by thousandths up to one-half inch. Particularly adapted for a pocket tool on account of its light weight. **Frame** finished in black enamel.

No. 22 —Without Friction Stop.....Each, $5.50

No. 22S—With Friction Stop.....Each, 4.00

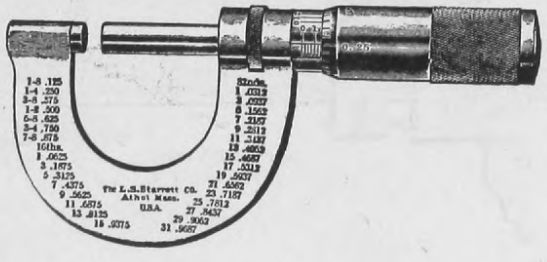


Nos. 203 and 203C.

Starrett. One Inch Micrometers, for measurements by thousandths up to one inch. Has neither Lock Nut nor Ratchet Stop.

No. 203 —In Pasteboard Box.....Each, $5.50

No. 203C—In Leather Case.....Each, 6.15



Nos. 201 and 201C.

Starrett. One Inch Micrometers, for measurements by thousands up to one inch. Has Lock Nut but no Ratchet Stop.

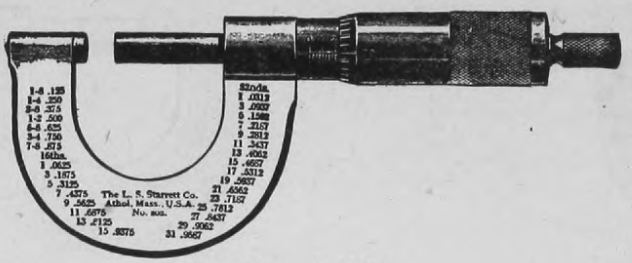
No. 201 —In Pasteboard Box.....Each, $6.00

No. 201C—In Leather Case.....Each, 6.65

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

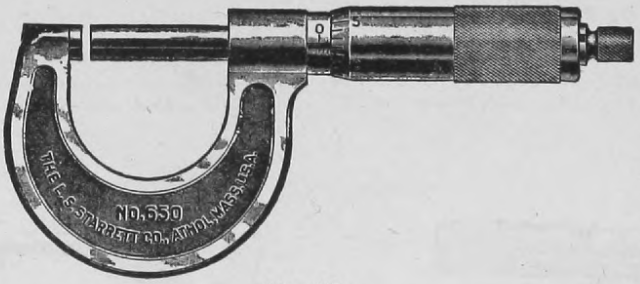
MICROMETERS



Nos. 202 and 202C.

Starrett. One Inch Micrometers, for measurements by thousandths up to one inch. Has Ratchet Stop but no Lock Nut.

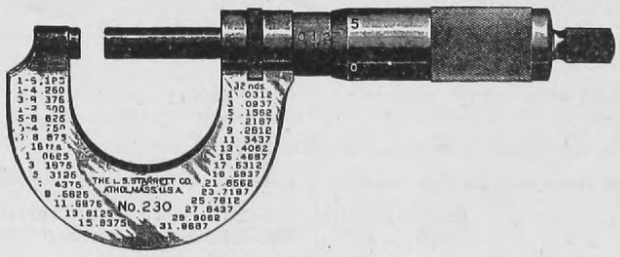
No. 202 —In Pasteboard Box..... Each, $6.00
No. 202C—In Leather Case..... Each, 6.65



No. 650.

Starrett. One Inch Micrometers, for measurements by thousandths up to one inch. Has improved speeded Screw with means for adjusting to compensate for wear.

No. 650 —Without Ratchet ..... Each, $4.00
No. 650R—With Ratchet ..... Each 4.50



Nos. 230 to 231C.

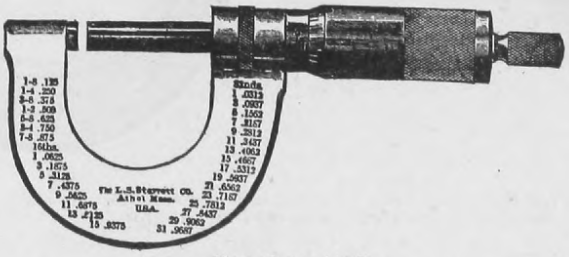
Starrett. One Inch Micrometers with Lock Nut and Ratchet Stop. Anvil is shortened for use in places where the ordinary anvil is too long to be inserted.

For Measurements by thousandths up to one inch.

No. 230 —In Pasteboard Box.....Each, $6.50
No. 230C—In Leather Case.....Each, 7.15

For Measurements by ten-thousandths up to one inch.

No. 231 —In Pasteboard Box.....Each, $7.50
No. 231C—In Leather Case.....Each, 8.15



Nos. 3 to 113C.

Starrett. One Inch Micrometers, with Lock Nut and Ratchet Stop.

For Measurements by thousandths up to one inch.

No. 3 —In Pasteboard Box.....Each, $6.50
No. 3C—In Leather Case.....Each, 7.15

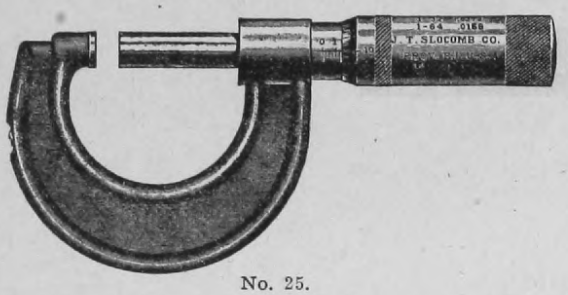
For Measurements by ten-thousandths up to one inch.

No. 113 —In Pasteborad Box.....Each, $7.50
No. 113C—In Leather Case.....Each, 8.15

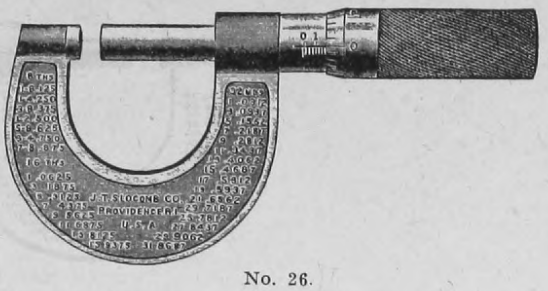
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

MICROMETERS



No. 25.



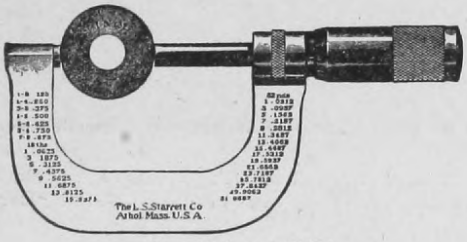
No. 26.

Slocomb. One Inch Micrometers, for measurements by thousandths up to one inch. Drop Forged Frame finished in black enamel with decimal equivalents stamped on thimble.

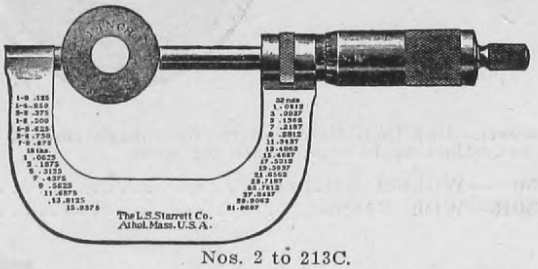
No. 25 —Without Friction Stop.....Each, $4.00
No. 25S—With Friction Stop.....Each, 4.50

Slocomb. One Inch Micrometers, for measurements by thousandths up to one inch. Long Knurled Thimble, Drop Forged Frame nicely polished, with table of decimal equivalents on same. Figures and Ribs about the edge are nicely raised. The Frame is pressed in polished dies under a hydraulic pressure of three hundred tons.

No. 26 —Without Friction Stop.....Each, $5.00
No. 26S—With Friction Stop.....Each, 5.50



Nos. 217 and 217C.



Nos. 2 to 213C.

Starrett. Two Inch Micrometers, for measurements by thousandths from one to two inches. Has Lock Nut and One Inch Test Gauge but no Ratchet Stop.

No. 217 —In Pasteboard Boxes.....Each, $6.50
No. 217C—In Leather Cases.....Each, 7.25

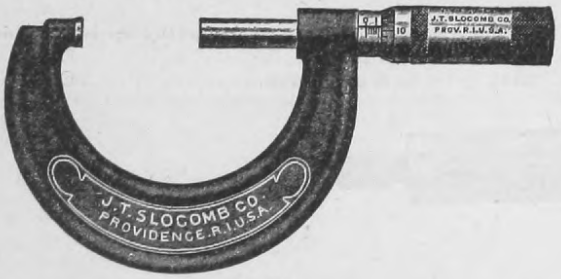
Starrett. Two Inch Micrometers with Lock Nut, Ratchet Stop and One Inch Test Gauge.

For Measurements by thousandths from one to two inches.

No. 2 —In Pasteboard Boxes.....Each, $7.00
No. 2C—In Leather Cases.....Each, 7.75

For Measurements by ten thousandths from one to two inches.

No. 213 —In Pasteboard Boxes.....Each, $8.00
No. 213C—In Leather Cases.....Each, 8.75



No. 27.

No. 28.

Slocomb. Two Inch Micrometers, for measurements by thousandths from one to two inches. Drop Forged Tool Steel Frame finished in black enamel, with decimal equivalents stamped on thimble.

No. 27 —Without Friction Stop.....Each, $4.00
No. 27S—With Friction Stop.....Each, 4.50

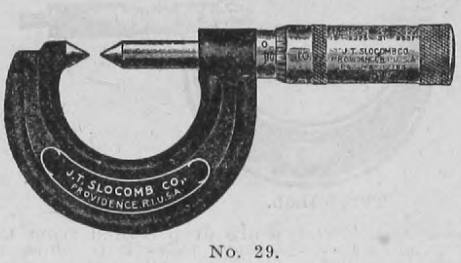
Slocomb. Three Inch Micrometers, for measurements by thousandths from two to three inches. Drop Forged Tool Steel Frame finished in black enamel, with decimal equivalents stamped on thimble.

No. 28 —Without Friction Stop.....Each, $5.00
No. 28S—With Friction Stop.....Each, 5.50

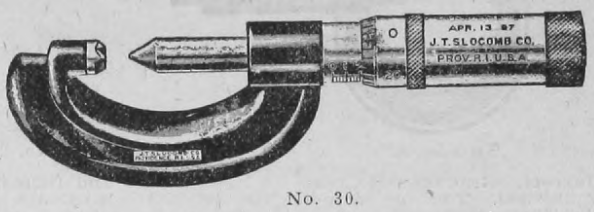
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

SCREW MICROMETERS



No. 29.



No. 30.

No. 29

Slocomb. One Inch Screw Thread Micrometers, valuable for making a tap same diameter of some other tap or screw, or a few thousandths larger or smaller. For cutting screw threads in the lathe to fit nuts the top may be measured and then the threads readily cut to same size and to fit nuts. The terminals are not made to a sharp point, but instead are flatted to about 1/64 inch diameter, and the tool is adjusted to 0 when the flat points are in contact, so it may be used same as any other micrometer, when it is desired to measure at the bottom of a groove or a small recess, the thickness in the center of twist drills, or similar work. Black Enameled Frame.

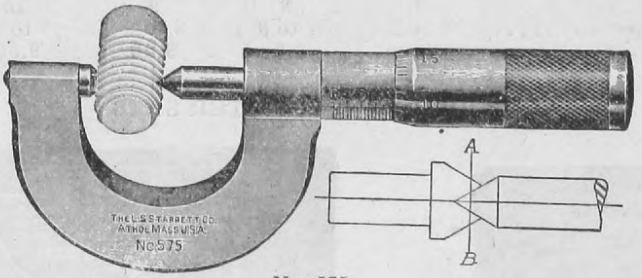
No. 29—One Inch Screw Thread Micrometers ..... Each, $4.50

No. 30

Slocomb Standard Screw Thread Micrometers provide the best means known of keeping taps, dies, and screw threads generally to standard sizes. They are especially adapted on account of all adjustments being inside, the thimble, which permits the use of a solid anvil making it more reliable than when this piece is fitted loose. Can be made to measure any form of angle-sided threads from the pitch line without the diameter being considered at all.

Nos.	30C	30E	30G	30J
Capacity, inches	1	1	1	1
Pitch	8 to 13	14 to 20	22 to 30	32 to 40
Each	$6.50	6.50	6.50	6.50

Note—In ordering always state what Pitches you want to measure "V" or U. S. Standard Threads.



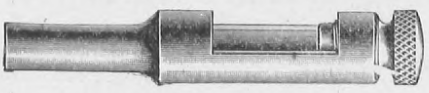
No. 575.

Starrett Screw Thread Micrometer Calipers have a pointed movable spindle and the end of the anvil is of the same form as the thread to be measured.

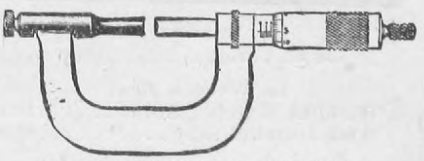
Nos.	575A	575B	575C	575D
Capacity, inches	1	1	1	1
Pitch	8 to 13	14 to 20	22 to 30	32 to 40
Each	$8.00	8.00	8.00	8.00
Nos.	**585A**	**585B**	**585C**	**585D**
Capacity, inches	2	2	2	2
Pitch	4½ to 7	8 to 13	14 to 20	22 to 30
Each	$9.50	9.50	9.50	9.50

Note—In ordering always state whether you want "V," U. S. Standard or Whitworth Standard Threads.

MICROMETER ATTACHMENTS



No. 212.



Showing Method of Attaching.

This attachment will instantly convert a two inch Micrometer into an inch tool.

No. 212—Starrett Micrometer Attachments ..... Each, $2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

NEW MICROMETERS

Two Inch.

No. 226

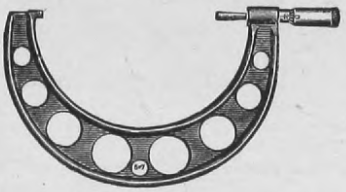
Three Inch.

Starrett. Graduated to read by thousandths and furnished with Lock Nut. Frames are drop forged from Bar Steel, nicely finished. The one inch has the decimal equivalents stamped on frame, other sizes are marked to show their capacity. These micrometers meet the demand for accurate gauges at a low price. They are better adapted for general use than the Vernier or bar micrometer, as they can be set quickly for the different measurements and are more easily read.

No. 226—Inches	1	2	3	4	5	6
Capacity by Thousandths, inches	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Without Ratchet Stop, Each,	$6.00	5.50	6.50	7.00	7.75	8.50
With Ratchet Stop, Each,	6.50	6.00	7.00	7.50	8.25	9.00

No. 226x1C—One Inch Micrometer in Leather Case..... { **Without** Ratchet Stop, Each, $6.65 / **With** Ratchet Stop, Each, 7.15

Six Inch.



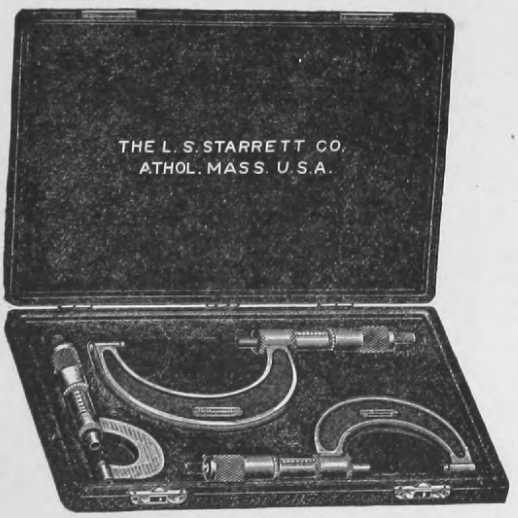
No. 112.

Seven Inch.

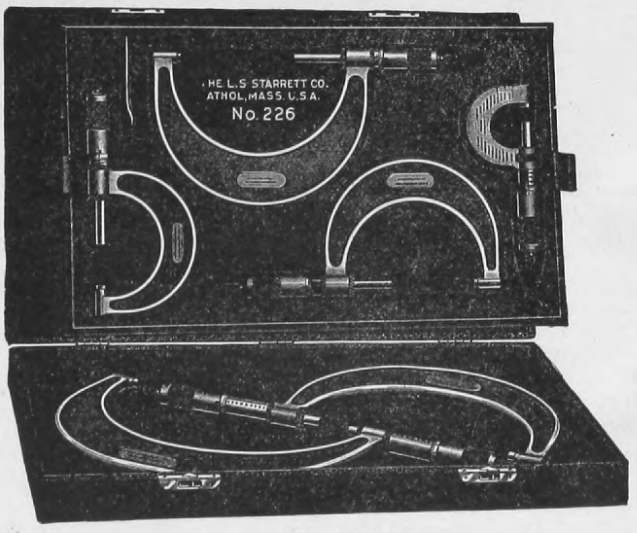
Slocomb. The one to six inch are drop forged of Bar Steel and the 7 to 12 inch are Steel Castings with holes through for lightness. The different sizes are marked to show their capacity. Frames are finished in Black Enamel.

No. 112—Size Nos.	1	2	3	4	5	6
Capacity by Thousandths, inches	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Each	$4.00	4.00	5.00	5.50	6.00	7.00
No. 112—Size Nos.	7	8	9	10	11	12
Capacity by Thousandths, inches	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12
Each	$8.00	8.50	9.00	9.50	10.00	11.50

STARRETT MICROMETER SETS



No. 226x3C.



No. 226x6C.

Set of Three, consisting of One, Two and Three inch No. 226 Micrometers as listed above.

	In Wooden Box.		In Leather Case.	
No. 226x3	**Without** Ratchet Stop, Each,	$18.00	**No. 226x3C** **Without** Ratchet Stop, Each,	$20.00
	With Ratchet Stop, Each	19.50	**With** Ratchet Stop, Each,	21.50

Set of Six, consisting of all sizes from One to Six inch of No. 226 Micrometers listed above.

	In Wooden Box.		In Leather Case.	
No. 226x6	**Without** Ratchet Stop, Each,	$41.25	**No. 226x6C** **Without** Ratchet Stop, Each,	$45.25
	With Ratchet Stop, Each,	44.25	**With** Ratchet Stop, Each,	48.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

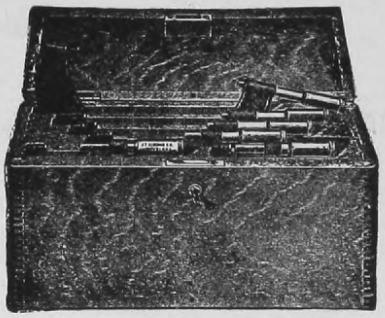
MACHINISTS' TOOLS

SLOCOMB MICROMETER SETS

No. 21.

This Set consists of Three Micrometers as follows, One Two and Three inch, in a good substantial case, covered with Morocco Leather and lined with blue velvet. Outside dimensions are 9½x6¾x1½ inches.

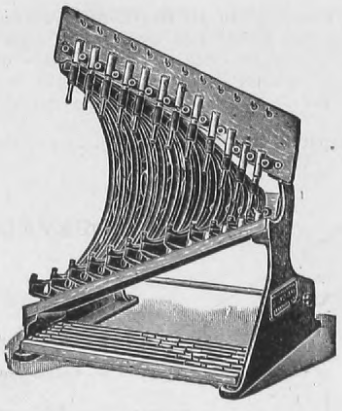
No. 21 —Without Friction Stop.....Each, $14.30
No. 21S—With Friction Stop .....Each, 15.80
No. 21C—Case Only.....Each, 1.25



No. 19.

This Set consists of Six Micrometers ranging from One to Six inch inclusive, in a fine Quartered Oak Case, with lock and key.

No. 19 —Without Friction Stop.....Each, $36.00
No. 19S—With Friction Stop.....Each, 39.00
No. 19C—Case Only .....Each, 3.25



No. 20.

This Set is intended for tool room use and consists of Twelve Micrometers and End Measures ranging from One to 12 inch inclusive. Ends of Rack are of Cast Iron, Black Enameled. Slats are of Oak with Rubber Button partings. Hooks are provided over each tool for workman's check. Lower slat is grooved and contains the set of end measures.

No. 20 —Without Friction Stop.....Each, $111.90
No. 20S—With Friction Stop .....Each, 117.90
No. 20R—Rack Only.....Each, 5.00

No. 22.

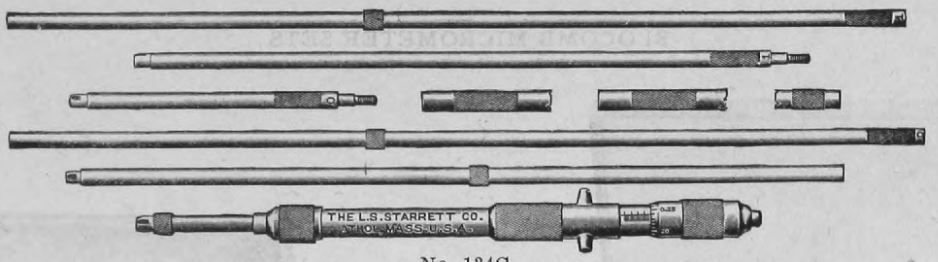
This Set consists of Twelve Micrometers and End Measures, ranging from One to 12 inch inclusive, in an Oak Case, with lock and key. The small case shown at the front fits the extra pocket shown in case. These cases are substantially made and are an advantage over a rack in keeping the tools free from dust.

No. 22 —Without Friction Stop.....Each, $115.40
No. 22S—With Friction Stop.....Each, 121.40
No. 22C—Case Only .....Each, 10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

INSIDE MICROMETERS



No. 124C.

Starrett. Designed for Internal and Lineal measurements such as measuring Cylinders, Rings, also for setting Calipers, comparing Gauges, etc. It is also very useful in measuring parallel surfaces.

No. 124A—Has 6 Rods and one ½ inch Gauge, and measures from 2 to 8 inches { Without Case.....Each, $4.50 / In Leather Case...Each, 5.25

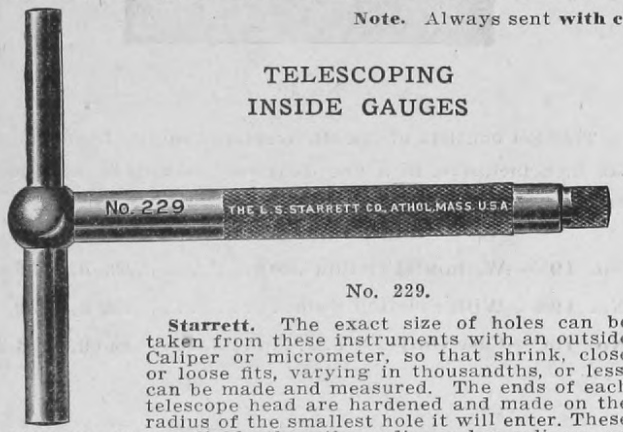
No. 124B—Has 10 Rods and one ½ inch Gauge, and measures from 2 to 12 inches. { Without Case.....Each, 5.50 / In Leather Case...Each, 6.50

No. 124C—Has 4 Rods and one 1 inch and two 2 inch Gauges and measures from 8 to 32 inches. { Without Case.....Each, 6.50 / In Leather Case...Each, 8.00

No. 124D—Comprises Nos. 124A and 124C, and measures from 2 to 32 inches..... { Without Case.....Each, 11.00 / In Leather Case...Each, 12.50

Note. Always sent **with case** unless otherwise ordered.

TELESCOPING INSIDE GAUGES

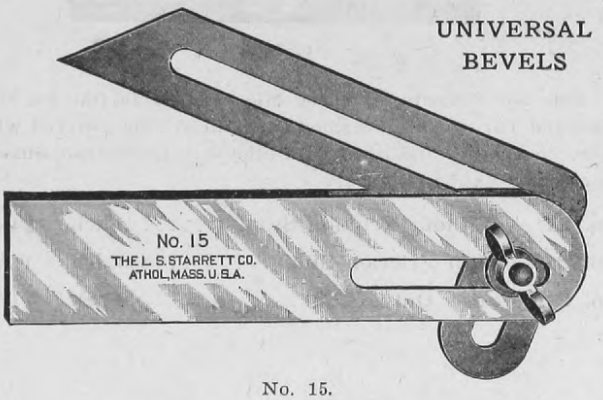


No. 229.

Starrett. The exact size of holes can be taken from these instruments with an outside Caliper or micrometer, so that shrink, close or loose fits, varying in thousandths, or less, can be made and measured. The ends of each telescope head are hardened and made on the radius of the smallest hole it will enter. These Gauges are more reliable than the ordinary leg calipers on account of the tendency of the latter to spring and of the points to catch in blow holes or other depressions.

Nos.	229A	229B	229C
Range, in.	½ to ¾	¾ to 1¼	1¼ to 2⅛
Each	$1.50	1.75	2.00
Nos.		229D	229E
Range, in.		2⅛ to 3½	3½ to 6
Each		$2.50	3.00

UNIVERSAL BEVELS

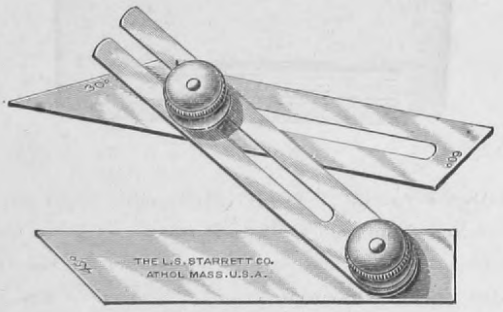


No. 15.

Starrett. The Set Off in the Blade increases its capacity and usefulness for bevel gear work, etc., so that any angle, however slight, may be obtained. One edge of the case being solid, a rest is formed directly under the blade, where thin templets may be placed and accurately fitted.

No. 15—Length 3 inches.....Each, $1.50

COMBINATION BEVELS

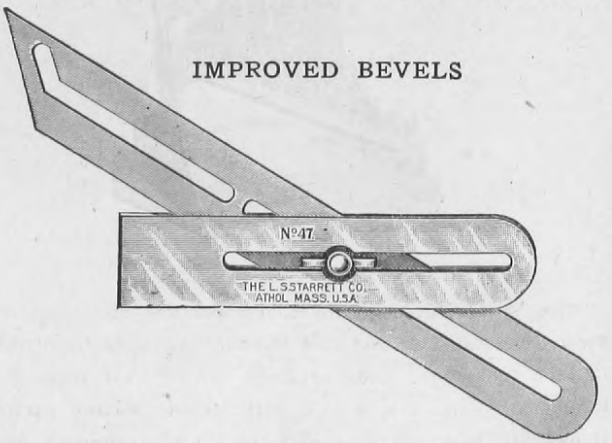


No. 49.

This bevel has a stud riveted in the straight edge stock or head, on which its split blade is hinged, so as to swing over the stock and be clamped at any angle. The slotted auxiliary blade with clamp bolt may be slipped on to the split blade and be clamped at any desired angle and used, in combination with the stock of the other for laying out work, measuring, or showing any angle desired.

No. 49—Length of Stock 4 inches.....Each, $2.00

IMPROVED BEVELS



No. 47.

The Stock as well as the Blade is slotted, thus admitting adjustments that cannot be obtained with a common Bevel. The Clamping Screw Head is let into a Rabbet flush with the surface of the stock which will lie flat on the work.

No. 47—Length of Blade, inches..	6	9
Length of Stock, inches.....	3½	4¾
Each	$1.25	1.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

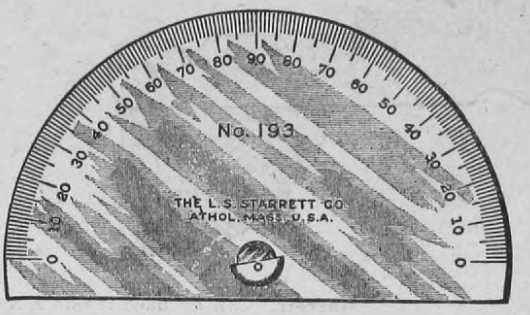
MACHINISTS' TOOLS

PROTRACTORS

No. 19.

Starrett. A convenient, accurate tool, for setting bevels, transferring angles, or for a number of other uses occuring to a machinist or draughtsman. Graduated in degrees from 0 to 90 both ways. The Blade is set firmly by a slight turn of the nut. The back of the tool is flat.

No. 19—Length of Blade 6 inches.....Each, **$1.75**

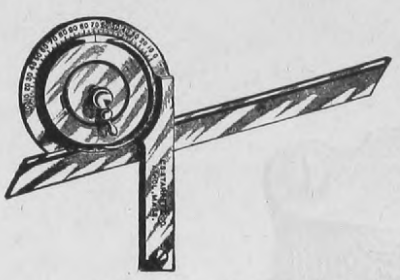


No. 193.

Starrett. This Protractor is used for setting Bevels, Nos. 15, 47 and 49 at any desired angle, thus converting them into Bevel Protractors at slight cost.

No. 193—Protractors .....Each, **$1.00**

UNIVERSAL BEVEL PROTRACTORS



Nos. 360A and 360B.

Starrett. Sheet Steel Stock and Blade, nicely finished. The Disc is graduated from 0 to 90 degrees each way, and rotates the entire circle on a central stud inside the case. The Blade is 7 inches long by ½ inch wide and the Stock is 4 inches long. Lays flat on the work. The Blade maybe slipped back and forth its full length, or turned at any angle around the circle and firmly clamped at any desired point.

No. 360A—Without Case .....Each, **$7.00**

No. 360B—In Leatherette Case.....Each, **7.75**

Nos. 362A and 362B.

Starrett. This Protractor is the same as No. 360 described opposite, except that it is made with verniers reading five minutes or one-twelfth of a degree, and a central locking nut by which the protractor is firmly held in position. The verniers are so placed with relation to the graduated half circle as to make the protractor readable by vernier in any position.

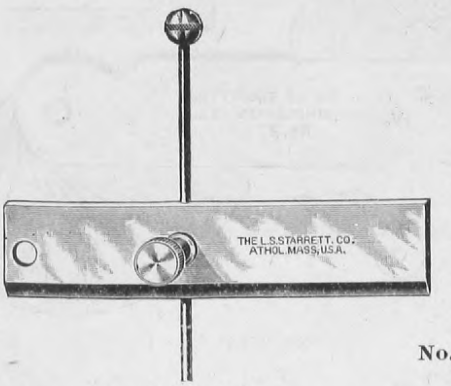
No. 362A—Without Case .....Each, **$10.00**

No. 362B—In Leatherette Case.....Each, **11.00**

DEPTH GAUGES

Starrett. This Gauge has a 3/16 inch scale graduated regularly in 32ds and 64ths also in 50ths and 100ths or 64ths and 100ths when desired.

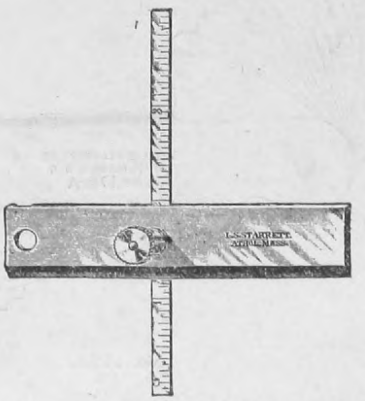
Blade may be used separately from the gauge if desired. The case hardened Steel Head is 2 inches wide across the base by ⅛ inch thick.



Nos. 45A and 45B.

No. 237.

No. 237—With 6 inch Scale .....Each, **$1.25**



Nos. 46A and 46B.

The wire in this gauge is held to a groove by a friction spring inside the nut while adjusting and may be used close to the end as well as in the middle of the straight edge. Gauge can be folded up by loosening nut.

No. 45A—With 3½ inch Stock.....Each, **$0.75**

No. 45B—With 6 inch Stock.....Each, **1.15**

This Gauge has a 3/16 inch Scale, graduated in either 32ds and 64ths, 50ths and 100ths or 64ths and 100ths, and may be used separately from gauge. Stock is 3½ inches long.

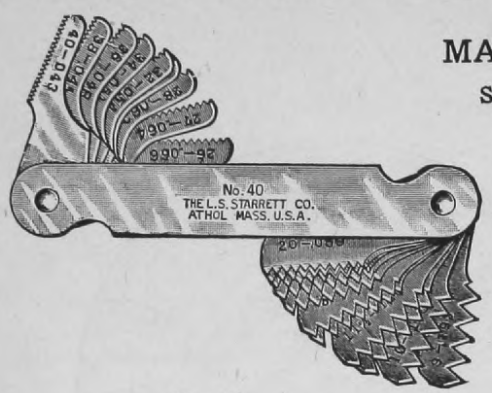
No. 46A—With 4 inch Scale.....Each, **$1.25**

No. 46B—With 6 inch Scale.....Each, **1.50**

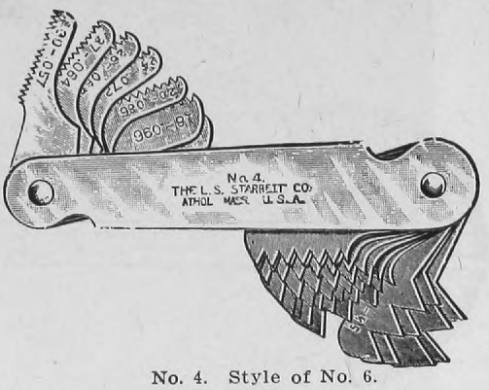
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

SCREW PITCH GAUGES



No. 40.



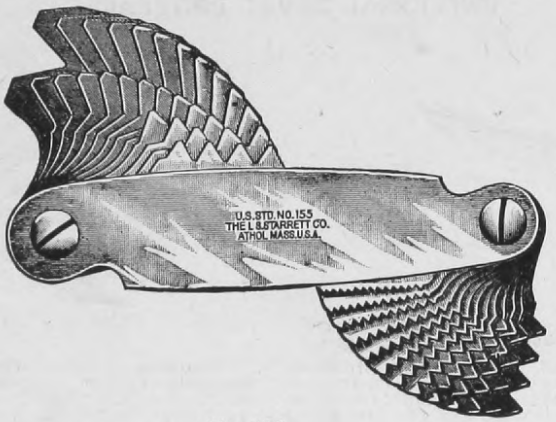
No. 4. Style of No. 6.

Starrett. Can be used inside a Nut as well as on the outside of a Screw or Bolt.

No. 40—22 Pitches: 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38 and 40 ..... Each, **$1.00**

No. 4—24 Pitches: 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28 and 30 ..... Each, 1.25

No. 6—30 Pitches: 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 40 and 42 ..... Each, 1.50

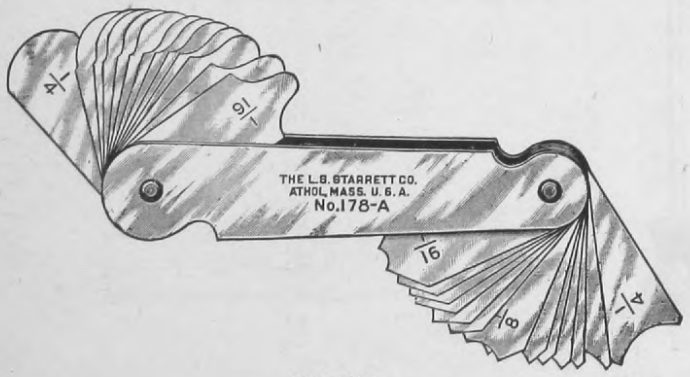


No. 155.

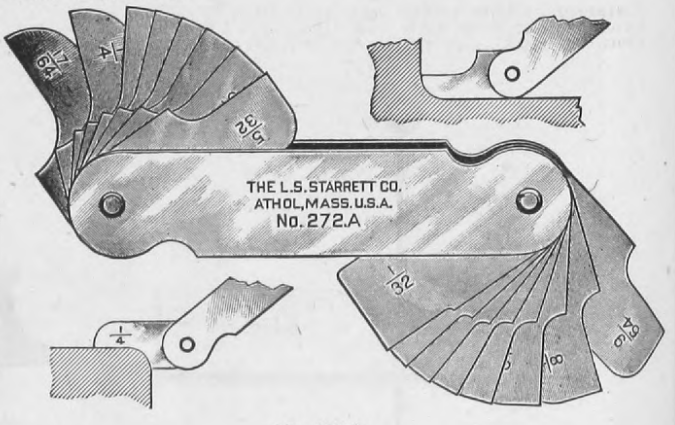
Starrett U. S. Standard Screw Pitch Gauges

No. 155—25 Pitches: 2¼, 2⅜, 2½, 2⅝, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18 and 20; also a Center Gauge with Coarse and Fine Notch ..... Each **$1.50**

FILLET OR RADIUS GAUGES



No. 178A.



No. 272A.

Starrett Fillet or Radius Gauges

This Gauge may also be described as a concave and convex gauge, and is adapted for use in laying out special forming tools, dies, etc., as well as for measuring fillets. The illustrations show a few of the ways in which this gauge can be used. Recommended for the use of Machinists and Tool Makers as well as Pattern Makers.

No. 178A—26 Leaves stamped to indicate radii by 64ths, from 1/16 to ¼ inch. Diameters are from ⅛ to ½ inch, varying by 32ds ..... Each, **$1.00**

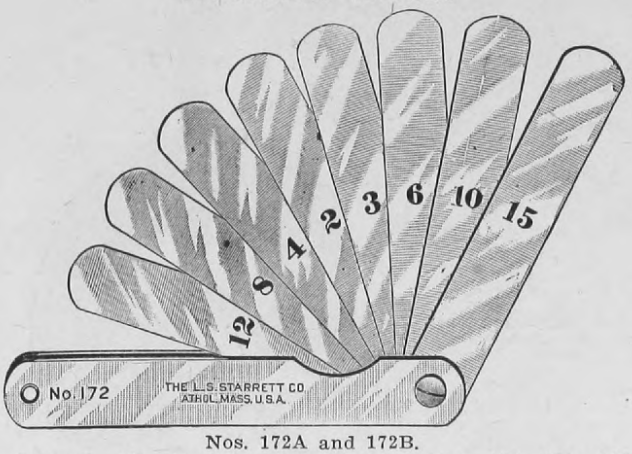
This Gauge can be used in any position or at any angle, the formation allowing it to be used up to a shoulder and for duplicating sample pieces.

No. 272A—16 Leaves stamped to indicate radii by 64ths, from 1/32 to 17/64 inch ..... Each, **$1.00**

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

THICKNESS GAUGES



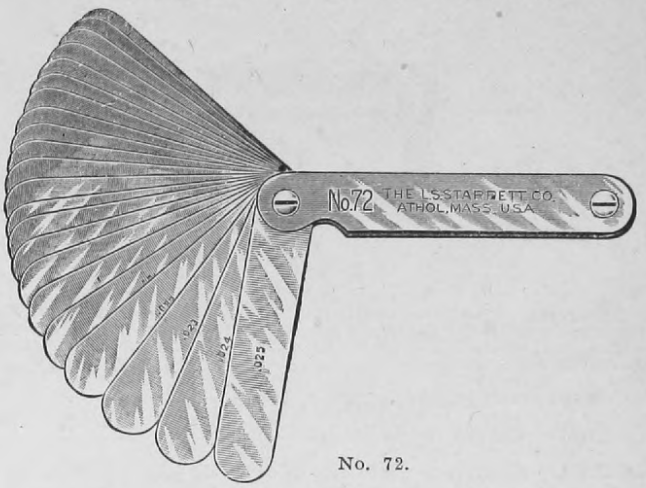
Nos. 172A and 172B.

Starrett. The B Gauge has 8 leaves, viz.: .002, .003, .004, .006, .008, .010, .012 and .015. The leaves are tempered and have the thickness marked on them. The A Gauge has the same leaves as above and a .0015 leaf also.

No. 172A—Case 3 3/8 x 1/2 inch, Leaves 31/16 x 1/2 inch ..... Each, $1.00

No. 172B—Case 4 3/4 x 1/2 inch, Leaves 4 1/2 x 1/2 inch ..... Each, 1.50

THICKNESS GAUGES OR "FEELERS"

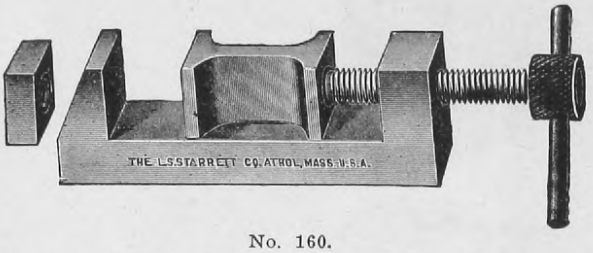


No. 72.

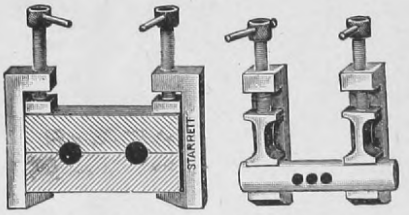
Starrett. This Gauge has 22 leaves, varying in thickness by thousandths, running from .004 to .025. The thickness of each leaf is designated by the number upon it. Each leaf may be used singly or in combination with others.

No. 72—Length of Case 2 3/4 inches..... Each, $1.50

TOOLMAKERS' STEEL CLAMPS



No. 160.

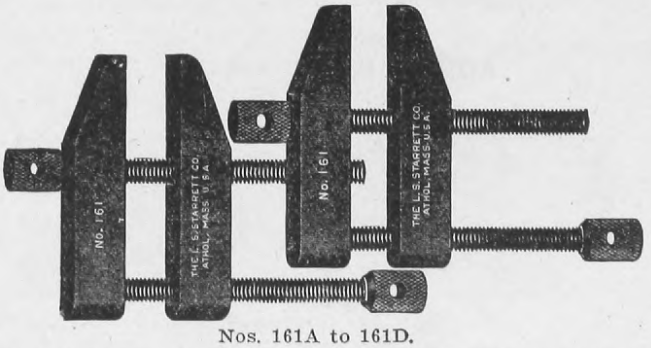


Cut Showing Application.

Starrett. Made from drop forgings, nicely finished, case hardened, and have take-up blocks to slip on and off end of screw. They will hold work square and parallel for laying out on surface plates, fitting or drilling. A round piece may be rigidly held in two of the clamps and drilled on an upright, central and parallel. Put up and sold in pairs.

No. 160—Starrett Tool Makers' Steel Clamp..... 1 inch Capacity.....Per Pair $2.00; 2 inch Capacity.....Per Pair 2.50

TOOLMAKERS' PARALLEL CLAMPS



Nos. 161A to 161D.

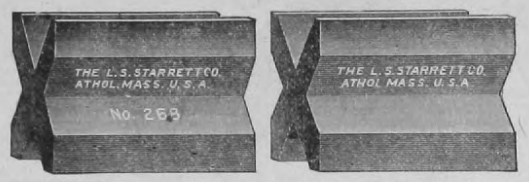
Starrett. Made of Steel, case hardened, very useful for holding small work together in tapping, drilling, etc.

Nos.	161A	161B	161C	161D
Opening of Jaws, inches	1 1/4	1 3/4	2 1/4	2 3/4
Length of Jaws, inches	2	2 1/2	3	4
Per Pair	$1.40	1.70	2.00	2.20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

DRILL BLOCKS AND CLAMPS



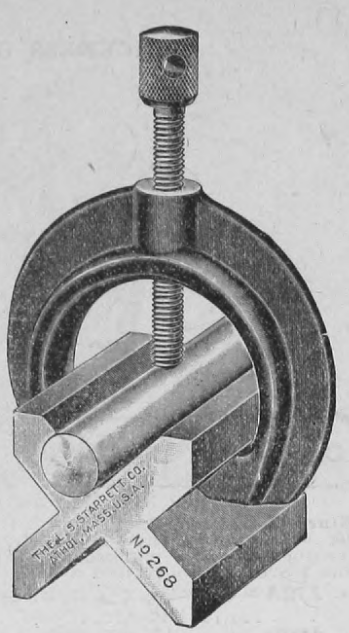
No. 268A.

Starrett. The Clamp will hold a round piece up to 1⅛ inches in diameter firmly in the groove of Drill Blocks, for prick punching, drilling or laying out a series of holes before and while being drilled. The Drill Blocks are furnished in pairs. Each Block measures 2x1½ inches.

No. 268A—Drill Blocks only.....Per Pair, $1.00

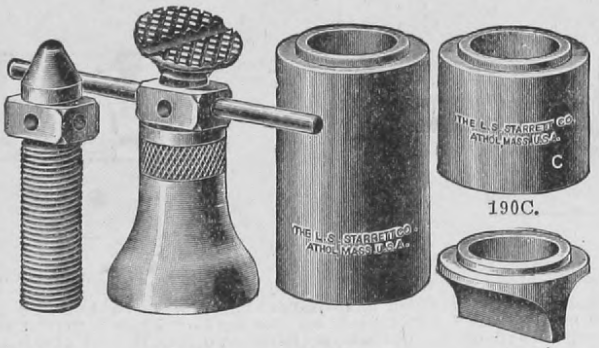
No. 268B—Clamp only.....Each, .50

No. 268C—Complete with Clamp and one pair of Drill Blocks.....Each, 1.50



No. 268C.

LITTLE GIANT JACK SCREWS



190C.

190D 190A 190B 190E

Starrett. Designed for tool room use, for leveling up work on a planer bed or under an upright drill, setting up machinery, etc. **All parts Case Hardened.**

The Jack No. 190A has a range from 2½ to 3⅝ inches. Two Extension Bases, No. 190B and 190C, 2 and 1 inch high respectively, will fit the main part No. 190A, thus increasing the capacity to 6½ inches. The Auxiliary Pointed Screw No. 190D and the Base No. 190E are also provided when preferable. **All parts Case Hardened.**

No. 190 —Little Giant Jack with all Attachments..... Each, $1.40

No. 190A—Little Giant Jack **only**..... Each, .75

ADJUSTABLE PARALLELS

Nos. 154B to 154D.

Starrett. Adjustable Parallels will be found very convenient for use in connection with milling, planer and shaper vises, taking the place of the large number usually required, also for leveling up work on planer, drill press, etc.

No. 154B—Length 2⅛ inches, Thickness 9/32 inch, Capacity ½ to 11/16 inches.....Each, $0.90

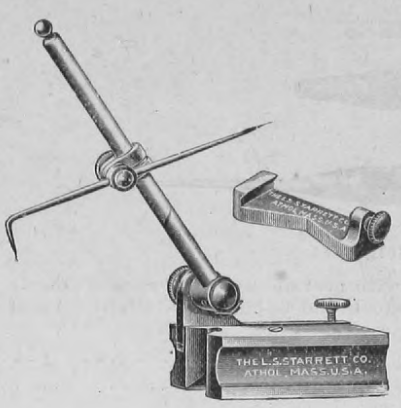
No. 154C—Length 2 11/16 inches, Thickness 9/32 inch, Capacity 11/16 to 15/16 inch.....Each, 1.00

No. 154D—Length 3 9/16 inches, Thickness 9/32 inch, Capacity 15/16 to 1 5/16 inch.....Each, 1.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

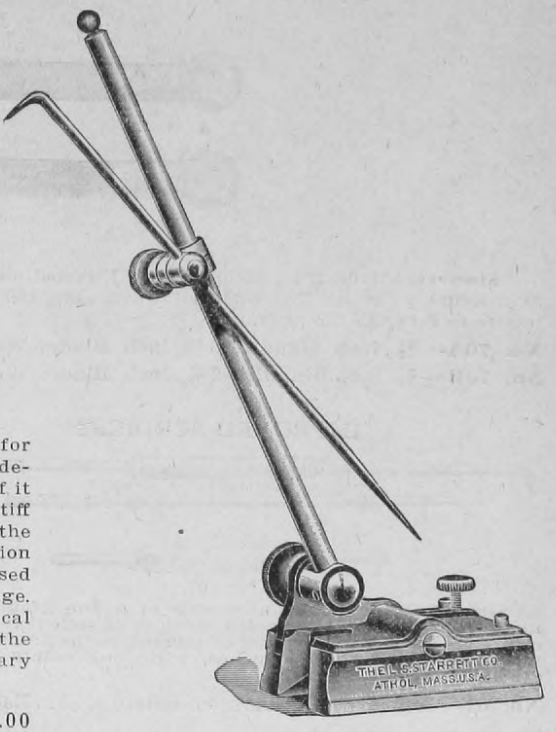
SURFACE GAUGES



No. 56A.

Starrett. Toolmakers' Universal Surface Gauge, admirably adapted for light work. The base is steel, nicely finished and case hardened, with depressions milled in the side for the thumb and finger to grasp. The top of it is slotted and the rocking bracket is pivoted in the same. There is a stiff spring under one end of the bracket and a knurled adjusting screw in the other; the spindle jointed to this may be set and rigidly held in any position from vertical to horizontal, and the scriber placed in position to be used below its base for a depth gauge, or (with bent end down) a scribing gauge. A V-shaped groove in the end and bottom adapts it for use on cylindrical work. There is a small hole in the clamp next to the base in which the scriber may be used for light work, the spindle being removed. An auxiliary guide piece is furnished to clamp to the base.

No. 56A—With 4 inch Spindle and Auxiliary Guide.....Each, $3.00



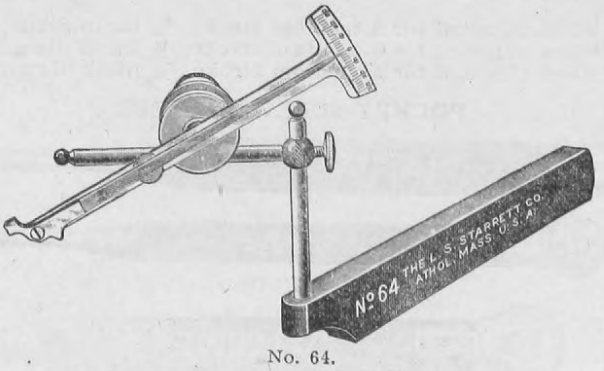
No. 57A to 57C.

Starrett New Universal Surface Gauges

This Gauge has a heavy base grooved through the bottom and end, adapting it for use on or against circular work as well as flat surfaces. The Spindle may be set upright or at any angle, or turned so as to work under the base and be sensitively adjusted to any position. For small work the spindle may be removed and the scriber inserted in hole provided where it can be adjusted and used to advantage on bench work. Two, frictionally held, gauge pins in rear of base may be pushed to bear against the edge of a surface plate or in the slot of a planer bed for lineal work.

No. 57A—3 inch Base, with 9 inch Spindle .....Each, $2.50
No. 57B—3 inch Base, with 9 and 12 inch Spindles.....Each, 2.85
No. 57C—3¾ inch Base, with 12 inch Spindle .....Each, 3.00

UNIVERSAL TEST INDICATORS



No. 64.

Starrett Universal Test Indicators may be used to test and show the imperfections or truth of inside, outside or surface work. A special Holder, as shown in cut, is designed to go in the Tool Post of a Lathe, adapting it for use to show the accuracy of all sorts of Lathe work, Turning, Chucking or locating and centering work on Face Plate. The Head of the needle has three working points, equal distance from its fulcrum, so the tell-tale needle will vibrate, reading in thousandths, when work is in contact with either point. Indicator can also be used on Surface Gauges Nos. 56A, 57A, 57B and 57C as illustrated above.

No. 64—Indicator, with Tool Post Holder, Complete.....Each, $3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

POCKET SCRIBERS

Nos. 70A and 70B.

Starrett. Made from steel tubing, Knurled and Nickel Plated, with best quality Steel Scriber, nicely tempered and held by a knurled chuck. The Scriber is reversible, telescoping into the stock and is held by a slight turn of the chuck making it safe to carry in the pocket.

No. 70A—¼ inch Handle, 2⅜ inch Blade, Weight 1 ounce ..... Each, $0.25
No. 70B—⅜ inch Handle, 2⅞ inch Blade, Weight 1½ ounces ..... Each, .35

IMPROVED SCRIBERS

No. 67.

Starrett. The Points are made of a fine grade of Steel, nicely tempered. The knurled Stock is of sufficient size to be easily held without cramping or turning in the finger. Length with short bent point 9 inches, with long points 12 inches, all parts interchangeable.

No. 67—Improved Scribers, complete..... Each, $0.50

ADJUSTABLE SLEEVE SCRIBERS

No. 68.

Starrett Improved Adjustable Sleeve Scribers. The knurled Sleeve has a hole clear through and a clamping device at each end adapting it for slipping on or off different tools, securely holding them near to or away from the working point.

No. 68—Length 8 inches..... Each, $0.50

AUTOMATIC ADJUSTABLE-STROKE CENTER PUNCHES

Nos. 18AA to 18B.

Starrett. The Knurled Adjustable Screw Cap, working in connection with a spring, regulates the stroke. For work requiring a heavy mark turn Cap down; for work requiring a light mark turn Cap up; no hammer is needed. When adjusted for either light or heavy stroke all indentations are of a uniform size. The point can be removed for regrinding and is easily replaced.

No. 18AA—Length 3¾ inches when adjusted for a medium stroke, ⅜ in. in diam., weight 1 ounce .... Each, $1.50
No. 18A —Length 5 inches when adjusted for a medium stroke, ½ in. in diam., weight 3 ounces.... Each, 2.00
No. 18B —Length 6 inches when adjusted for a medium stroke, ⅝ in. in diam., weight 4 ounces.... Each, 2.50

POCKET SCREW DRIVERS

No. 553. Open.

No. 553. Closed.

Starrett. Made from Steel Tubing, Knurled and Nickel Plated. The butt of the blade fits a solid lock in the tube preventing it from turning, and is held from coming out by a slight turn of the chuck. Reverse blade, insert it in handle, giving a slight turn of the chuck to keep it there and tool can be carried in pocket.

No. 553A—Handle ¼ inch diameter, Blade 2¾ inches long, weight ½ ounce..... Each, $0.25
No. 553B—Handle ⅜ inch diameter, Blade 3 inches long, weight 1½ ounces..... Each, .35

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

MAGAZINE SCREW DRIVERS

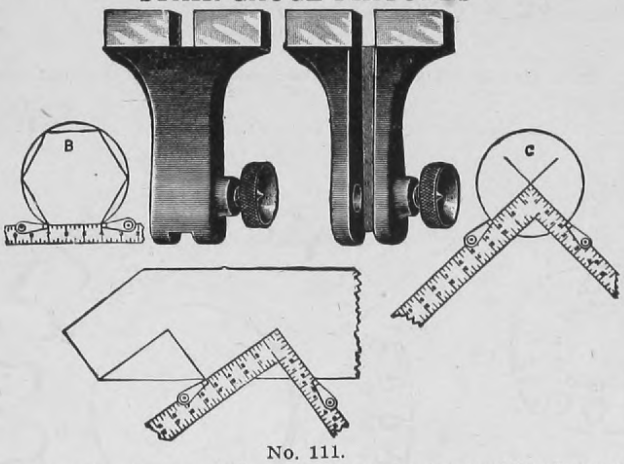
No. 557. Open.

No. 557. Closed.

Starrett. The best tool ever offered for a set of pocket screw drivers. It has four blades of different widths, any of which may quickly be taken from the telescope handle and inserted in the end, where it is automatically locked and firmly held for use. Blades are carried in handle, where by a spring pressure they are held from rattling when carried in pocket, or from being lost when the cap is off.

No. 557—Starrett Patent Magazine Screw Drivers, Complete ..... Each, $1.00

STAIR GAUGE FIXTURES

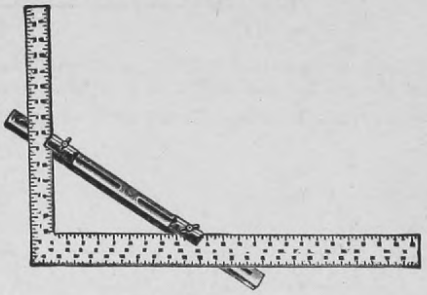


No. 111.

Starrett. A pair of these fixtures can be readily clamped to a carpenter's steel square to form a gauge for various uses. Sketch A shows the gauge as applied for laying out a stair stringer; Sketch B, laying off hexagon angles; Sketch C, as used as a center gauge or in quartering a circle.

No. 111—Stair Gauge Fixtures ..... Per Pair, $0.75

PATENT STAIR GAUGES

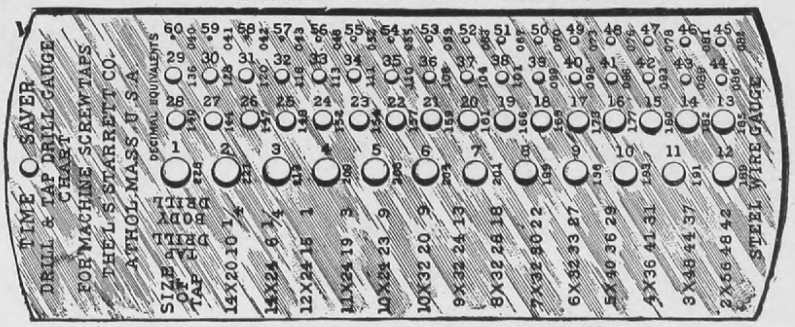


Nos. 110A and 110B.

Starrett. This Gauge is to be used in connection with any carpenter's steel square, and can be adjusted to any pitch or angle desired. Invaluable for cutting in rafters, braces, stairs, etc.

No. 110A—Plain, 18 inch, Nickel Plated .... Each, $1.50
No. 110B—Plain, 28 inch, Nickel Plated .... Each, 2.00

DRILL AND WIRE GAUGES



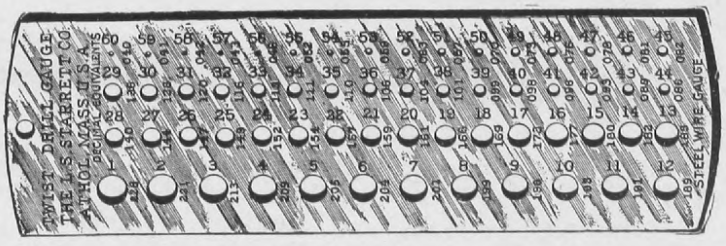
No. 185.

Starrett Time Saver Drill, Tap and Steel Wire Gauge

By the use of this Gauge one is enabled to select at once the right sized drill to suit machine screw tap most commonly used, leaving just stock enough for the tap to cut as near a full thread as is practicable for one tap without breaking it.

Explaining the chart, the first row of figures, for example, read thus: 14x20 10 ¼. The number 14 (in the first row of figures) means the number or size of tap; 20 the pitch or size of thread; 10 the size of drill to use which will leave the right stock for proper thread; and ¼, size of drill to use to let this tap or screw through outside of the thread.

No. 185—Starrett Time Saver Drill, Tap and Steel Wire Gauge, Sizes Nos. 1 to 60 ..... Each, $2.00



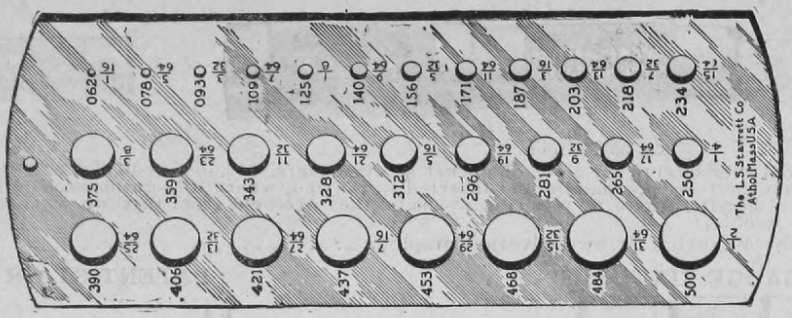
No. 186.

This Gauge gives the number of Drill to fit each hole and size of the hole in thousandths of an inch.

No. 186—Starrett Twist Drill Gauge ..... Each, $1.50

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

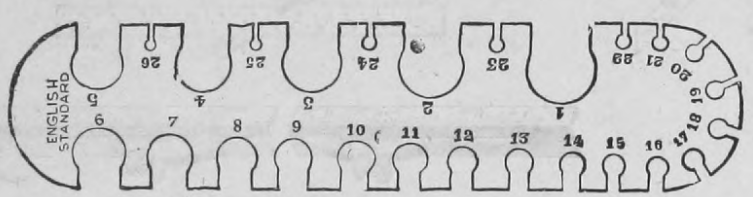
DRILL AND WIRE GAUGES



No. 187.

This Gauge shows sizes from 1/16 to 1/2 inch varying by 64ths. Each size is designated by both common and decimal fractions. The Gauge is hardened and tempered and the holes standard.

No. 187—Starrett Jobbers' Twist Drill Gauge.....Each, $2.25

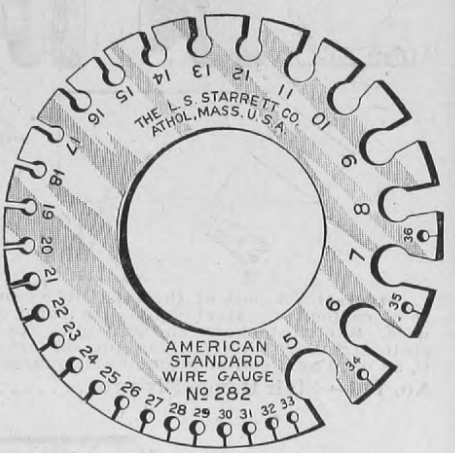


Full Size Cut of No. 4.

P. S. & W. Co., Tinners' Wire Gauges, English Standard, Cast Steel, Polished.

No. 4—Small, Oblong, for Wire Nos. 1 to 26.....Per Dozen, $17.00

Packed—Half Dozen in a Box.



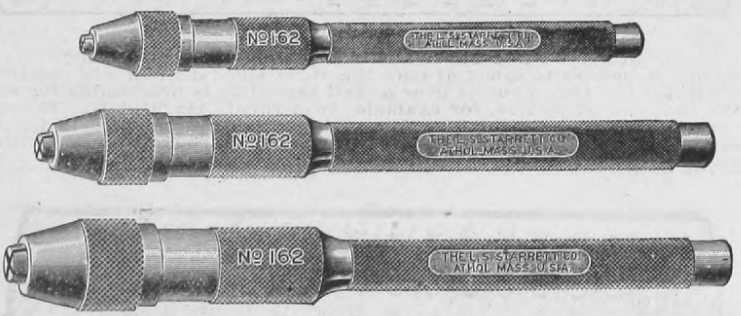
No. 282. Style of Nos. 1 and 281.

Each Gauge is tested after hardening and warranted accurate.

No. 281—Starrett American Standard Gauge, takes in Nos. 0 to 36.....Each, $2.50
No. 282—Starrett American Standard Gauge, takes in Nos. 5 to 36.....Each, 2.00
No. 1—P. S. & W. Co., Tinners' English Standard, takes in Nos. 0 to 36, Cast Steel, Polished.....Each, 2.00

MACHINISTS' TOOLS

PIN VISES



Nos. 162A to 162S.

Starrett Pin Vises have hardened jaws with chucks so made that they will hold firmly anything inserted in them. Especially adapted for holding scribers, small files, etc. The hole extends clear through the handle. Nickel Plated.

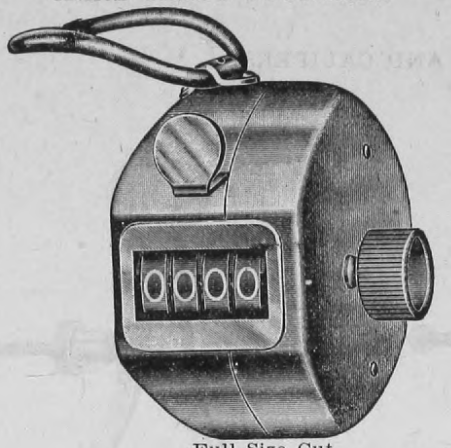
Nos.	162A	162B	162C	162D
Capacity, inch	.0 to .040	.030 to .062	.050 to .125	.115 to .187
Each	$0.55	.55	.55	.75

No. 162S—Set containing one of each size.....Per Set, $2.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

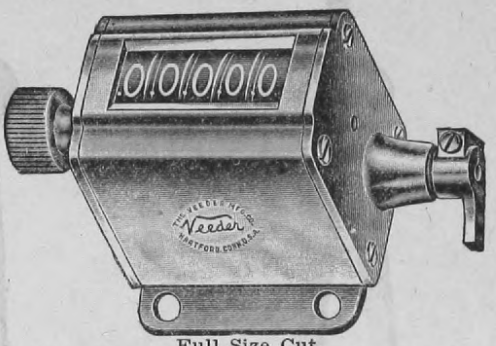
MACHINISTS' TOOLS

HAND TALLY COUNTERS



Full Size Cut.

REVOLUTION COUNTERS



Full Size Cut.

Veeder Hand Tally Counters

A new Instrument with four figures embodying a number of desirable features not found in any other hand tally, chief among which is the fact that it can be quickly set to zero by one turn of the knob. Case is small in size and has been designed with rounded corners so as not to irritate the hand of the user, nor to wear the pockets when carrying it. This Counter is useful to Conductors, Head Waiters, Traffic Officers, by Gatemen and Ticket Takers at Baseball Parks and Railway Stations, also used in Mines, Lumber Camps, Ranches, Stock Yards, by Telephone and Electric Companies as Pole Counters, Nurseries and Foresters as Tree Counters, in fact for any and every purpose where an accurate count is desired.

Hand Tally Counter with Quick Set Back.....Each, $4.00

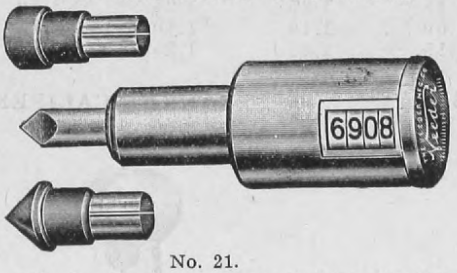
Veeder Revolution Counters

This Revolution Counter registers one for each revolution of the Shaft and it is so constructed that it will always add no matter in which direction the shaft is turned. Can be reset to zero by one turn of the Knob. Ratchets and Pawls are made of hardened Steel and the Springs are made of the very best Spring Steel which should retain its elasticity for an indefinite time. **Can be furnished with 2, 3, 4 or 5 figure Wheels.**

Small Set Back Revolution Counter.....Each, $5.00

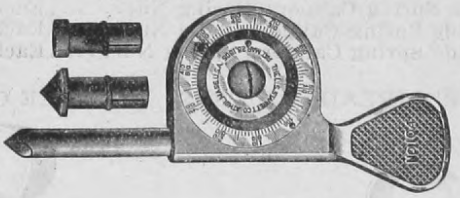
Note.—When Ordering state if you desire to have the Drive Shaft project on the right or left hand side; also give number of Figure Wheels required.

CLUTCH SPEED COUNTERS



No. 21.

SPEED INDICATORS



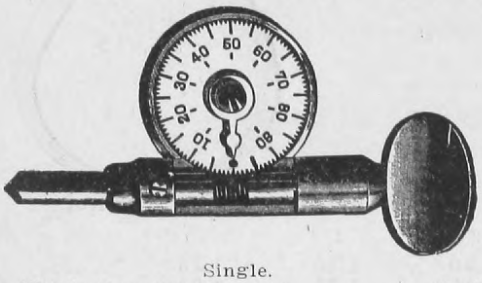
No. 104.

Veeder. The best Instrument for finding revolutions per minute made by a shaft, or any other revolving part. Speeds as high as 5,000 R. P. M. can be safely measured. A Stop Watch is not needed because of the clutch in the counter.

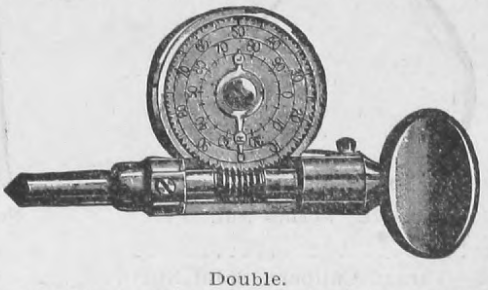
No. 21—Speed Counter, with Two Rubber Tips.....Each, $3.00

Starrett Speed Indicators may be run at highest speed without heating on account of our frictionless bearing against which the inner end of the spindle revolves. Working parts are encased and the Dial Plate has two rows of figures reading right or left, as the shaft may run. Rotating Disc, being carried by friction, may be moved to starting point where the two raised knobs coincide. When the spindle is placed in connection with the revolving shaft, pressing the raised knob with the thumb will prevent the disk from rotating, while the hand of the watch gets to the right position to take the time. By releasing the pressure the disk is liberated for counting the revolutions of the shaft when every 100 may be noted by feeling the knob pass under the thumb pressed light against it.

No. 104—Nickel Plated, with Two Rubber Tips, in Pasteboard Box.....Each, $1.00



Single.



Double.

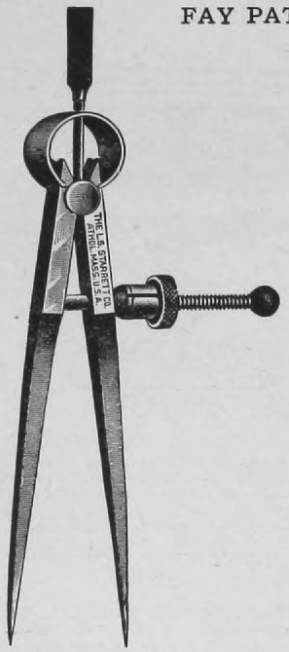
No. 14—Single Speed Indicators.....Each, $0.75 | **No. 28—Double** Speed Alarm Indicators....Each, $1.50

Note.—These Indicators are accurate, reliable, and the thinnest and lightest made. In the Double Speed Alarm Indicators, the bell rings when either hand is at its zero and afterwards at every hundred revolutions of the spindle. A shaft turning to the left is registered by the shorter hand, stamped L, and on the inner dial; a shaft turning to the right by the longer hand, marked R, and on the outer dial.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

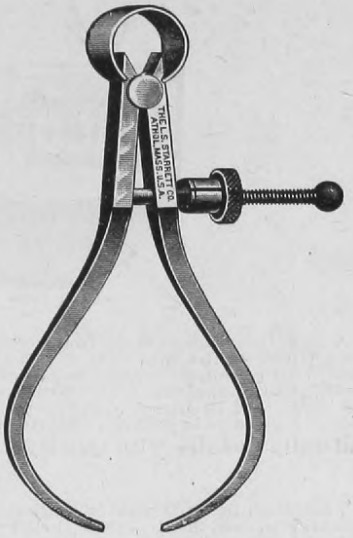
MACHINISTS' TOOLS
STARRETT

FAY PATENT SPRING DIVIDERS AND CALIPERS



No. 077. Spring Nut.

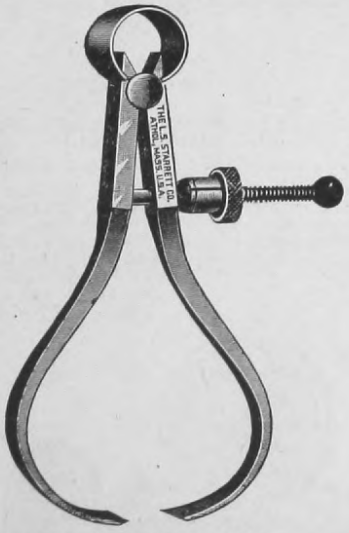
No. 074. Spring Nut.



No. 075. Spring Nut.

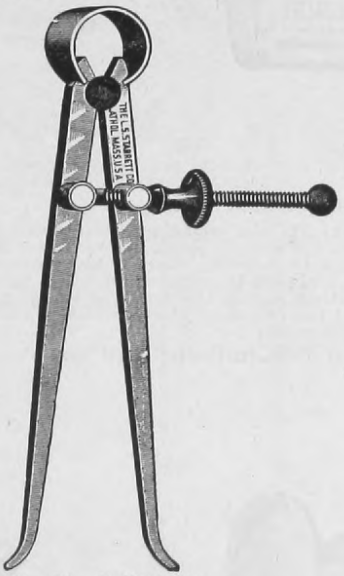
Length .....Inches,	3	4	5	6	8
No. 77—Spring Dividers, **Solid** Nut.....Each,	$1.00	1.25	1.25	1.60	1.85
No. 077—Spring Dividers, **Spring** Nut.....Each,	1.15	1.40	1.40	1.75	2.00
No. 74—Inside Spring Calipers, **Solid** Nut.....Each,	1.00	1.10	1.10	1.35	1.60
No. 074—Inside Spring Calipers, **Spring** Nut.....Each,	1.15	1.25	1.25	1.50	1.75
No. 75—Outside Spring Calipers, **Solid** Nut.....Each,	1.00	1.10	1.10	1.35	1.60
No. 075—Outside Spring Calipers, **Spring** Nut.....Each,	1.15	1.25	1.25	1.50	1.75

FAY PATENT THREAD CALIPERS



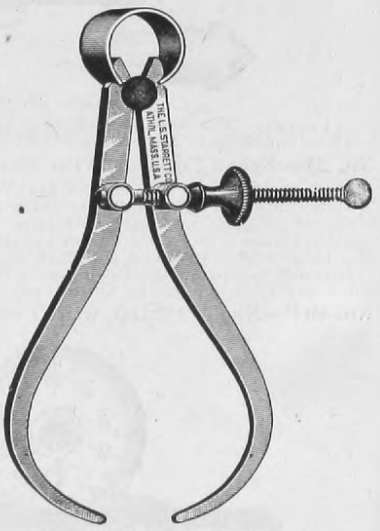
No. 076. Spring Nut.

YANKEE CALIPERS



No. 73. Solid Nut.

YANKEE CALIPERS



No. 79. Solid Nut.

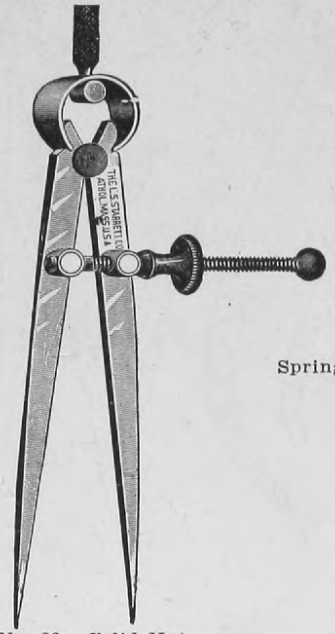
Length .....Inches,	3	4	5	6	8
No. 76—Thread Calipers, **Solid** Nut.....Each,	$1.00	1.10	1.10	....	....
No. 076—Thread Calipers, **Spring** Nut.....Each,	1.15	1.25	1.25	....	....
No. 73—Inside Calipers, **Solid** Nut.....Each,	.70	.75	.80	.85	1.00
No. 073—Inside Calipers, **Spring** Nut.....Each,	.85	.90	.95	1.00	1.15
No. 79—Outside Calipers, Solid Nut.....Each,	.70	.75	.80	.85	1.00
No. 079—Outside Calipers, Spring Nut.....Each,	.85	.90	.95	1.00	1.15

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MACHINISTS' TOOLS

STARRETT

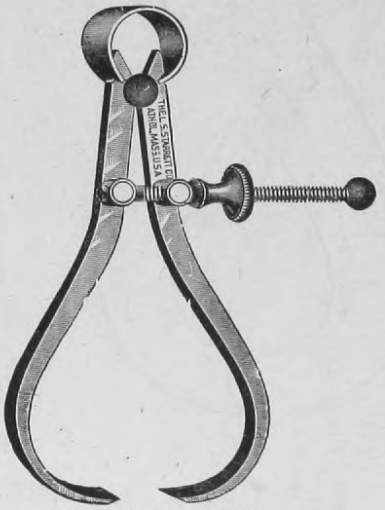
YANKEE SPRING DIVIDERS



No. 83. Solid Nut.

Spring Nut for Nos. 083, 080, 0179 and 0184.

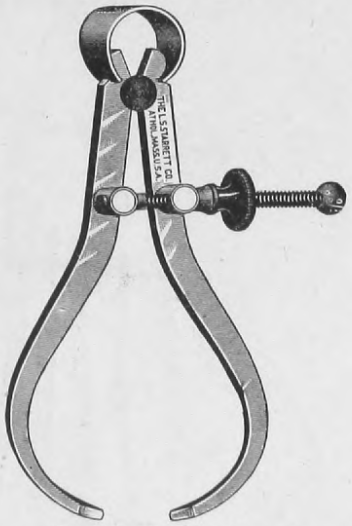
YANKEE THREAD CALIPERS



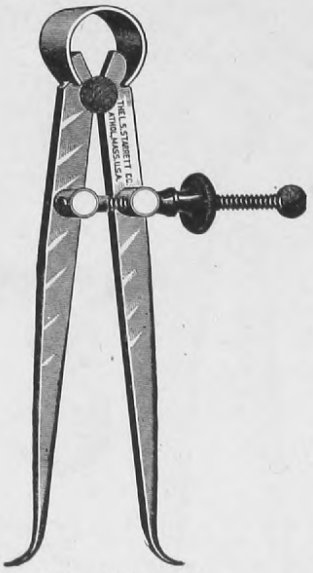
No. 80. Solid Nut.

Length, inches	3	4	5	6	8
No. 83—Spring Dividers, **Solid** Nut.....Each,	$0.70	.75	.80	.85	1.10
No. 083—Spring Dividers, **Spring** Nut....Each,	.85	.90	.95	1.00	1.25
No. 80—Thread Calipers, **Solid** Nut.....Each,	.85	.90	.95	....	....
No. 080—Thread Calipers, **Spring** Nut....Each,	1.00	1.05	1.10	....	....

STARRETT THREAD CALIPERS

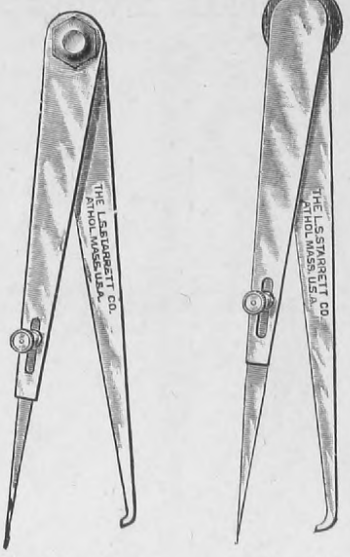


No. 179. Solid Nut.



No. 184. Solid Nut.

HERMAPHRODITE CALIPERS



No. 41. No. 42.

Length, inches	4	5	6
No. 179—Outside Thread Calipers, **Solid** Nut.....Each,	$0.75	.80	.85
No. 0179—Outside Thread Calipers, **Spring** Nut....Each,	.90	.95	1.00
No. 184—Inside Thread Calipers, **Solid** Nut.....Each,	.75	.80	.85
No. 0184—Inside Thread Calipers, **Spring** Nut.....Each,	.90	.95	1.00

Hermaphrodite Calipers, with Adjustable point and sensitive adjustment.

Length, inches	4	6	8
No. 41—Lock Joint Hermaphrodite Calipers.....Each,	$0.65	.80	1.00
No. 42—Firm Joint Hermaphrodite Calipers.....Each,	1.00	1.15	1.35

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

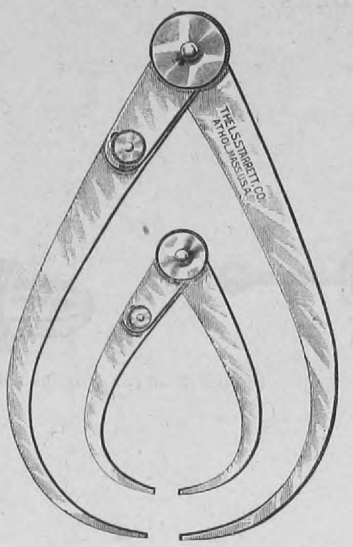
MACHINISTS' TOOLS

FIRM JOINT CALIPERS

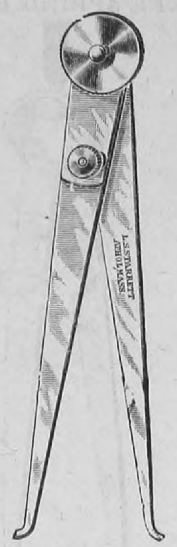
No. 26.

No. 27.

LOCK JOINT CALIPERS



No. 38.



No. 39.

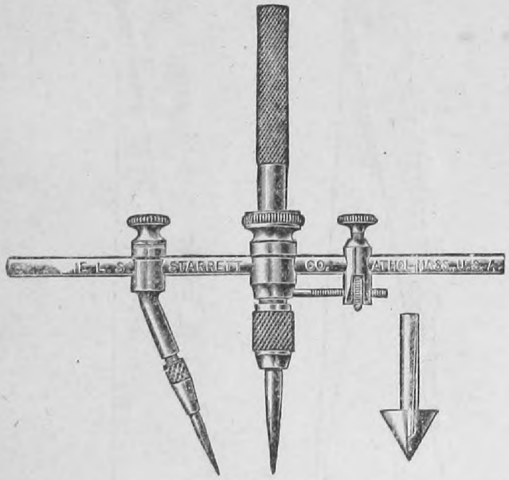
Starrett Improved Firm Joint Calipers

Length.....Inches,	4	5	6	8	10	12	14	16	18	20	24
No. 26—Outside...Each,	$0.50	.55	.65	.80	.90	1.00	1.50	1.75	2.10	2.50	3.00
No. 27—Inside....Each,	.50	.55	.65	.80	.90	1.00	1.50	1.75	2.10	2.50	3.00

Starrett Lock Joint Calipers

Length.....Inches,	6	8	10	12	14	16	18
No. 38—Outside....Each,	$1.00	1.25	1.50	1.75	2.00	2.25	2.50
No. 39—Inside.....Each,	1.00	1.25	1.50	1.75	2.00	2.25	2.50

UNIVERSAL DIVIDERS



No. 89.

BALL POINTS

No. 88.

For use with No. 85 Dividers and No. 59 Trammels. Forms a seat for divider leg in describing circles around a hole. Consists of 4 balls, 1⁹⁄₁₆, 1, ¾ and ½ inch diameter, and a Holder which fits either Divider Leg or Trammel Head.

No. 88 { Complete .....Each, $1.25
{ Ball or Holder only....Each, .25

EXTENSION DIVIDERS

No. 85.

Starrett. The Adjustable Scriber Holder is reversible and carries either a fine tempered steel point or a pencil lead, held in a split socket by a knurled nut. 7½ inches and under may be scribed.

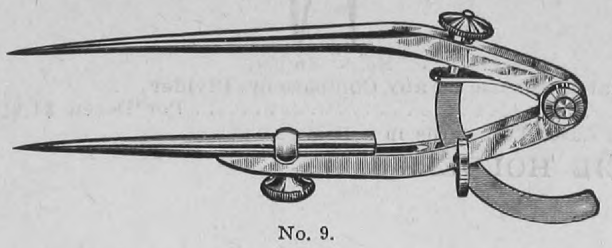
No. 89—With 4 inch Beam and V Center Point.....Each, $2.00

Starrett Improved Extension Dividers, with Auxiliary Caliper Legs, which together with a common pencil, form convenient combination. The point is 7 inches long, by adjustment it becomes 9 inches, and will scribe a 22 inch circle; will caliper 11 inches outside and 13 inches inside.

No. 85A—7 inch, with Divider Legs only.....Each, $1.50
No. 85C—7 inch, complete as illustrated.....Each, 2.50

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

EXTENSION DIVIDERS

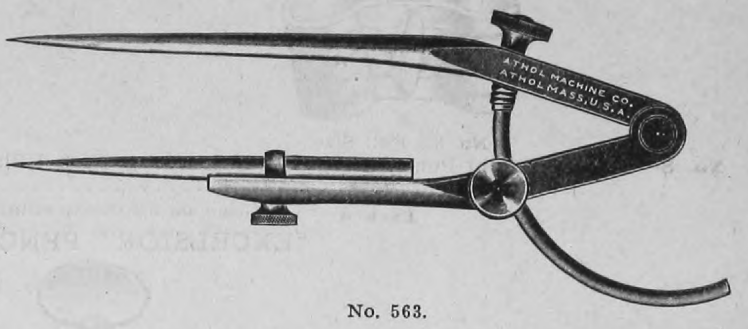


No. 9.

Forged Steel, Full Polished, with One Movable Point, easily and accurately adjusted.

No. 9	Inches	6	8	10
	Per Dozen ..	$9.00	11.00	12.00

Packed—Half Dozen in a Box.



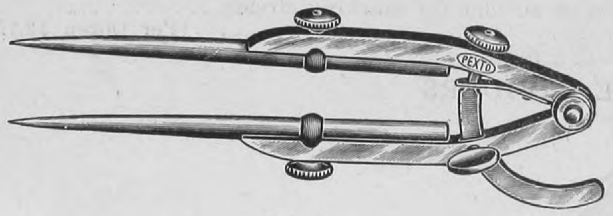
No. 563.

Cast Steel, Full Polished, with One Movable Point, easily and accurately adjusted.

No. 563 ..	Inches	6	8	10
	Per Dozen ..	$10.20	12.00	15.00

Packed—Half Dozen in a Box.

EXTENSION DIVIDERS



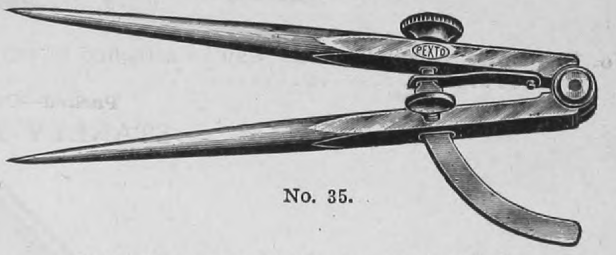
No. 19.

Forged Steel, Full Polished, with Two Movable Points. Easily and accurately adjusted.

No. 19—Inches ...	6	8	10
Per Dozen	$10.00	12.00	13.00

Packed—Half Dozen in a Box.

WING DIVIDERS



No. 35.

Solid Leg, Forged Steel, Full Polished.

No. 35—Inches ...	6	7	8	9	10
Per Dozen	$5.50	6.50	7.50	9.00	10.00
No. 35—Inches ...	12	15	18	24	
Per Dozen	$12.00	28.00	39.00	56.00	

Packed—6 to 8 inch, One Dozen in a Box.
Larger Sizes, Half Dozen in a Box.

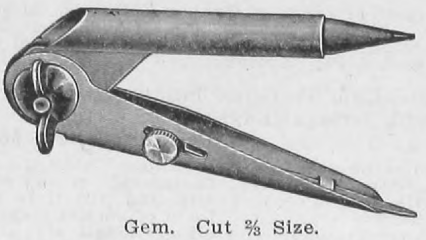
COMPASS AND DIVIDER

No. 569.

For Architects, Draughtsmen, Artists, School Children and Mechanics, this attractive compass will be found to be most useful and reliable in its work. Easily and accurately adjusted.

No. 569—Eagle Compass and Divider ..... Per Dozen, $3.00

GEM SCRIBERS



Gem. Cut ⅔ Size.

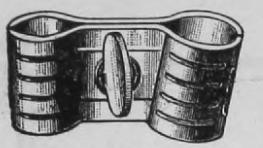
Useful to all Mechanics, Carpenters especially. Takes the place of the compass, and being very small, can be carried in the vest pocket.

Gem Improved Scriber ..... Per Dozen, $4.70

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANLEY PENCIL CLASPS



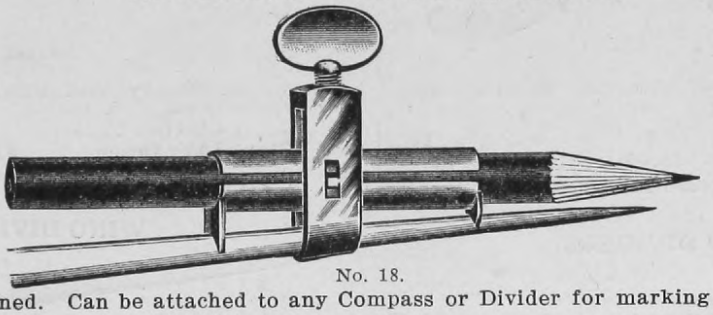
No. 8. Full Size.

No. 8. In use.

No. 8—Stanley Patent Pencil Clasp, 1¼ inches long, Nickel Plated, for use on any Compass or Divider..... Per Dozen $1.25

Packed—One Dozen on an Ornamental Card, Two Cards in a Box.

"EXCELSIOR" PENCIL HOLDERS

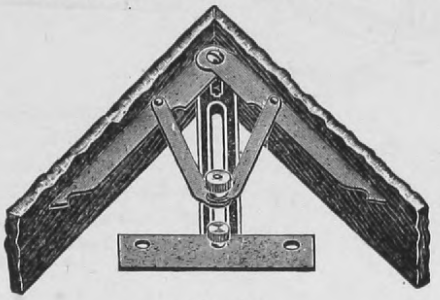


No. 18.

No. 18—Brass, Nicely Tinned. Can be attached to any Compass or Divider for marking circles..... Per Dozen $2.75

Packed—One Dozen in a Box.

STANLEY ANGLE DIVIDERS



No. 30.

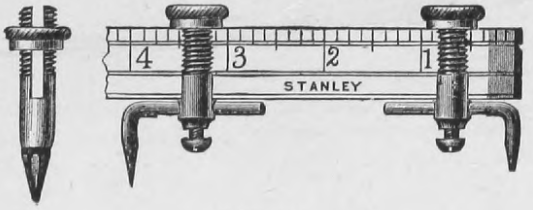
With this tool any angle can be found and bisected. Fitting moulding or other wood work to odd angles can be done with ease and certainty. It is also graduated for the parts of circle commonly used. Can also be used as a Try or T Square.

No. 30—Stanley Angle Dividers, Length 7⅜ inches, Nickel Plated ..... Per Dozen $18.00

Packed—One-twelfth Dozen in a Box.

STANLEY TRAMMEL POINTS

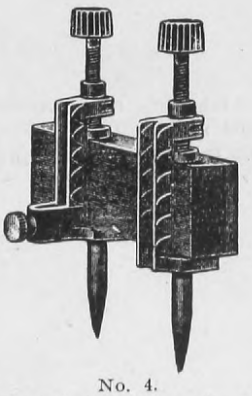
Nos. 1 and 2.



No. 99.

A practical form of Trammel Points, adapted for use on a carpenter's rule. Consists of Two Brass Heads, with Movable Steel Points and One Head with a Pencil Socket.

No. 99—Rule Trammel Points for use with Straight Edges up to ¾ inch, ... Per Dozen Sets $6.00



No. 4.

These Tools are used by carpenters', etc., having occasion to strike arcs or circles larger than can be done with the ordinary compass. Made of Bronze Metal, with Steel Points. A pencil socket furnished with each pair.

No. 1—For ⅝ inch Straight Edge..... Per Dozen Sets $14.40

No. 2—For 1 inch Straight Edge..... Per Dozen Sets 18.00

These Tools are so constructed that they can be attached to one side of any straight stick, without exact regard to its size and are thus quickly adjusted for use. The peculiar form of socket makes it possible to use an ordinary size pencil or a full size oval shaped carpenter's pencil. Made of Iron, Nickel Plated, with Steel Points.

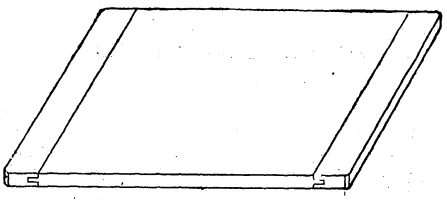
No. 4—For Straight Edges up to 1¼ inch..... Per Dozen Sets $9.00

Packed—All Trammel Points One-twelfth Dozen Sets in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DRAWING TOOLS

BOARDS



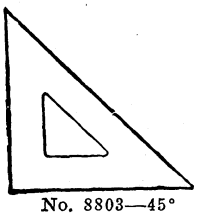
No. 8500

School Drawing Boards, Whitewood, both sides flat, end-cleats tongued and grooved.

No. 8500—Inches	16x21	18x23	20x26
Per Dozen	$9.60	12.60	15.60

TRANSPARENT TRIANGLES

No. 8802—30x60°

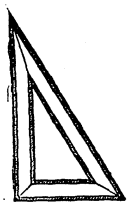


No. 8803—45°

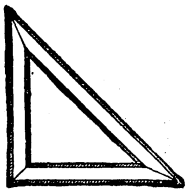
Plain Transparent Xylonite Triangles

	30x60 Degrees.									
No. 8802—Inches	4	5	6	7	8	9	10	11	12	14
Per Dozen	$2.90	3.70	4.50	5.30	6.10	6.90	8.10	9.80	11.70	16.20
	45 Degrees.									
No. 8803—Inches	4	5	6	7	8	9	10	11	12	14
Per Dozen	$4.50	5.30	6.10	7.30	8.90	10.20	11.70	14.60	17.90	22.30

MAHOGANY TRIANGLES



No. 8804—30x60°

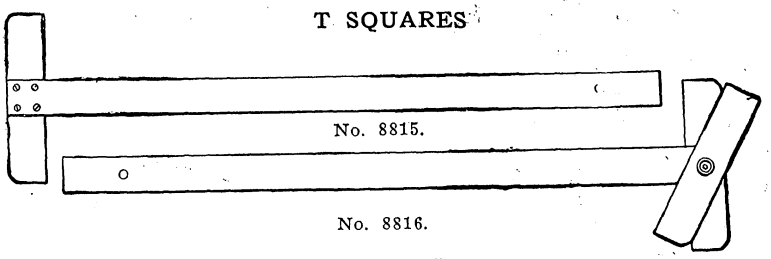


No. 8805—45°

Mahogany Triangles, with Ebonized Lining

	30x60 Degrees.					
No. 8804—Inches	7	9	11	14	17	20
Per Dozen	$4.00	5.40	7.40	10.00	14.70	19.00
	45 Degrees.					
No. 8805—Inches	6	8	10	12	14	16
Per Dozen	$4.00	5.40	6.50	10.00	12.50	16.00

T SQUARES

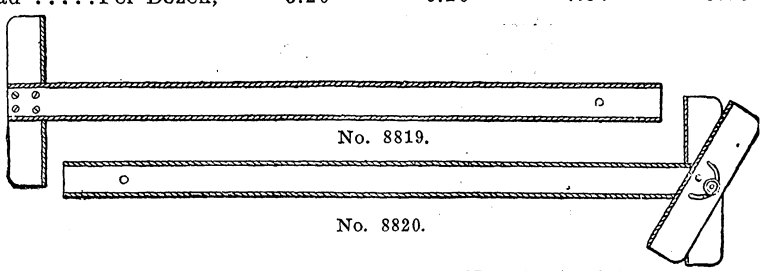


No. 8815.

No. 8816.

Hardwood T Squares

Inches	15	18	24	30	36	42
No. 8815—Fixed Head ....Per Dozen,	$2.20	2.50	3.20	4.00	4.60	5.60
No. 8816—Double Head ....Per Dozen,	5.20	6.20	7.50	8.40	9.20	10.00



No. 8819.

No. 8820.

Mahogany T Squares, with Ebonized Lining

Inches	18	24	30	36	42	48	54
No. 8819—Fixed Head...Per Dozen,	$6.00	7.50	9.00	10.80	12.80	15.00	17.50
No. 8820—Double Head..Per Dozen,	10.00	12.80	14.60	16.60	19.00	21.50	24.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

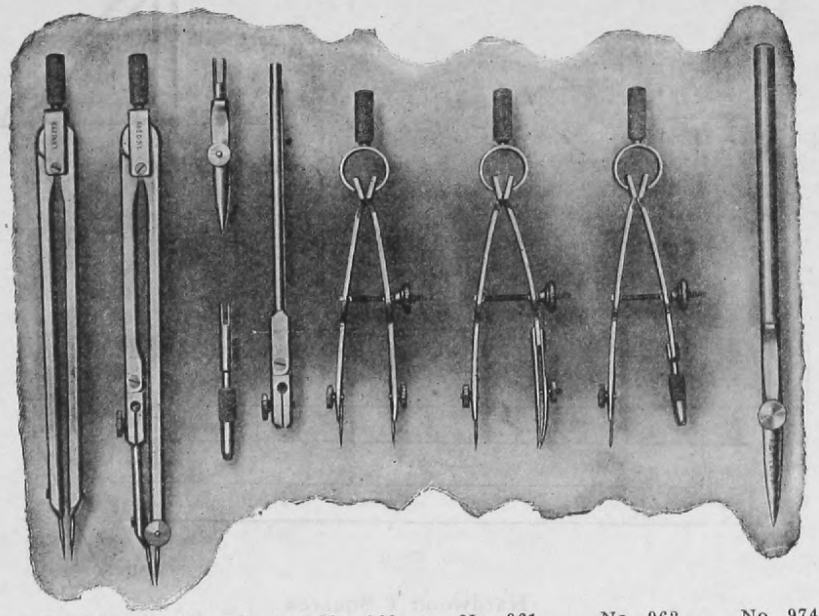
DRAWING TOOLS

IRREGULAR CURVES

Transparent Xylonite Irregular Curves.

Style	A	B	C	D	E	F	G	H	I	K	L	M	N
Per Dozen....	$4.50	6.00	6.75	6.75	6.75	6.00	6.75	4.50	6.75	7.50	4.10	9.75	15.00

DRAWING INSTRUMENTS



No. 946. No. 950. No. 960. No. 961. No. 962. No. 974.

K & E Pilot Drawing Instruments

Pilot Drawing Instruments are intended to meet the demand for a serviceable and durable instrument, at a moderate price. The materials used, Nickel-Silver and Fine Tool Steel, are the best obtainable.

The above illustration represents the following items:

No. 946—Plain Divider, 5¾ inch.....Each, $1.90

No. 950—Compasses, 6½ inch, with fixed Needle Point, Pen, Pencil Point and Lengthening Bar.....Each, 4.75

No. 960—Steelspring Bow Divider, nickel-silver Handle, 3¾ inch.....Each, 1.25

No. 961—Steelspring Bow Pen, Spring Blade, with Needle Point, nickel-silver Handle, 3¾ inch.....Each, 1.75

No. 962—Steelspring Bow Pencil, with Needle Point, nickel-silver Handle, 3¾ inch.....Each, 1.75

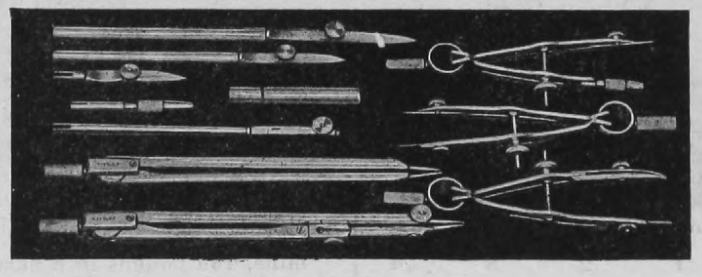
No. 972—Drawing Pen, upper blade with spring, 4½ inch.....Each, .95

No. 974—Drawing Pen, upper blade with spring, 5½ inch.....Each, 1.10

No. 959—Lead Box, containing 3 leads.....Each, .10

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DRAWING INSTRUMENTS



No. 986.

K. & E. Pilot Drawing Instruments

No. 980—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Drawing Pen 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959 ..... Each, $ 8.20

No. 982—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Drawing Pen, 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959; Plain Divider, 5¾ inches, No. 946 ..... Each, 10.10

No. 984—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Drawing Pen, 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959; Plain Divider, 5¾ inches, No. 946; Steelspring Bow Pen, 3¾ inches, No. 961 ..... Each, 12.00

No. 984½—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Drawing Pen, 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959; Plain Divider, 5¾ inches, No. 946; Steelspring Bow Pen, 3¾ inches, No. 961; Steelspring Bow Pencil, 3¾ inches, No. 962 ..... Each, 13.75

No. 985—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Drawing Pen, 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959; Plain Divider, 5¾ inches, No. 946; Steelspring Bow Pen, 3¾ inches, No. 961; Steelspring Bow Pencil, 3¾ inches, No. 962; Drawing Pen, 4½ inches, No. 972 ..... Each, 14.70

No. 985½—Pocket Case, containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point, and Lengthening Bar, No. 950; Drawing Pen, 5½ inches, upper Blade with Spring, No. 974; Lead Box containing 3 Leads, No. 959; Plain Divider, 5¾ inches, No. 946; Steelspring Bow Divider, 3¾ inches, No. 960; Bow Pen, 3¾ inches, No. 961; Bow Pencil, 3¾ inches, No. 962 ..... Each, 15.00

No. 986—Pocket Case, (as illustrated above) containing: Compasses, 6½ inches, with Fixed Needle Point, Pen, Pencil Point and Lengthening Bar, No. 950; Plain Divider, 5¾ inches, No. 946; Steelspring Bow Divider, 3¾ inches, No. 960; Bow Pen, 3¾ inches, No. 961; Bow Pencil, 3¾ inches, No. 962; Drawing Pens, upper Blades with Spring, No. 972, 4½ inches and No. 974, 5½ inches; Lead Box containing 3 Leads, No. 959 ..... Each, 16.00

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GLUE POTS

Tinned.

Nos.	0	1	2	3	4
Pints	1	1½	2	3	4
Per Dozen	$6.00	6.75	8.40	10.26	12.42

Enameled.

Nos.	00	01	02	03	04
Pints	1	1½	2	3	4
Per Dozen	$6.00	6.75	8.40	10.26	12.42

BULK GLUE

Sheet and Broken Glue.

No. 7—Broken, Medium, Clear, for Cabinet Makers, 150 lbs. in a barrel..Per Pound, $.....
No. 15—Broken, Medium, White, for Calcimine, 150 pounds in a barrel..Per Pound, $.....
No. 20—Pulverized, Strong, Light, for Quick Work, 150 pounds in a barrel..Per Pound, $.....
No. 125—Sheet, Strong, Light, for Carpenters and Joiners, about 250 pounds in a cask.. .....Per Pound, $.....
No. 150—Sheet, Amber, First Quality, for Best Work, about 250 pounds in a cask..... .....Per Pound, $.....

LEPAGE'S PHOTO PASTE

No. 51.

For mounting Photographs and for all fine paper work. Contains no injurious ingredients, spreads easily and does not strike through the paper or warp the mount.

No. 51—In 1½ oz. Screw Cap Col. Tubes. Per Dozen $0.92
Packed—One Dozen in a Display Box; One Gross in a Case

LEPAGE'S LIQUID GLUE

No. 27.

No. 27—One Ounce, Small Size, in Self-Sealing Collapsible Tubes.....Per Dozen, $1.60
Packed—One Dozen in a Box; One Gross in a Case.

LEPAGE'S LIQUID GLUE

No. 25.

Nos. 29 and 30.

Nos. 31 to 35.

Family Glue in Glass Bottles.

No. 25—Small Bottles, with Spreader, one dozen in a box .....Per Dozen, $ 1.60

Packed—One Gross in a Case.

Family Glue in Patent Tin Cans.

No. 30—One Gill Cans, one dozen in a box.....Per Dozen, 2.80

Packed—Six Dozen in a Case.

Mechanics' Glue in Tin Cans with Special Fastenings and Large Outlets.

No. 31—Half Pint Cans, two dozen in a case.....Per Dozen, $ 4.50
No. 32—One Pint Cans, one dozen in a case.....Per Dozen, 7.00
No. 33—One Quart Cans, one dozen in a case.....Per Dozen, 11.25

Mechanics' and Manufacturers' Glue in Tin cans with Special Fastenings and Large Outlets.

No. 34—Half Gallon Cans, half dozen in a case.....Per Dozen, $21.00
No. 35—One Gallon Cans, half dozen in a case.....Per Dozen, 40.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ROSIN

Lump Rosin

F Grade Lump Rosin, in 280 pound casks.....Per Pound, $.....

VALVE GRINDING COMPOUND

Fine and Coarse.

Combination.

Contains no ground glass nor powdered emery. It is uniform and grinds the valve quickly down to an even, firm seat. Made in fine, coarse and combination grades; the latter is packed in a can 2 inches high and 2¼ inches in diameter, divided into two compartments, one for holding the fine compound, the other the coarse compound.

Fine—Valve Grinding Compound.....In One Pound Cans, Per Dozen, $15.00
Coarse—Valve Grinding Compound.....In One Pound Cans, Per Dozen, 15.00
Combination—Valve Grinding Compound.....In Combination Cans, Per Dozen, 4.80

UNIVERSAL SOLDER

No. 1.

No. 2.

No. 3.

Used without heat or acid and contains no injurious ingredient. No smell, taste or odor to Universal Solder.

No. 1—To be used on Cut Glass and Fancy China Ware. Heat, cold or boiling water will not force the article apart after it is once soldered.

No. 2—Used for Cooking Utensils, such as Granite, Aluminum, Porcelain and Tin. Will stand 2250 degrees of heat without melting.

No. 3—Used by Locomotive and Stationary Engineers for making tight joints. Great for Automobile Radiators, Cracked Cylinders, Water Jackets and Gasoline Tanks.

No. 1—Universal Solder, for Cut Glass and China.....Per Dozen, $4.00
No. 2—Universal Solder, for Cooking Utensils.....Per Dozen, 4.00
No. 3—Universal Solder, for Iron and Steel.....Per Dozen, 4.00

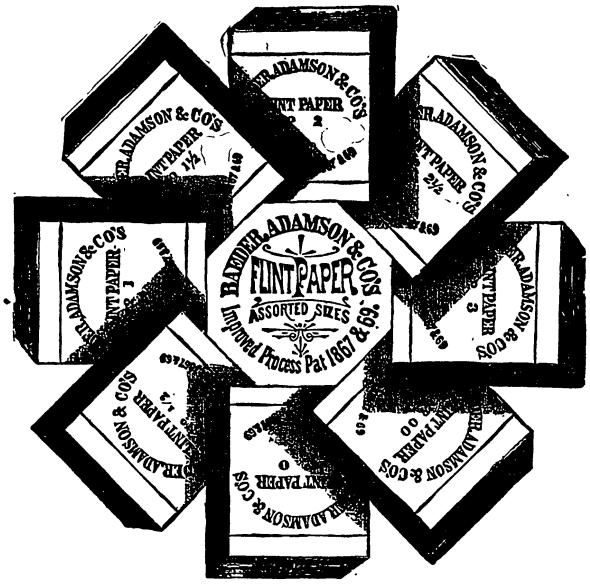
Packed—One Dozen in a Carton.

Assorted Universal Solder—Consisting of 3, No. 1; 6, No. 2, and 3, No. 3 Tubes.....Per Assortment, $4.00

Packed—Each Assortment (One Dozen) in a Separate Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAND AND EMERY PAPER



Flint Paper in Sheets, 9x11 Inches

Nos.	00	0	½	1	1½	2	2½	3
Buhl Extra ..... Per Ream,	$7.00	7.00	7.00	7.50	8.00	8.50	9.00	10.50
B. & A. ..... Per Ream,	7.00	7.00	7.00	7.50	8.00	8.50	9.00	10.50

Packed—Half Ream in a Bundle.

Flint Paper in Rolls

Nos.	00	0	½	1	1½	2	2½	3	3½
Buhl Extra, 24 inches wide. Per Roll,	$8.00	8.00	8.00	8.75	9.25	10.25	11.00	12.25	13.50

Packed—Fifty Yards in a Roll.

B. & A. Flint Finishing Paper in Sheets, 9x11 inches

No. 4/0—Double Face, 240 Sheets in a Package ..... Per Package, $.....

B. & A. Garnet Paper in Sheets, 9x11 Inches

Nos.	00	0	½	1	1½	2	2½	3
B. & A. ..... Per Ream,	$7.00	7.00	7.00	7.50	8.25	9.00	10.00	11.00

Packed—Half Ream in a Bundle.

B. & A. Garnet Paper in Rolls

Nos.	00	0	½	1	1½	2	2½	3
24 inches wide ..... Per Roll,	$8.00	8.00	8.00	8.50	8.75	9.50	11.00	12.00
30 inches wide ..... Per Roll,	10.75	10.75	10.75	11.25	11.75	12.50	13.50	15.00
36 inches wide ..... Per Roll,	13.00	13.00	13.00	13.75	14.25	14.75	16.00	17.50

Packed—Fifty Yards in a Roll.

B. & A. Garnet Finishing Paper in Sheets, 9x11 Inches

Nos.	00	0	½	1
B. & A. ..... Per Ream,	$.....	.....	.....	.....

Packed—Half Ream in a Bundle.

Barton's Garnet Paper in Sheets, 9x11 Inches

Nos.	00	0	½	1	1½	2	2½	3
Barton's ..... Per Ream,	$10.15	10.15	10.15	10.50	11.50	12.40	13.50	15.00

Packed—Half Ream in a Bundle.

Barton's Garnet Paper in Rolls

Nos.	00	0	½	1	1½	2	2½	3
24 inches wide ..... Per Roll,	$11.25	11.25	11.25	12.00	12.35	13.10	15.00	15.75
30 inches wide ..... Per Roll,	15.40	15.40	15.40	16.00	16.75	17.50	18.75	20.25
36 inches wide ..... Per Roll,	18.30	18.30	18.30	19.50	20.50	21.35	22.25	24.00

Packed—Fifty Yards in a Roll.

Abrasite Cloth in Sheets, 9x11 Inches

Nos.	00	0	½	1	1½	2	2½	3	3½
B. & A. ..... Per Ream,	$31.00	31.00	31.00	33.00	35.00	38.00	41.00	44.00	47.00

Packed—Quarter Ream in a Bundle.

Emery Cloth in Sheets, 9x11 Inches

Nos.	Crocus	00	0	½	1	1½	2	2½	3
B. & A. ..... Per Ream,	$31.00	31.00	31.00	31.00	33.00	35.00	38.00	41.00	44.00

Packed—Quarter Ream in a Bundle.

Note.—Kindly notice that all our Paper in Reams is cut in full size sheets of 9x11 inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAND PAPER

Household Package B. & A. Extra Quality Flint Paper

Handy for odd jobs of carpentry. Necessary for the repair of woodwork, and removing mars and stains. Useful in the kitchen for scouring and polishing steel, iron, tin and aluminum ware; also for cleaning and refinishing molding and bread boards. Contains 20 sheets 5x6 inches. Assorted Nos. 00, 0, ½, 1, 1½, 2, 2½ and 3.

Household Assorted Package.....Per Dozen Packages, $1.20

Packed—Each Assortment put up in a printed Carton; Cartons packed in Bulk.

STEEL WOOL

In One Pound Packages

No. 00—Equivalent to Rotten Stone, for cleaning and polishing kitchen utensils, bath room fixtures, etc. .....Per Pound, $1.30

No. 0—Equivalent to Pumice Stone, for cleaning and polishing brass, metal, fine wood and stone ware, rubbing down varnish, etc.....Per Pound, 1.04

No. 1—Equivalent to No. 0 Sand Paper, used for same purposes as No. 0.....Per Pound, .84

No. 2—Equivalent to Nos. ½ and 1 Sand Paper, used for purposes similar to above.....Per Pound, .76

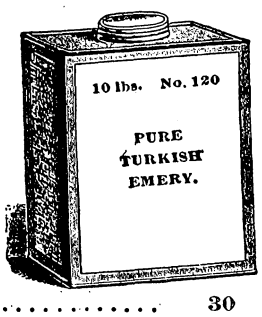
No. 3—Equivalent to Nos. 1½ and 2 Sand Paper, for cleaning and polishing hardwood floors and bowling alleys, for removing paint, varnish, rust and grease and for general rough work.....Per Pound, .64

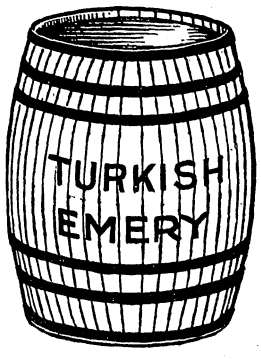
In 10-cent Packages

Nos.	10	11	12	13
Grade of Coarseness	0	1	2	3

Per Dozen Packages.....All Sizes, $1.80

TURKISH EMERY





Nos.	30	40	46	60	80	100	120	Flour
In **1 Pound** Cans..Per Pound, $	.....	.....	.....	.....	.....	.....	.....	.....
In **10 Pound** Cans..Per Pound,	.....	.....	.....	.....	.....	.....	.....	.....
In Kegs of about 350 pounds } Per Pound,	.....	.....	.....	.....	.....	.....	.....	.....

Note—No. 30 indicates the coarsest grain or grade and Flour the finest.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ABRASIVE GRINDING WHEELS

Grinding Wheels

For any make of machine, and for any grinding operation.

Grinding Wheels

Made of **Boro Carbone** and **Electrolon** in Vitrified, Silicate, and Elastic Processes.

BORO-CARBONE

It is an artificial abrasive produced by fusing Bauxite in an electric furnace at about 3,800 degrees Fahrenheit. Wheels made of **Boro Carbone** are the most efficient for grinding all kinds of steel, annealed malleable iron, wrought iron and other materials or high tensile strength.

ELECTROLON

Is Carbide of Silicon and is the hardest known abrasive. It is made of coke, sand, salt and saw-dust, very carefully selected and proportioned. This mixture is heated in an electric furnace of the resistance type, to a temperature approximately 2,200 degrees C. Wheels made of **Electrolon** are recommended for grinding cast iron, chilled iron, hard malleable iron, brass, bronze, marble, granite and other materials of low tensile strength.

VITRIFIED WHEELS

Have the greatest cutting efficiency, the majority of wheels used are made by this process. After the abrasive and bonding materials have been thoroughly mixed in specially designed machines this material is drawn into forms or molds of the required size and subjected to a drying operation which enables them to be shaped to size. It is then necessary to further dry them, after which they are placed in specially designed kilns and subjected to heats of very high temperature which vitrifies the bond in the wheel, therefore the bond itself becomes a cutting property. Vitrified process wheels can be used wet or dry.

SILICATE WHEELS

Are furnished in special cases where a closer bonded wheel is needed. Wheels of this kind are made by what is known as the tamping process. The abrasive materials and bonds are thoroughly mixed until they are in a perfect condition for manufacture. This material is then tamped firmly into moulds, they are then placed in specially designed ovens and subjected to a heat sufficient to set the bond. This process requires but a short time and prompt deliveries can be made on this class of wheel. On such work as tool grinding, knife sharpening and surfacing work they give excellent results. On account of the low degree of heat required they can be furnished with **wire web** if desired. When ordering state whether they are to be used wet or dry. The grade of hardness is designated by letters of the alphabet the same as vitrified wheels, but with the letter S added (see grade list). All wheels over thirty inches diameter are furnished in this process. They take the same price list as vitrified wheels.

ELASTIC OR SHELLAC WHEELS

Have some valuable qualities not attainable in any other wheel. They are made in moulds, the larger and heavier sizes being formed under heavy pressure. After being formed they are placed in specially constructed ovens and baked similarly to silicate wheels. They can be made as thin as 1/16 inch thick up to 8 inches diameter and 1/8 inch thick up to 12 inches diameter. They have a high degree of elasticity, making them suitable for work requiring very thin wheels, such as gumming small saws, grinding between the teeth of cast gears, die, cutter, reamer and roll grinding, also for cutting off small stock such as thin steel and brass strips, brass tubing, steel wire and for slotting purposes. Elastic Wheels are largely used in cutlery manufacturing and in a great variety of special wheels for the shoe trade. They may be run in water, caustic soda, or dry. State how used when ordering. They take same price list as vitrified and silicate wheels but are graded differently. (See grade list).

GRAIN

The abrasive material after being crushed is graded to different sizes. These numbers are determined by the sieve through which the material passes. For example—No. 20 is that which passes through a sieve which has twenty meshes to the linear inch, No. 30, thirty meshes, No. 60, sixty meshes, etc. The wheel's coarseness or fineness is determined by the size or number of the grain it is made of.

8 to 10 grain leaves a surface like a wood rasp.
16 to 20 grain leaves a surface like a coarse rough file.
24 to 30 grain leaves a surface like an ordinary rough file.
36 to 40 grain leaves a surface like a bastard file.
46 to 60 grain leaves a surface like a second cut file.
70 to 80 grain leaves a surface like a smooth file.
90 to 100 grain leaves a surface like a superfine file.
120 F and FF grain leaves a surface like a dead smooth file.

GRADE

Means the hardness of the wheel or the resistance of the cutting particles under grinding pressure. A soft wheel is one where the cutting particles break away very rapidly under grinding pressure. A hard wheel retains its cutting particles longer. The ideal wheel for any work is one that furnishes a new cutting face as fast as the particles in use become dull, in other words, the proper wheel will not glaze, but will remain sharp.

SPEED

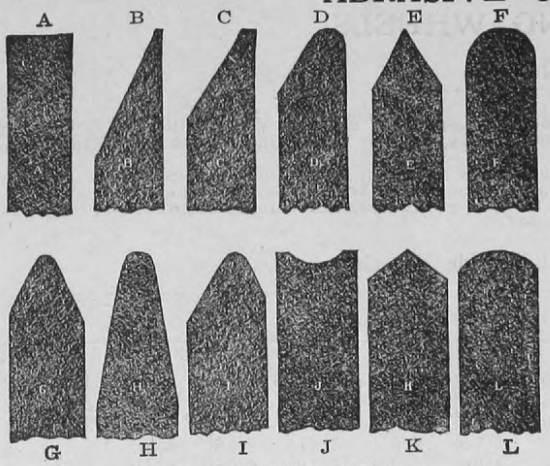
A surface speed of 5,000 feet per minute is recommended as a safe wheel speed for grinding in general. This speed should be maintained until the wheel is worn out to get best results. The following table designates number of revolutions per minute for specified diameters of wheels to cause them to run at the respective periphery rates of 4,000, 5,000 and 6,000 feet per minute. The stress on the wheel at 4,000 feet per minute is 48 pounds per square inch at 5,000 feet, 75 pounds; at 6,000 feet, 108 pounds.

Diameter Wheel in Inches	Rev. per Minute for Surface Speed of 4,000 feet	Rev. per Minute for Surface Speed of 5,000 feet	Rev. per Minute for Surface Speed of 6,000 feet	Diameter Wheel in Inches	Rev. per Minute for Surface Speed of 4,000 feet	Rev. per Minute for Surface Speed of 5,000 feet	Rev. per Minute for Surface Speed of 6,000 feet
1	15,279	19,099	22,918	14	1,091	1,364	1,637
2	7,639	9,549	11,459	16	955	1,194	1,432
3	5,093	6,366	7,639	18	849	1,061	1,273
4	3,820	4,775	5,730	20	764	955	1,146
5	3,056	3,820	4,584	22	694	868	1,042
6	2,546	3,183	3,820	24	637	796	955
7	2,183	2,728	3,274	30	509	637	764
8	1,910	2,387	2,865	36	424	531	637
10	1,528	1,910	2,292	42	364	455	546
12	1,273	1,592	1,910	48	318	397	477

Speed Recommended

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ABRASIVE GRINDING WHEELS



Shapes of Wheel Faces

Here are shown different shapes of faces frequently used in grinding wheels. The round and bevel-faced wheels are more particularly used for gumming and sharpening saws, grinding moulding cutters, etc.

In ordering give the number of the diagram to show the shape of face or edge required.

We are always willing to turn the faces of wheels to any desired shape, and where any shapes other than the ones shown are needed a sketch should accompany the order.

Note.—Where no shape of face is mentioned, we understand that a square-faced wheel is wanted.

Abrasive Grade List

The following grade list is used in designating hardness of Silicate and Vitrified wheels:

Grade	Classification
G	Very Soft
H	
I	
J	Soft
K	
L	
M	Medium
N	
O	Medium Hard
P	
Q	Hard
R	
S	
T	
U	Very Hard
W	Extra Hard
Z	Extremely Hard

Each letter represents a grade harder than the preceding letters, the words soft, medium, etc., being only comparative and intended only for general guidance.

Elastic wheels are graded as follows: ½E, ¾E, 1E, 1¼E, 1½E, 1¾E, 2E, 2½E, 3E, 4E, 5E, 6E, 7E; grade No. ½E being the softest and No. 7 the hardest.

Table for Selection of Grain and Grade

CLASS OF WORK	Boro-Carbone Grain	Boro-Carbone Grade	Electrolon Grain	Electrolon Grade
Aluminum castings	30 to 46	4-5 Elas	20 to 24	P to Q
Brass castings (large)			20 " 30	P " Q
Brass castings (small)			30 " 46	O " P
Brick (fire)			16 " 24	P " R
Brick (pressed)			16 " 24	P " R
Cam shafts (roughing)	24 to 30	Q to S		
Cam shafts (finishing)	46	J " K		
	46	3 Elas.		
Car wheels			16 " 24	P " R
Cast iron (cylindrical)	46 or 24 comb	J to K	30 " 46	J " L
Cast iron (rough snagging large castings)			16 " 20	Q " R
Cast iron (rough snagging small castings)			20 " 30	P " Q
Cast iron (finishing castings			36 " 60	O " P
Cast iron (surfacing castings	20 to 30	I " K	20 " 30	J " L
Crank shafts (roughing)	24 comb	O		
	36	P		
Crank shafts (finishing)	46	M		
	24 comb	M		
Dies (chilled iron)			24 " 36	O " P
Dies (hardened steel)	30 to 46	L " N		
Drop forgings	16 " 30	P " R		
Files (edging)	24 " 36	R " U		
General (rough grinding)	16 " 30	P " R		
General (machine shop use)	24 " 46	O " P		
Hammers	24 " 36	P " Q		
Hollowware (inside grinding)			24 " 36	Q " R
Internal grinding (cast iron auto cylinders)			36 " 46	J " K
Internal grinding (steel)	46 " 60	J " L		
Knives (leather shaving)	60 " 80	M " N		
Knives (leather splitting)	24 " 30	1-2 Elas		
Knives (moulding)	46 " 60	M to N		
Knives (paper)	36 " 46	J " K		
Knives (planer automatic)	30 " 46	J " L		
Knives (planer hand)	36 " 60	L " M		
Knives (shear and shear blades)	36 " 60	K " M		
Knives (shoe)	60 " 80	L " M		
Lathe centers	60 "100	N " P		
Lathe and planer tools	24 " 36	O " P		
Machine shop tools (general)	30 " 46	O " P		
Malleable iron castings (large annealed)	12 " 20	P " R		
Malleable iron castings (large unannealed)			16 " 20	R " U
Malleable iron castings (small annealed)	20 to 30	P to Q		
Malleable iron castings (small unannealed)			24 to 30	Q to R
Marble (roughing)			20 " 46	M
Marble (finishing)			180 "220	I " J
Marble (coping)			30 " 46	P " R
Milling cutters, reamers, taps, etc. (automatic)	46 " 80	J " M		
Milling cutters, reamers, taps, etc. (hand)	46 " 80	M " O		
Pearl (roughing)			30 " 46	P " Q
Pearl (finishing)			100 "150	M " O
Plows edging and joining (steel)	14 " 24	P " R		
Plow Points			20 " 30	Q " S
Plows surfacing (steel)	16 " 24	P " R		
Plows surfacing (cast iron)			20 " 30	P " R
Pulleys surfacing faces (cast iron)			24 " 36	L " M
Radiators edging (cast iron)			20 " 30	Q " S
Razors (concaving and grinding)	46 "100	J " M		
Reamers, taps, milling cutters (hand)	46 " 80	K " M		
Reamers, taps, milling cutters (automatic)	36 " 60	I " M		
Rolls (cast iron roughing)			30 " 46	3-5 Elas
Rolls (cast iron finishing)	70 " 80	2-4 Elas	30 " 46	K " L
Rubber	30 " 46	J " K		
			16 " 30	Q " R
			80 "100	P " Q
Sad irons (roughing)				
Sad irons (finishing)				
Saws gumming and sharpening	36 " 60	M " N		
Saws cold cutting	46 " 60	O " P		
Shovels (edging)	20 " 36	Q " R		
Springs (spiral ends)	16 " 24	P " Q		
Springs (wagon) ends of	16 " 30	P " R		
Steel (soft cylindrical)	24 comb	L " M		
Steel (soft surfacing)	24 to 36	J " L		
Steel (hard cylindrical)	24 comb	J " K		
Steel (hard surfacing)	24 to 36	H " K		
Steel castings (large)	12 " 16	P " R		
Steel castings (small)	16 " 24	O " Q		
Steel (hardened tools)	30 " 46	N " O		
Steel (internal grinding)	36 " 60	J " M		
Steel (manganese safes)	16 " 36	N " O		
Steel (manganese frog and switch)	12 " 16	P " R		
Steel (structural)	16 " 24	P " R		
Stove mountings	20 " 36	Q " R		
Twist drills (hand)	46 " 60	M " N		
Twist drills (automatic)	36 " 60	K " M		
Wood working tools	46 " 60	L " M		
Wrought iron	16 " 30	P " R		

Note.—When two or more grains or grades are recommended for the same class of work, the coarser grain and harder grade or the finer grain and softer grade are suggested; for example, where 30 or 46 grain, grade N or O are specified the 30 grain, grade O or the 46 grain, grade N would be recommended.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ABRASIVE GRINDING WHEELS

"IN ORDERING"

Always state quantity required, diameter, thickness, size of arbor hole, speed of spindle, viz. number of revolutions it turns per minute, description of work to be done, whether large or small pieces, regular or irregular in shape. Kind of metal to be ground, wrought, cast or malleable iron, hard or soft steel, brass, etc.

If for tool grinding state whether they will be used wet or dry. If for saw gumming, moulding cutters, etc., state whether round or bevel face is wanted. When a special shaped face or edge is required refer to "Shapes of Wheel Faces" and give number of diagram or if not shown therein, send sketch with order. It is of great assistance in selecting the proper wheel for the work to know the make, grain and grade of wheel now being used.

Price List of Regular or Straight Side Wheels

Diam., Inches	Thickness of Wheels in Inches															
	¼	½	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3	3¼	3½	3¾	4
1	$0.40	$0.50	$0.60	$0.70	$0.80	$0.95	$ 1.05	$ 1.15	$ 1.25	$ 1.35	$ 1.45	$ 1.55	$ 1.70	$ 1.80	$ 1.90	$ 2.00
2	.60	.75	.90	1.00	1.15	1.30	1.45	1.60	1.75	1.85	2.00	2.15	2.30	2.40	2.55	2.70
3	.80	1.00	1.20	1.45	1.65	1.85	2.10	2.30	2.50	2.70	2.95	3.15	3.35	3.55	3.80	4.00
4	1.10	1.40	1.65	1.95	2.25	2.55	2.80	3.10	3.40	3.70	4.00	4.25	4.55	4.80	5.10	5.40
5	1.50	1.90	2.25	2.65	3.00	3.40	3.80	4.15	4.55	4.90	5.30	5.70	6.05	6.40	6.80	7.20
6	1.90	2.40	2.90	3.40	3.90	4.45	4.95	5.40	5.95	6.50	7.00	7.50	8.00	8.50	9.00	9.50
7	2.30	2.95	3.60	4.30	4.95	5.60	6.30	6.90	7.55	8.20	8.90	9.60	10.25	10.90	11.55	12.20
8	2.70	3.55	4.40	5.20	6.10	6.90	7.80	8.60	9.45	10.30	11.15	12.00	12.85	13.70	14.55	15.40
9	3.10	4.15	5.20	6.30	7.40	8.40	9.50	10.60	11.65	12.70	13.75	14.80	15.90	17.00	18.05	19.10
10	3.60	4.90	6.20	7.50	8.90	10.20	11.50	12.80	14.10	15.40	16.70	18.00	19.35	20.70	22.00	23.30
12	4.20	6.00	7.80	9.50	11.30	13.10	14.90	16.70	18.45	20.20	22.00	23.80	25.55	27.30	29.10	30.90
14	4.90	7.20	9.60	11.90	14.20	16.50	18.90	21.20	23.50	25.80	28.15	30.50	32.80	35.10	37.45	39.80
16	5.70	8.70	11.60	14.60	17.60	20.50	23.50	26.50	29.45	32.40	35.35	38.30	41.30	44.30	47.25	50.20
18	6.60	10.30	14.00	17.70	21.40	25.10	28.80	32.50	36.15	39.80	43.50	47.20	50.90	54.60	58.30	62.00
20	....	12.30	16.80	21.40	25.90	30.50	35.00	39.60	44.15	48.70	53.35	58.00	62.50	67.00	71.50	76.00
22	....	....	20.10	25.60	31.10	36.70	42.20	47.70	53.35	59.00	64.50	70.00	75.50	81.00	86.50	92.00
24	....	....	24.00	30.60	37.30	44.00	51.00	59.00	65.00	71.00	78.00	85.00	92.00	99.00	106.00	113.00
26	....	....	....	36.40	44.50	52.50	61.00	69.00	77.00	85.00	93.00	101.00	109.00	117.00	125.00	133.00
28	....	....	....	....	46.00	55.00	65.00	74.00	83.00	92.00	102.00	111.00	120.00	129.00	139.00	148.00
30	....	....	....	....	58.00	68.00	79.00	89.00	100.00	111.00	122.00	132.00	143.00	153.00	164.00	174.00
32	....	....	....	....	....	72.00	84.00	96.00	109.00	121.00	133.00	145.00	157.00	169.00	181.00	193.00
34	....	....	....	....	....	82.00	95.00	109.00	123.00	136.00	150.00	163.00	177.00	191.00	204.00	218.00
36	....	....	....	....	....	94.00	109.00	124.00	139.00	154.00	169.00	183.00	198.00	213.00	228.00	243.00
38	....	....	....	....	....	....	.....	136.00	153.00	170.00	187.00	204.00	221.00	238.00	255.00	272.00
40	....	....	....	....	....	....	.....	151.00	170.00	189.00	207.00	226.00	245.00	264.00	283.00	302.00
42	....	....	....	....	....	....	.....	.....	.....	209.00	229.00	249.00	270.00	290.00	311.00	331.00
44	....	....	....	....	....	....	.....	.....	.....	228.00	251.00	274.00	297.00	319.00	342.00	365.00
46	....	....	....	....	....	....	.....	.....	.....	249.00	274.00	299.00	324.00	349.00	374.00	399.00
48	....	....	....	....	....	....	.....	.....	.....	271.00	299.00	326.00	353.00	380.00	407.00	434.00
50	....	....	....	....	....	....	.....	.....	.....	.....	.....	353.00	383.00	412.00	442.00	471.00
52	....	....	....	....	....	....	.....	.....	.....	.....	.....	382.00	414.00	446.00	478.00	510.00
54	....	....	....	....	....	....	.....	.....	.....	.....	.....	412.00	447.00	481.00	515.00	550.00
56	....	....	....	....	....	....	.....	.....	.....	.....	.....	443.00	480.00	517.00	554.00	591.00
58	....	....	....	....	....	....	.....	.....	.....	.....	.....	476.00	515.00	555.00	594.00	634.00
60	....	....	....	....	....	....	.....	.....	.....	.....	.....	509.00	551.00	594.00	636.00	679.00

Note.—Wheels less than 1 inch diameter take the list of a 1 inch wheel. Diameters represented by odd inches or fractional parts of inches intermediate to diameters shown in list take the list of the next larger diameter. Wheels less than ¼ inch thick take the list of a wheel ¼ inch thick. Thicknesses intermediate to those shown in list take the list of the next thicker wheel. Straight wheels with raised dovetails take the list of a straight wheel based on thickness of face. Prices on wheels thicker than 4 inches or any special shape of wheel not shown in catalogue will be quoted on request.

Extras for "Taper Side or Safety Shape Wheels"

Take the regular list prices of straight wheels and **add** extras as listed below.

Diam., Inches	½" Taper Add to List Any Thickness	¾" Taper Add to List Any Thickness	Diam., Inches	½" Taper Add to List Any Thickness	¾" Taper Add to List Any Thickness	Diam., Inches	½" Taper Add to List Any Thickness	¾" Taper Add to List Any Thickness	Diam., Inches	½" Taper Add to List Any Thickness	¾" Taper Add to List Any Thickness
10	$1.00	$1.50	24	$10.00	$15.00	38	$39.00	$68.00	52	$108.00	$184.00
12	1.50	2.00	26	13.00	20.00	40	46.00	80.00	54	121.00	207.00
14	2.00	3.00	28	16.00	25.00	42	54.00	92.00	56	136.00	231.00
16	2.50	4.50	30	19.00	31.00	44	65.00	108.00	58	152.00	257.00
18	3.50	6.00	32	23.00	39.00	46	75.00	125.00	60	170.00	287.00
20	5.00	8.00	34	27.00	48.00	48	85.00	142.00			
22	7.00	11.00	36	33.00	57.00	50	96.00	162.00			

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ABRASIVE GRINDING WHEELS

PRICE LIST—CUP WHEELS

Diam., Inches	Height, Inches	Thickness of Rim and Back in Inches						
		1	1½	2	2½	3	3½	4
8	4	$16.20	.....	.....	.....	.....	.....	.....
	5	18.90	.....	.....	.....	.....	.....	.....
	6	21.45	.....	.....	.....	.....	.....	.....
	7	23.85	.....	.....	.....	.....	.....	.....
*	8	27.25	.....	.....	.....	.....	.....	.....
Back	per inch	.65	.....	.....	.....	.....	.....	.....
10	4	21.00	$22.20	$23.20	.....	.....	.....	.....
	5	24.70	26.20	27.40	.....	.....	.....	.....
	6	27.75	29.55	30.70	.....	.....	.....	.....
	7	31.45	33.45	35.20	.....	.....	.....	.....
*	8	35.95	38.25	40.25	.....	.....	.....	.....
Back	per inch	1.20	.90	.65	.....	.....	.....	.....
12	4	25.50	27.30	28.65	$29.70	$30.25	.....	.....
	5	29.50	31.60	33.30	34.60	35.35	.....	.....
	6	33.45	35.85	37.90	39.45	40.45	.....	.....
	7	38.05	40.80	42.90	44.95	46.20	.....	.....
*	8	43.50	46.65	49.00	51.35	52.80	.....	.....
Back	per inch	1.85	1.50	1.20	.90	.65	.....	.....
14	4	31.80	34.20	36.10	37.50	38.55	$39.25	$39.60
	5	37.45	40.20	42.45	44.20	45.60	46.50	47.10
	6	42.60	45.90	48.55	50.55	52.35	53.50	54.30
	7	49.00	52.60	55.65	58.05	60.00	61.50	62.65
*	8	56.00	60.10	63.60	66.35	68.55	70.30	71.60
Back	per inch	2.70	2.25	1.85	1.50	1.20	.90	.65
16	4	39.75	42.85	45.30	47.25	48.30	49.80	50.50
	5	47.55	51.25	54.15	56.55	57.90	59.80	60.85
	6	55.00	59.05	62.40	65.25	66.85	69.25	70.60
	7	62.35	66.85	70.65	74.05	75.85	78.70	80.35
*	8	71.25	76.40	80.75	84.60	86.70	89.95	91.80
Back	per inch	3.65	3.15	2.70	2.25	1.85	1.50	1.20
18	4	51.40	55.15	58.30	60.85	62.80	64.05	65.40
	5	60.25	64.60	68.25	71.35	73.75	75.40	77.10
	6	68.85	73.50	78.00	81.55	84.40	86.50	88.65
	7	77.70	83.20	87.90	91.95	95.20	97.80	100.30
*	8	88.80	95.10	100.45	105.10	108.80	111.75	114.60
Back	per inch	4.75	4.20	3.65	3.15	2.70	2.25	1.85
20	4	61.60	66.40	69.75	73.30	76.05	77.95	79.50
	5	71.65	77.05	81.10	85.15	88.55	90.75	92.85
	6	81.70	87.70	92.35	97.00	100.90	103.65	106.20
	7	92.25	98.95	104.20	109.35	113.85	117.10	120.10
*	8	105.40	113.10	119.10	124.95	130.10	133.85	137.25
Back	per inch	6.05	5.40	4.75	4.20	3.65	3.15	2.70
24	4	84.10	90.55	96.15	100.95	105.00	108.30	111.00
	5	99.40	106.65	113.10	118.50	123.30	127.30	130.50
	6	113.65	121.65	128.85	135.00	140.50	145.05	148.95
	7	128.85	137.65	145.75	152.50	158.65	163.90	168.30
*	8	147.25	157.30	166.55	174.30	181.30	187.30	192.35
Back	per inch	9.05	8.25	7.45	6.75	6.05	5.40	4.75
30	4	126.00	136.15	145.00	153.60	160.90	166.30	172.05
	5	150.15	161.35	171.25	180.70	188.80	195.15	201.75
	6	170.50	182.65	193.60	203.95	212.95	220.15	227.70
	7	193.35	206.50	218.50	229.65	239.55	247.65	256.05
*	8	220.95	236.00	249.70	262.45	273.75	283.00	292.60
Back	per inch	14.55	13.60	12.45	11.80	10.95	9.90	9.15

PRICE LIST—CYLINDERS

Diam., Inches	Height, Inches	Thickness of Rim in Inches						
		1	1½	2	2½	3	3½	4
8	4	$13.75	.....	.....	.....	.....	.....	.....
	5	17.35	.....	.....	.....	.....	.....	.....
	6	19.75	.....	.....	.....	.....	.....	.....
	7	22.30	.....	.....	.....	.....	.....	.....
	8	25.50	.....	.....	.....	.....	.....	.....
9	4	16.30	$17.20	.....	.....	.....	.....	.....
	5	19.80	20.95	.....	.....	.....	.....	.....
	6	22.45	23.85	.....	.....	.....	.....	.....
	7	25.60	27.15	.....	.....	.....	.....	.....
	8	29.25	31.00	.....	.....	.....	.....	.....
10	4	18.90	20.05	$21.10	.....	.....	.....	.....
	5	22.50	23.95	25.20	.....	.....	.....	.....
	6	25.60	27.30	28.50	.....	.....	.....	.....
	7	29.35	31.20	33.00	.....	.....	.....	.....
	8	33.55	35.65	37.70	.....	.....	.....	.....
12	4	22.20	23.70	25.00	$26.20	$27.10	.....	.....
	5	26.20	28.00	29.65	31.05	32.20	.....	.....
	6	30.00	32.10	34.05	35.80	37.15	.....	.....
	7	34.35	36.85	38.85	41.05	42.70	.....	.....
	8	39.25	42.10	44.40	46.90	48.80	.....	.....
14	4	27.30	29.05	30.70	32.20	33.45	$34.60	$35.55
	5	32.35	35.05	37.05	38.85	40.50	41.85	43.05
	6	37.75	40.35	42.75	44.85	46.90	48.45	49.90
	7	43.80	46.80	49.65	52.15	54.30	56.25	58.00
	8	50.05	53.50	56.75	59.60	62.05	64.30	66.30
16	4	34.20	36.30	38.25	40.05	41.25	43.15	44.40
	5	41.10	43.80	46.20	48.45	49.95	52.20	53.85
	6	48.55	51.60	54.45	57.15	58.90	61.65	63.60
	7	55.35	58.90	62.20	65.40	67.35	70.60	72.85
	8	63.25	67.30	71.10	74.75	76.95	80.70	83.25
18	4	42.70	45.00	47.25	49.35	51.30	52.80	54.70
	5	51.40	54.30	57.10	59.70	62.10	64.00	66.25
	6	59.10	62.35	65.95	69.00	71.85	74.20	76.90
	7	67.75	71.85	75.70	79.30	82.50	85.35	88.35
	8	77.40	82.10	86.50	90.60	94.30	97.55	100.95
20	4	51.15	53.85	56.10	58.80	61.20	63.15	65.20
	5	61.20	64.60	67.50	70.75	73.75	76.05	78.60
	6	70.60	74.55	78.10	81.90	85.45	88.30	91.30
	7	80.95	85.50	89.65	94.00	98.10	101.40	104.85
	8	92.50	97.70	102.45	107.40	112.10	115.90	119.80
24	4	70.30	73.65	76.90	79.95	82.90	85.60	88.20
	5	86.55	90.70	94.75	98.40	102.10	105.45	108.60
	6	100.45	105.40	110.20	114.60	118.95	122.95	126.75
	7	115.05	120.75	126.45	131.50	136.50	141.15	145.50
	8	131.50	138.00	144.50	150.30	156.00	161.30	166.30
30	4	104.20	108.45	112.65	116.80	120.60	124.05	127.90
	5	128.50	133.80	139.05	144.00	148.65	153.10	157.75
	6	148.90	155.20	161.50	167.35	172.90	178.15	183.75
	7	172.00	179.25	186.60	193.30	199.75	205.90	212.35
	8	196.55	204.85	213.25	220.90	228.30	235.30	242.70

NOTE

A wheel 8 inches or more outside diameter, 4 inches or more in height, with an inside cup diameter of not less than 6 inches, and a rim thickness not exceeding 4 inches is figured as a cup wheel. Cups with outside projections, or tapered rims, take the list of the maximum diameter and maximum thickness of rim.

*The cup wheel price list is based on cups with the same back and rim thickness. For each additional inch in thickness of back **add** to list as indicated above.

A wheel 8 inches or more outside diameter, 4 inches or more in height, with a hole (Inside Diameter) not less than six inches in diameter, rim thickness not exceeding 4 inches and without inside projections, is figured as a cylinder.

A wheel of this type with inside projections is a **cup** wheel.

A cylinder with outside projections or with tapered rims takes the list price of the maximum diameter and the maximum thickness of rim.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RUBBING BRICKS

Boro Carbone and Electrolon.

Size	Price per dozen	Size	Price per dozen
8x4x4	$48.00	6x2x 1	$ 6.00
8x4x3	36.00	4x4x 4	24.00
8x4x2	24.00	4x3x 3	14.40
8x3x3	28.80	4x3x 2	10.80
8x3x2	18.00	4x2x 2	7.80
8x2x2	12.60	4x2x 1	4.80
8x2x1	7.80	4x2x½	3.60
6x3x3	21.60	4x1x½	2.40
6x3x2	14.40	4x1x¼	2.40
6x2x2	10.80		

The above sizes are more commonly used for cleaning castings and other rough work. Bricks for such work are mostly made in coarse grain. We can, however, furnish them in any grain from the coarsest to the finest and in special sizes as well. They are not squared up and dressed, but are furnished just as they come from the kilns.

Price List of Electrolon Rubbing Brick for Concrete Work.

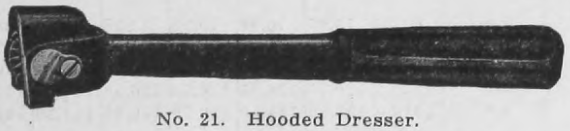
8x3x3 inches.....$28.80
8x2x2 inches..... 12.60

Fluted bricks have been found to be satisfactory for the rubbing down of concrete. They are more efficient than sandstone and give much longer life. By having the flutes in the bricks a faster cutting action is produced and also allows a clearance for the material removed.

Bricks for this work are usually furnished in No. 20 Grit, Grade Q.

HUNTINGTON EMERY WHEEL DRESSERS

No. 20.



No. 21. Hooded Dresser.

For Truing, Shaping, Sharpening and removing Glaze from solid Emery Wheels running at full speed.

No. 20—Plain Emery Wheel Dressers, with one extra Set of cutters.....Each, $.....

No. 21—Hooded Emery Wheel Dressers, with one extra set of cutters.....Each, ...

FINISHING STICKS

Round.

Triangular.

Square.

Round, Triangular and Square.

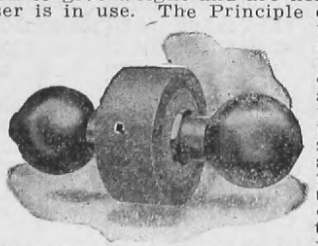
Price List

ROUND STICKS			TRIANGULAR STICKS			SQUARE STICKS		
Length in Inches	Diam.	Price per Dozen	Length in Inches	Thick-ness	Price per Dozen	Length in Inches	Thick-ness	Price per Dozen
4	1	$3.00	4	1	$3.00	4	1	$3.00
4	¾	2.75	4	¾	2.75	4	¾	2.75
4	⅝	2.50	4	⅝	2.50	4	⅝	2.50
4	½	2.25	4	½	2.25	4	½	2.25
3	⅜	2.00	3	⅜	2.00	4	⅜	2.00
2	¼	2.00	2	¼	2.00	4	¼	2.00

Note.—Sticks are furnished as they come from kilns. They are not squared and trued on rubbing beds.

"METCALF" EMERY WHEEL DRESSER

A veritable wizard for truing down and shaping grinding wheels of all kinds of ordinary size, from about 14 inches down. This Dresser consists of two heavy iron knobs at the ends of a short shaft, with an abrasive wheel of special grade and grit mounted on a sleeve between them. The knobs are of iron to give weight and are held in the hands when the Dresser is in use. The Principle of this Dresser in truing a wheel is three-fold: First, that of inertia due to the weight in the balls; second, the peculiar cutting effect of one abrasive wheel on another when held at an angle of 30 to 40 degrees from the horizontal; and third, gyroscopical action set up by the rapid rotation of the wheel on the axis. This Dresser cuts out the bond or filling between the cutting particles in the wheel and leaves them standing out on the surface in the best possible condition for rapid cutting and will bring up a sharp corner on thin and delicate wheels. A wheel can be given a coarse, open face, for rapid cutting, by holding the Dresser with its axis about horizontal; while on the other hand a fine, close grained face, for smooth work, will be given to the wheel by holding the Dresser with the axis nearly vertical. For shaping thin, hard wheels, used on fine tooth saws, this Dresser surpasses all other tools ever produced.



Metcalf Emery Wheel Dressers.....Each, $5.00
Extra Wheels—3½x1½"—⅞" hole.....Each, 1.50

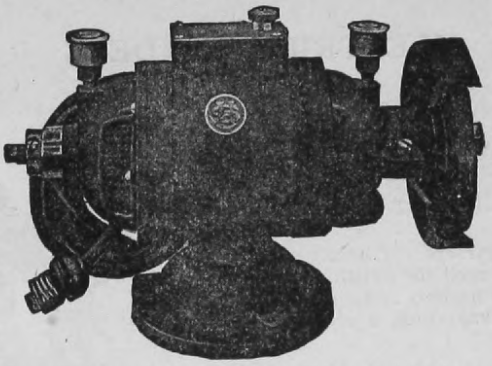
Extra Cutters for Emery Wheel Dressers

No. 020. Cutters

No. 020—For Nos. 20 and 21 Emery Wheel Dressers.....Per Set, $.....
Each Set comprises 4 Toothed Discs and 2 plain Washers, as illustrated.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

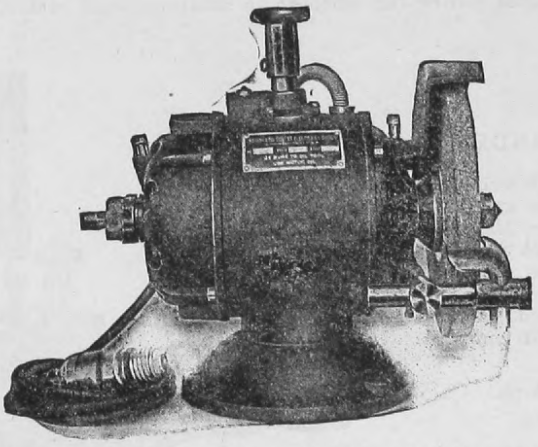
ELECTRIC GRINDERS



UNIVERSAL MOTOR BENCH GRINDER

This grinder is a handy tool for grinding small tools. It can be taken out on a job and the tools can be kept sharp, as the motor is wound so as to run on direct or alternating current of 110 or 220 volts, 60 cycle or less. Grease is used for lubrication. The bearings are adjustable to wear.

Volts	Dimension, Inches	Weight, Pounds	Speed	Size Wheel, Inches	Universal Type	Price, Complete with Grinding Wheel
110	5x14	24	5,000	4½x½	PU110	$77.34
220	5x14	24	5,000	4½x½	PU220	77.34



ELECTRIC BENCH GRINDER—¼ and ½ H. P.

Illustration shows our bench grinder, which is a very handy tool for grinding small tools. It can also be used for polishing and buffing. **State when to be used for buffing.** The tool rest on grinder is detachable. Bearings adjustable to wear. Air cooled motor. Made for direct current or alternating current. Ball bearings furnished when ordered instead of bronze bearings.

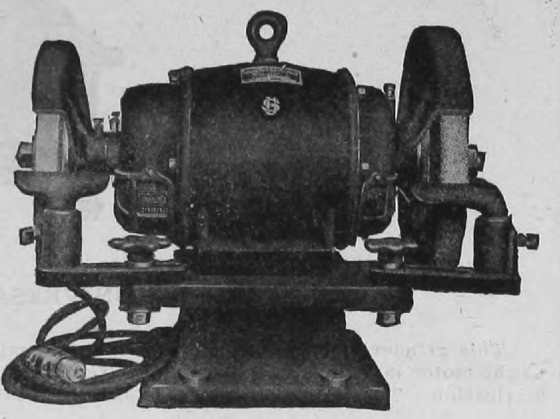
Volts	Dimensions Inches	Weight, Pounds	H. P.	Speed	Size Wheel, Inches	Type	Price, D. C.	Type	Price, A. C.
110	4½x9	14	¼	4,500	6x⅜x½	P110¼	$56.00	PA110¼	$61.34
120	4½x9	14	¼	4,500	6x⅜x½	P220¼	56.00	PA220¼	61.34
110	6x14	57	½	3,000	8x1x⅝	K110½	90.66	KA110½	104.00
220	6x14	57	½	3,000	8x1x⅝	K220½	90.66	KA220½	104.00

Important.—Prices include wheel. When ordering state whether "Direct" or "Alternating" current is wanted and purpose wheel is to be used for.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRIC GRINDERS

ELECTRIC GRINDER—1 and 2 H. P.



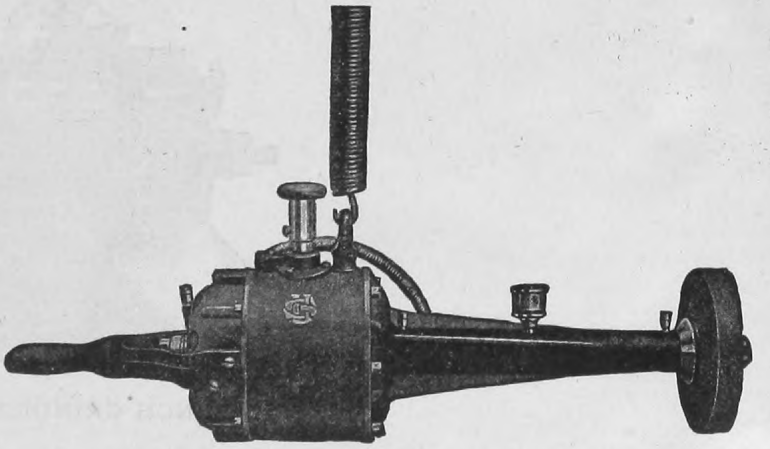
We herewith illustrate our 1 and 2 horsepower bench grinder for tool grinding and general work. Can be used for polishing or buffing. Direct current motors are run from lamp socket. This grinder is also made for alternating current of 110 or 220 volts, 2 or 3 phase only. Ball bearings used for bearings.

Volts	Dimensions, Inches	Weight, lbs.	H. P.	Speed	Size Wheels, Inches	Type	Price, D. C.	Type	Price, A. C.
110	7½x20	123	1	2,400	10x1x⅞	KK110	$120.66	KKA 110	$144.00
220	7½x20	123	1	2,400	10x1x⅞	KK220	120.66	KKA 220	144.00
110	Overall, 18	185	2	2,050	10x1 or	KM110	200.00	KMA110	208.00
220	Height, 15	185	2	2,050	12x1¼x⅞	KM220	200.00	KMA220	208.00

Prices include wheels. When ordering state whether "Direct" or "Alternating" current is wanted and kind of work wheels are to be used for.

Note.—A pedestal base for this outfit can be furnished at an additional cost of $.....

PORTABLE SURFACE GRINDER



The above cut shows our type O grinder for grinding and cleaning castings. This grinder can also be used with a felt wheel for polishing or a sand wheel for grinding off high spots on castings after the filler has been put on. This grinder can be used in close places, and will save its cost in a short time. Runs all day. Air cooled. Made for alternating or direct current. Type OB and O also made with Universal motor.

Type OM and OMM made for 2 or 3 phase alternating current or direct current.

Volts	Dimensions, Inches	Weight, lbs.	H. P.	Speed	Size Wheel Inches	Type	Price, D. C.	Type	Price, A. C.	Type	Price, with Universal Motor
110	5½x21	20	¼	3,500	5x¾x½	OB110	$80.00	OBA110	$93.34	OBU110	$106.66
220	5½x21	20	¼	3,500	5x¾x½	OB220	80.00	OBA220	93.34	OBU220	106.66
110	6x30	48	½	3,500	6x1x⅝	O110	106.66	OA110	117.34	OU110	128.00
220	6x30	48	½	3,500	6x1x⅝	O220	106.66	OA220	117.34	OU220	128.00
110	7½x32	65	1	2,700	8x1x⅝	OO110	126.66	OOA110	146.66		
220	7½x32	65	1	2,700	8x1x⅝	OO220	126.66	OOA220	146.66		
110	9½x32	132	2	2,050	8x1½x⅞	OM110	213.34	OMA110	200.00		
220	9½x32	132	2	2,050	8x1½x⅞	OM220	213.34	OMA220	200.00		
110	10x42	170	3*	1,450	8x2x1⅛	OMM110	246.66	OMMA110	246.66		
220	10x42	170	3*	1,450	8x2x1⅛	OMM220	246.66	OMMA220	246.66		

When ordering state whether "Direct," "Alternating" current or Universal Motor is wanted and kind of metal to be ground.

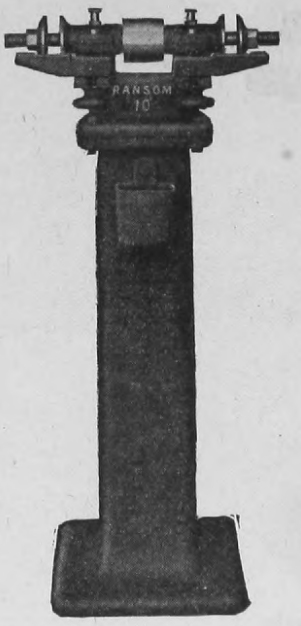
*Wheel not furnished with 3 H. P. Grinder.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

BELT DRIVEN GRINDING MACHINES

BENCH TYPE

Without Wheel Guards



With Wheel Guards

☛ Prices do NOT include Grinding Wheels

Size of Machine, inches	8	10	12	14
Head only	$17.34	21.34	29.34	38.66
Column only	13.34	20.00	21.34	24.66
Countershaft only	13.34	20.66	20.66	38.66
Complete	44.00	62.00	71.34	102.00
Guards, Per Pair Extra (Cast Iron)	4.66	7.34	9.67	14.00
Guards, Per Pair Extra (Steel Castings)	12.67	20.00	24.00	29.34
Dimensions				
Wheel Capacity, inches	8x1	10x1 ½	12x2	14x2 ½
Height to center of Spindle, inches	4 ½	6	7	8
Height when on column inches	39	39	38	37
Diameter Spindle between Collars, inches	⅝	⅞	1	1 ⅛
Diameter of Collars, inches	2 ⅝	3 ¼	4	4 ½
Pulley on Arbor, inches	2x2 ⅛	3x2 ¾	3 ¾ x3 ¼	4 ½ x3 ¾
Tight and loose Pulley on Countershaft, inches	4x2 ⅛	6x3 ¼	6x3 ¼	6x4 ¼
Speed of Countershaft	475	475	500	510
Weight Head only, pounds	18	40	60	80
Weight Column only, pounds	65	90	110	120
Weight Countershaft only, pounds	40	60	60	140
Weight Guards, per pair	17	35	50	70
Weight Complete	140	225	280	410

These machines are made with self-oiling bearings and self-closing nickel plated oil hole covers. Bearings are of cast iron and adjustable. Spindle steel is of high carbon and is ground accurately.

The rests are very rigid, made of one piece and are adjustable for different widths and diameters of wheels.

When wheel guards are required the rests are removed and the guards fastened on the same way as the rests. In this guard we have combined the guard and rest in one casting.

Unless specially ordered, machines will be shipped **without** guards, but with rests as shown in left hand cut.

IMPORTANT

When ordering grinding wheels please state kind of material to be ground. Whether large or small pieces, regular or irregular in shape, etc.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BELT DRIVEN GRINDING MACHINES

HEAVY FLOOR TYPE—16-INCH AND LARGER

Three Sizes

Prices do not include Grinding Wheels

Number of Machine	5-B	6-B	8-B
Size Wheel, Regular Shape	16″x3″	18″x4″	24″x5″
Size Wheel, Safety Shape	16″x2 ½″	18″x3″	24″x4″
Price of Machine **without** Countershaft	$160.00	183.34	266.67
Price of Countershaft	46.67	53.34	66.67
Price **with** Countershaft	206.67	253.34	333.34
Price Steel Wheel Guards, Open Type, per pair **extra**	42.67	46.67	66.67
Extra for Belt Guard	8.67	8.67	8.67
Extra for Safety Nuts, per pair	9.34	13.34	16.00
Dimensions			
Length of Arbor or Spindle	38″	44 ½″	57 ¼″
Bearings (Length overall)	8″x1 ⅜″	8 ¼″x1 9/16″	11 ¼″x2 1/16″
Diameter of Spindle where wheels go on	1 ¼″	1 ½″	2″
Pulley on Spindle	5″ and 6″x3 13/16″	6″ and 7″x4 ¼″	8″ and 9″x5 ¼″
Distance between wheels	25″	29 ½″	37 ¼″
Diameter of Collars	5 ½″	6″	8″
Height from floor to Center of Spindle	36″	34″	32″
Size Tight and Loose Pulleys on Countershaft	8″x4 ¼″	8″x4 ¾″	8″x5 ¾″
Driving Pulleys on Countershaft	14″ and 15″x3 ¾″	14″ and 15″x4 ¼″	14″ and 15″x5 ¼″
Speed of Countershaft	515 R.P.M.	490 R.P.M.	510 R.P.M.
Weight **with** Countershaft	525 lbs.	650 lbs.	1100 lbs.
Weight Steel Wheel Guards, per pair	90 lbs.	90 lbs.	150 lbs.

Note—Bearings are ring oiling and dust proof and lined with old formula pure genuine babbitt. Caps are fitted with tongue and groove.

Each rest held by two bolts and slotted so as to take care of various diameters, also various widths of wheels. Rests are of chilled iron where work is supported.

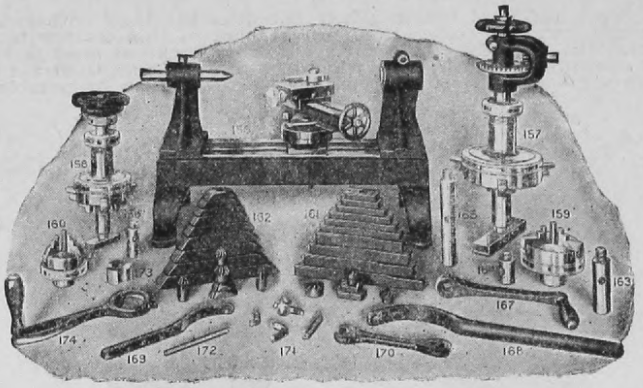
Steel Flanges for "Safety Shape" Grinding Wheels

Diameter of Flange	8″	10″	12″	14″	16″	18″	20″
Price per pair	$24.00	33.34	60.00	80.00	93.34	120.00	153.34

The Safety Flanges should be 4″ less in diameter than the grinding wheel they are used on leaving 2″ of the wheel exposed. When ordering state whether wheels are tapered ½″ or ¾″ to the foot. Unless otherwise specified ¾″ taper flanges will be furnished.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DEXTER VALVE RESEATING MACHINES



Outfit No. 6 T-L, capacity for reseating globe valves ¼ to 6 inches.

Dexter Valve Reseating Machines are known wherever valves are used and are the result of twenty-five years specializing in tools for repair of valves. The Dexter Machines recut a worn valve seat and disc accurately, making a perfect tight valve that will hold water or steam. The same valve can be recut from ten to twenty times. The saving of a few valves pays for a machine. Extensively used in mines, sugar mills, public institutions, railroads, ships and manufacturing plants.

Prices for Outfits for Flat and Taper seated Globe, Angle, Safety and Cross Valves.

Outfit Number	3 T-L	4 T-L	6 T-L	8 T-L	10 T-L	12 T-L
For Valves, Sizes	¼-3″	¼-4″	¼-6″	¼-8″	¼-10″	¼-12″
Price, Each	$116.68	136.68	183.38	250.00	350.00	450.00

Prices of Outfits with Dexter Disc Cutter substitued for T-L Disc Cutter.

Outfit Number	3	4	6	8	10	12
For Valves, Sizes	¼-3″	¼-4″	¼-6″	¼-8″	¼-10″	¼-12″
Price, Each	$100.00	120.00	166.66	233.34	333.34	433.34

DEXTER PUMP VALVE RESEATING MACHINES

These machines recut the seats in all types of feed water, circulating and service pumps.

Price of Pump Outfits used independently of Dexter Globe Valve Machines.

Outfit Number	K-4	H-6	D-H-6
Capacity for refacing seats	2-3″	2-4″	2-7½″
Price, without Cutters, Each	$30.00	40.00	49.34

PUMP ATTACHMENTS

Price of **Pump Attachments** used with Dexter Globe Valve Reseating Machines.

Attachment Number	M-4	M-6	D-M-6
Capacity for refacing seats	2-3″	2-4″	2-7½″
Price, without cutters, Each	$20.00	22.66	32.00

S. & W. PATENT PUMP VALVE SEAT CUTTERS

Add price of Pump Cutters required to price of Pump Outfit or Attachment as follows.

Size	2″	2½″	3″	3½″	4″	4½″	5″	5½″	6″	6½″	7″	7½″
Each	$16.00	16.00	16.00	20.00	20.00	20.00	24.00	24.00	24.00	29.34	29.34	29.34

Note. Give diameter of pump valve stud for each cutter. Dexter Pump outfits and Cutters can also be supplied for pump valve seats up to 14 inches.

DEXTER GATE VALVE RESEATING MACHINES

Catalogs—Complete Catalog giving information in detail will be sent on request.

Capacity for refacing gate valves 1½ to 14 inches, prices on request.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LUTHER TOOL GRINDERS

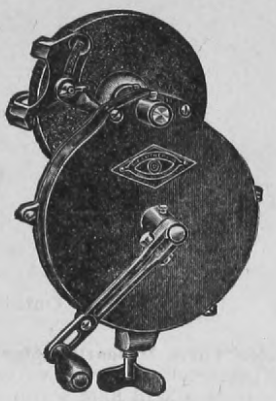
MECHANICS' SPECIAL

Grinders are built to stand wear and hard usage. Have one piece bearings, both ends of the shafts run in the same casting and the bearings are reamed out in one operation. On account of this feature in their construction the bearings are always in perfect alignment. The Spur Gears are cut from solid blocks of steel, every part is interchangeable. All machine parts are enclosed and dust-proof. Those parts which are most subject to strain are made of Malleable Iron and all bearings are extra wide to insure ample oil-retaining surfaces. Fitted with Adjustable Tool Rest and Scissors Guide.

No. 4M.

No. 5M.

No. 6M.



No. 7M.

No. 4M—With 4x1 inch Medium Grit Carborundum Wheel for home, office or wherever a light, portable grinder is desired. Weight boxed 7 pounds.....Each, $3.75

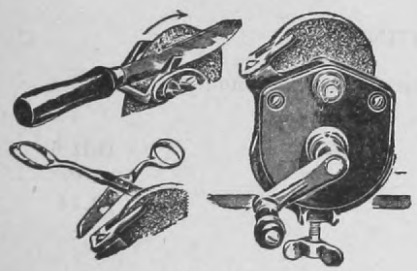
No. 5M—With 5x1 inch Carborundum Wheel, for mechanics' and carpenters' tool chests. Weight, boxed, 9 pounds .....Each, 5.00

No. 6M—With 6x1 inch Carborundum Wheel, strong and durable, for general use. Weight boxed 13 pounds .....Each, 6.75

No. 7M—7x1¼ inch Carborundum Wheel, built heavy and strong to withstand extra hard usage. Weight boxed 24 pounds.....Each, 9.75

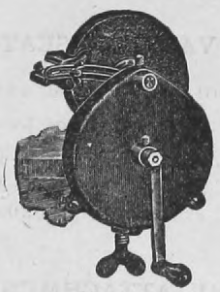
Packed—One in a Box.

HOUSEHOLD



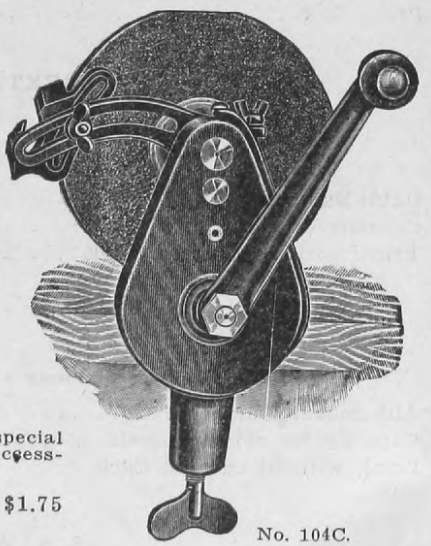
No. 2C.

CHALLENGE



No. 94.

MULTIPLE GEAR



No. 104C.

HOUSEHOLD GRINDERS

A very practical grinder for household and light use. Equipped with a special combination knife and shear guide so that anyone, however inexperienced, can successfully sharpen knives and shears.

No. 2C—With 3x¾ inch Carborundum Wheel. Weight, boxed 4 pounds, Each, $1.75

Packed—One in a Box.

CHALLENGE GRINDERS

A serviceable machine equipped with an adjustable tool rest and carborundum wheel. For every turn of the handle the wheel makes 12 revolutions, insuring cutting qualities. Circumference of Case, 14 inches. Finished in black enamel.

No. 94—With 4x1 inch wheel, weight boxed, 5½ pounds.....Each, $2.75

Packed—One in a Box.

MULTIPLE GEAR

These Grinders are built for high speed; every turn of the handle causes 30 revolutions of the grinding wheel, making them especially adapted for rapid cutting qualities and smooth finished work. The entire frame is in one piece, so that the ends of all bearings and gears are in perfect alignment. The mechanism consists of three gears and three pinions, all cut from solid steel blanks and having long bearings at both ends of the arbors. All bearings are entirely enclosed and protected from dust. Fitted with Adjustable Tool Rest and Scissors Guide.

No. 104C—With 4x1 inch Carborundum Wheel Weight boxed, 8 pounds.....Each, $7.25

Packed—One in a Box.

No. 105C—With 5x1 inch Carborundum Wheel. Weight boxed, 10 pounds.....Each, $7.50

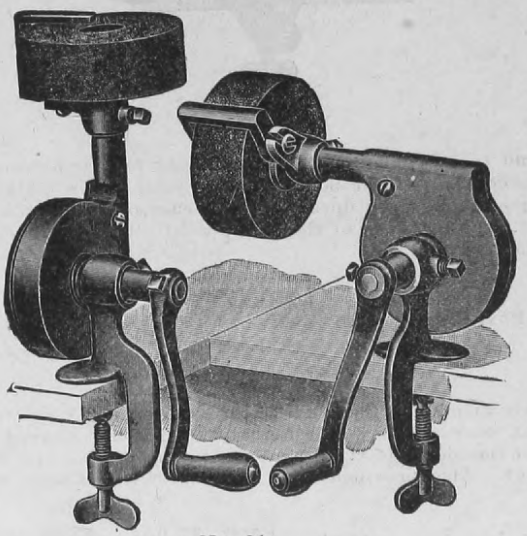
Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LUTHER TOOL GRINDERS

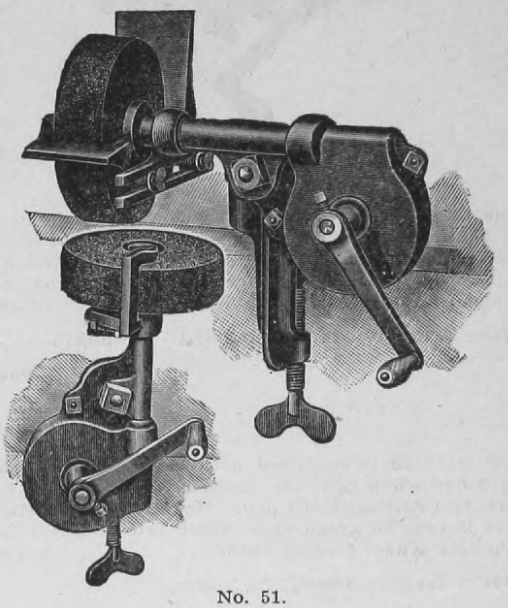
BEST MAIDE

These Grinders, by means of a cut worm gear, worm shaft and ball bearings, develop a very high speed that is practically noiseless. Bearings for both shafts are made in one piece insuring long life and perfect alignment; they have long oil-retaining surfaces and are entirely enclosed by the metal casing making them dust-proof. Ball bearings are used to take up all side thrust, all parts subject to strain are made malleable. Machine can be tilted so the grinding wheel will run at any angle or in any plane, every side of wheel can be used in sharpening.



No. 04.

Recommended for jewelers, opticians, physicians and for household use. Fitted with Adjustable Tool Rest.



No. 51.

For use by carpenters, mechanics, cabinet workers, harness makers and many other tool users. Fitted with Adjustable Tool Rest.

No. 04—With 4x1½ inch Medium Grit Carborundum Wheel; Weight, boxed, 9 pounds.....Each, $5.75

No. 51—With 5x1½ inch Double Grit Carborundum Wheel; one side of the wheel is for medium or general grinding and the other for fine work. Weight, boxed, 12 pounds.....Each, 7.00

No. 53—With Luther's Chisel and Plane Bit Honing attachment and a special twist drill sharpening attachment, otherwise the same as No. 51.....Each, 7.25

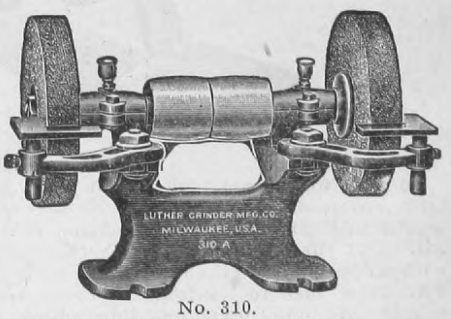
Packed—One in a Box.

LUTHER POWER BENCH GRINDERS

This line of Luther Grinders is built extra heavy in order to do away with vibration. The power may come from any direction. They are equipped with spring oil-cups, adjustable tool rests, extra wide bearings and wheels of Dimo-Grit Oxide. Finished in black, baked enamel. May be bolted or screwed to any heavy bench.

No. 309—Equipped with two Dimo-Grit Oxide wheels, 7x1¼ inches in size, one medium and one coarse grit. Diameter of shaft, ¾ inch. Diameter of pulley, 2½ inches. Width of pulley, 2¼ inches. Height of shaft above bench, 6¼ inches. Maximum speed, 2700 R. P. M. Will accommodate 10 inch wheels. Weight, packed, 31 lbs.....Each, $10.75

No. 310—The same as No. 309 except that the bearings are adjustable for wear and it has an extra pulley, an idler....Each, 14.25

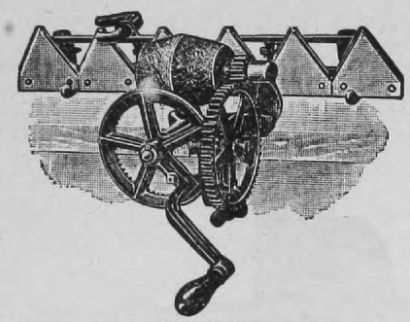


No. 310.

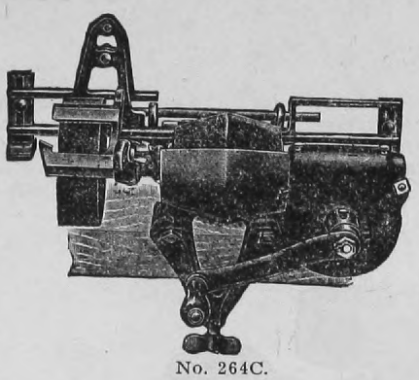
No. 316—Equipped with two Dimo-Grit Oxide wheels, each 10x1½ inches in size. Bearings are adjustable for wear by removing shimming. They are made of bronze, which, by a special patented method of construction, can be easily replaced and which automatically line up with the shaft. Two pulleys, one idler and one tight. Diameter of shaft, 1 inch. Length of bronze bearings, 4 inches. Diameter of pulleys, 3 inches. Width of pulleys, 3 inches. Height of shaft above bench, 8 inches. Maximum speed, 1500 R. P. M. Will accommodate 14 inch wheels. Weight, packed, 98 lbs.....Each, $37.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LUTHER'S TOOL GRINDERS



No. 82C.



No. 264C.

No. 82C

This is a simple, compact and serviceable hand power sickle and tool grinder especially adapted for farm work. It can be clamped to a mower wheel or bench. Its driving-mechanism consists of one bevel and two spur gears, which give a simple transmission of power. Bearings are long and large in diameter, insuring durability and ease of running, a long handle affords a big leverage. Although the device is partly automatic the grinding of the sickle is at all times under control of operator. The sickle holding attachment affords a very satisfactory tool rest.

No. 82C—Grinder, weight, boxed, 16 pounds.....Each, $4.00

Packed—One in a Box.

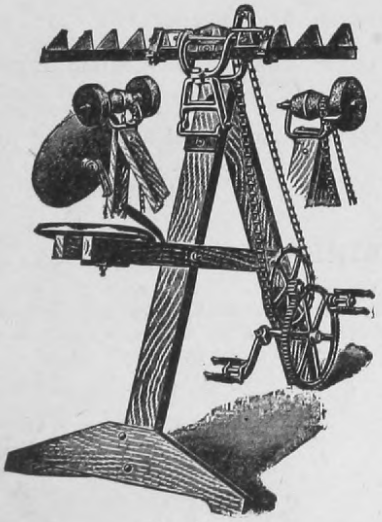
No. 264C

This machine is equipped with a cone-shaped Carborundum sickle grinding wheel that will give the same bevel to any section it had when new. It sharpens half of two different sections at once. The Sickle-holding device has proved very satisfactory. Although the device is partly automatic, the grinding of the sickle is at all times in full control of the operators and is easy to grind clear down into the heel or out to the point. Also provided with a medium grit Carborundum tool grinding wheel 4¼x3⅛ inches.

No. 264C—Weight, boxed, 22 pounds.....Each, $7.00

Packed—One in a Box.

FARM SPECIAL



No. 63.

Adapted to general tool grinding but more especially for farm requirements. Frame is of selected Maple, strongly braced. All grinding wheels run on the same shaft, which will carry three at one time, therefore any one can be used without removing others. **Fitted** with Dimo Grit Wheels. Two 5x1⅜ inch tool grinding wheels, one medium and one coarse grit, one sickle grinding wheel, sickle holder, disc holder and polishing wheel.

No. 63—Weight, boxed, 65 pounds.....Each, $14.25

Packed—One in a Box.

HUMMER

No. 271

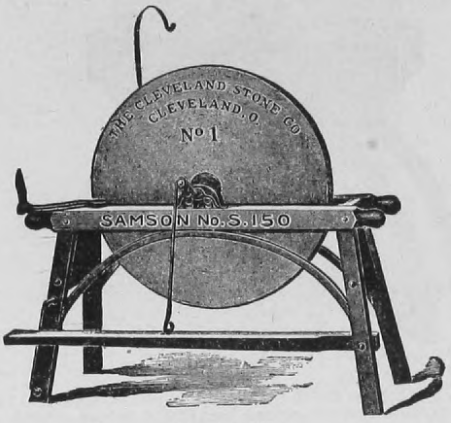
Angle Iron Frame, with malleable iron parts and adjustable metal seat. Bevel Gears, Steel Shaft Drive. Enclosed Dust-proof Bearings. Will carry three wheels at once. Has two grinding shafts in horizontal plane and one running in vertical plane. Head can be swiveled to any angle. **Equipped** with two 6x1⅜ inch Dimo Grit Wheels, one medium and one coarse grit. Tool Rest and Chisel and Plane Bit Guide.

No. 271—Weight, boxed, 64 pounds.....Each, $19.75

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOUNTED GRINDSTONES



No. S150.

Samson. Mounted with Specially Selected Stone, 1¾ to 2¼ inches thick, seasoned Hardwood Frame, braced and bolted. Has Treadle, Crank, Bucket Holder and Malleable Roller Bearing Fixtures.

Nos.	S150	S155	S160
Size, Nos.	1	2	3
Stone, Weight lbs.	100 to 110	70 to 80	40 to 50
Shipping Weights, lbs.	150	100	75
Each	$6.00	5.00	4.50

Packed—Shipped Knocked Down.

No. 115.

Double Treadle, 27 inches high, firmly braced. Mounted with stone 18 to 20 inches in diameter and 1¾ to 2 inches thick. Frame constructed of 1x⅝ inch Angle Steel. Has Malleable Iron Detachable Fixture, Ball Bearings on shaft and crank, Clothes Protector and Water Cup. Shipping weight 75 pounds.

No. 115—Mounted Grindstone.....Each, $4.75

Packed—Shipped Knocked Down.

No. B100.

Bi-Treadle. Steel Frame riveted together and braced in a manner to insure absolute rigidity. Mounted with Genuine Berea or Huron Stone, 1¾ to 2¼ in. thick, weighing 50 to 60 pounds. Duplex Treadles, Interchangeable Fixtures. Finished in black. Average shipping weight 100 pounds

No. B100—With **Ball** Bearings
.....Each, $6.00

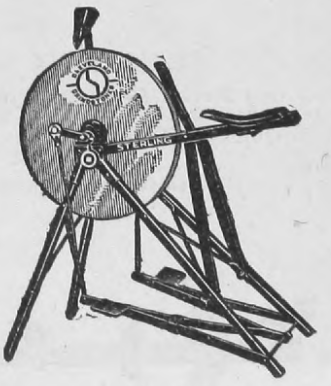
Packed—Shipped Knocked Down.

Norka.

Mounted with Genuine Berea or Huron Grit, 19 to 22 inches in diameter and 1¾ to 2¼ in. thick. Frame is of 1 1/16 inch Heavy Steel Tubing, strongly braced and held at the top by two roller bearing steel Clamps. Shipping weight 100 pounds.

Norka Grindstone.....Each, $5.75

Packed—Shipped Knocked Down.



No. T100.

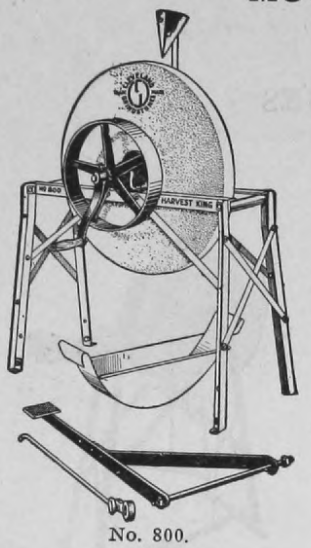
Sterling. Constructed of Heavy Steel Tubing braced securely with heavy material. All rods and bolts are threaded. Mounted with Genuine Berea or Huron Stone, 1¾ to 2¼ inches thick. Has Duplex Treadles, Seat, Clothes Protector, Malleable Iron Castings and Ball Bearing Fixtures. Enameled in a rich Vermilion. Average shipping weight 100 pounds.

No. T100—Weight of Stone, 50 to 60 pounds.....Each, $6.50

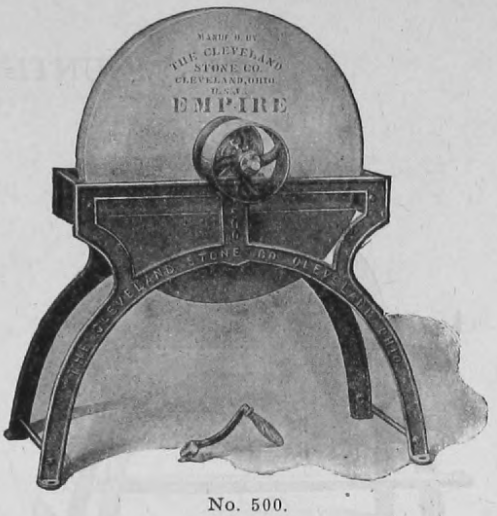
Packed—Shipped Knocked Down.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOUNTED GRINDSTONES



No. 800.



No. 500.

Harvest King

Mounted with selected Cleveland Grindstone 24 inches in diameter, 2 inches thick; a 5/8 inch shaft and a 12x2 3/8 inch pulley. Frame constructed of heavy angle steel 1¼x1¼x3/16 inches, equipped with roller bearings, hand crank and drip cup. Average shipping weight 125 pounds.

No. 800—Harvest King Grindstone.....Each, $10.50

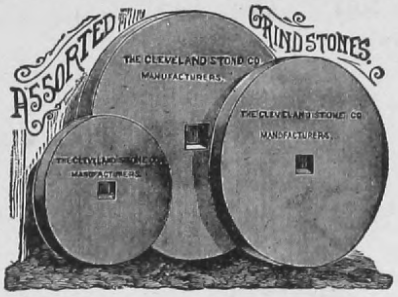
Packed—Shipped Knocked Down.

Empire

Empire Ball Bearing Power Grindstones, designed to meet the requirements of the farmer who desires a grindstone to be operated by a gasoline engine, something more substantial than the regular outfit for hand power and still light enough to consume very little power. Can be operated with crank if desired. Mounted with Genuine Berea Stone, 24 inches in diameter, 2 to 3½ inches thick. Cast Iron Frame and Trough. **Ball** Bearing Fixtures.

No. 500—Weight Complete, 225 Pounds.....Each, $15.00

UNMOUNTED GRINDSTONES

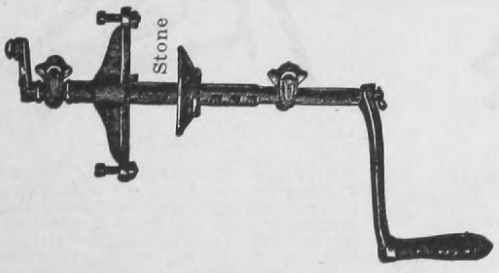


Fine Grit Stones are suitable for grinding all Edge Tools, Cutlery, etc. Coarse Grit Stones are suitable for grinding Tools for Coarse work, but are **not** suitable for use on Fine Edge Tools, Cutlery, etc.

F. O. B. Quarry—Sizes.....	Under 40 pounds	40 to 200 pounds	200 pounds and over
Per Ton.....	$.....	.....	.....

In Ordering specify Fine or Coarse Grit or State purpose for which stones are to be used.

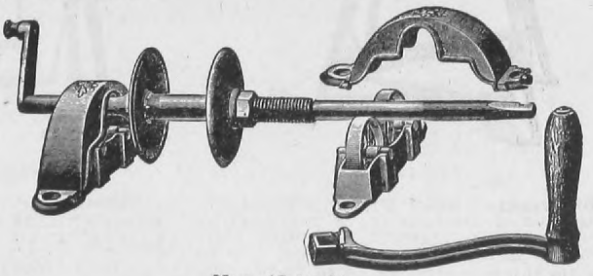
GRINDSTONE FIXTURES



Giant—Set Up.

Will hang a stone true and fast to its Shafts by means of Set Screws. No blocking, wedging or cementing is necessary.

Giant Grindstone Hangers.....Per Dozen Sets, $18.50



Nos. 17 to 21.

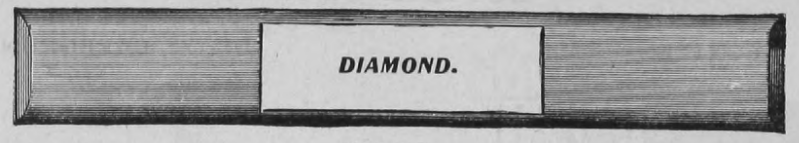
Japanned, with Covered Bearings and Broad Faced Coppered Rollers.

Nos.	17	19	21
Length of Shaft, inches.....	17	19	21
Per Dozen	$8.00	9.00	11.00

Extra Cranks or Handles for Grindstones.... .....Per Dozen, $.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SCYTHE STONES



No. 066.

No. 066—Diamond or Western Red End, Coarse Grit, Length 10 inches.....Per Gross, $8.50

Packed—Quarter Gross in a Box.

No. 65.

No. 65—No. 1 Indian Pond, Red End, very Sharp Grit, Length 10 inches.....Per Gross, $11.00

Packed—Quarter Gross in a Box.

No. 62½.

No. 62½—Buhl Sons Co. New Quinnebaugh, Round Oval Shape, Length 10 inches.....Per Gross, $11.00

Packed—Quarter Gross in a Box.

No. 065.

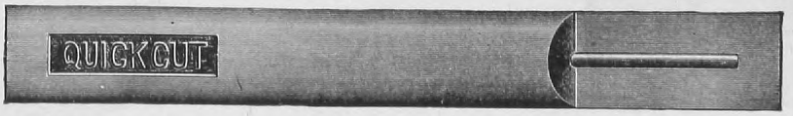
No. 065—Berea Scythe Stones, made from the finest Selected Berea Grit, Smooth Finish, Half Oval Sides, Flat Edges, Tapers both ways from center, Length 9½ inches.....Per Gross, $12.50

Packed—Quarter Gross in a Box.

No. 60.

No. 60—White Mountain, Oval Shape with Square Edges, Length 10 inches.....Per Gross, $20.00

Packed—Quarter Gross in a Box.

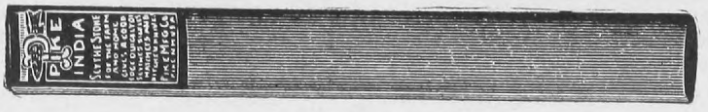


No. 9½.

An inexpensive but serviceable stone made of extremely fast cutting material strengthened by a **Steel Bar** extending its entire length. Imparts a medium coarse edge.

No. 9½—**Quick Cut** Scythe Stones, Round Oval Shape, Length 10 inches.....Per Gross, $13.50

Packed—Quarter Gross in a Box.



No. 25.

No. 25—**India** Vitrified Scythe Stones, Round Oval Shape, Length 10 inches. Put up with an attractive **Counter Display** Stand in each box.....Per Gross, $28.80

Packed—Quarter Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SCYTHE STONES

ALOXITE

No. 188.

The Aloxite Scythe Stone is very hard and tough. Cuts quickly and easily leaving a good working edge.

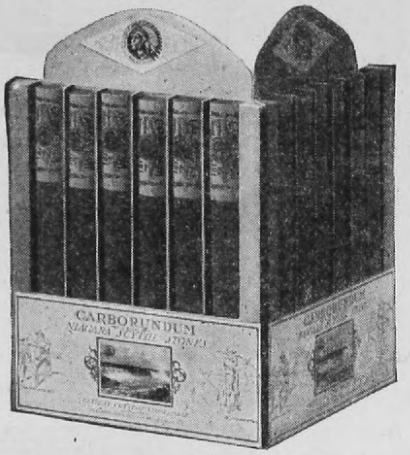
No. 188—Aloxite Scythe Stones.....Per Gross, $18.00

Packed—Quarter Gross in a Box.

CARBORUNDUM

Nos. 190 to 192.

CARBORUNDUM



Nos. 190C to 192C.

CARBORUNDUM NIAGARA SCYTHE STONES

These are strong, durable and wonderfully rapid cutting stones. They do away with the grinding of a scythe almost entirely, by producing a clean, sharp edge; doing it faster and easier than it could be done on the best grindstone.

Nos. 190 to 192.

No. 190—Length 10 inches.....Per Gross, $28.80
No. 191—Length 12 inches.....Per Gross, 36.00
No. 192—Length 10 inches, **heavy**....Per Gross, 36.00

Packed—Quarter Gross in a Box.

Nos. 190C to 192C.

No. 190C—Length 10 inches.....Per Dozen, $2.40
No. 191C—Length 12 inches.....Per Dozen, 3.00
No. 192C—Length 10 inches, **heavy**....Per Dozen, 3.00

Packed—One Dozen in a Display Carton.

SCYTHE STONE ASSORTMENTS

No. D—Scythe Stone Assortment

Quantity	Kind	Each	Total
9	White Mountain Scythe Stones	$0.15	$1.35
9	Quick Cut Scythe Stones	.10	.90
9	Leader Scythe Stones	.05	.45
9	Crescent Scythe Stones	.10	.90
36	Pieces ..... Total,		$3.60

No. D—Scythe Stone Assortment, weight each 25 pounds ..... Each, $3.60

Packed—Each Assortment in a Box. Size 12½x7¾x7 inches.

No. B—Scythe Stone Assortment

Quantity	Kind	Each	Total
12	Sun Scythe Stones	$0.05	$0.60
12	Leader Red End Scythe Stones	.05	.60
12	Crescent Scythe Stones	.10	1.20
12	Willoughby Lake Scythe Stones	.10	1.20
12	Quick Cut Scythe Stones	.10	1.20
12	Prem. Quinnebaugh Scythe Stones	.10	1.20
12	Black Diamond	.15	1.80
84	Pieces ..... Total,		$7.80

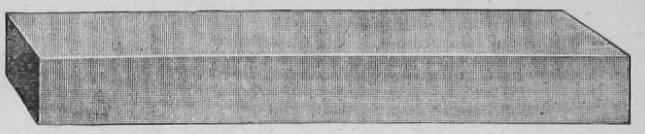
No. B—Scythe Stone Assortment, Weight each, 65 pounds ..... Each, $7.80

Packed—Each Assortment in a Box. Size 13x12½x9½ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AXE STONES

BENCH STONES



Axe Stones

Quickcut Emery Axe Stones, for oil, 3x2x⅝ inch ..... Each, $0.15
Queer Creek Axe Stones, for oil and water, 2½x1½x½ inch ..... Each, .05

Packed—Quickcut, Twelve; Queer Creek, Twenty-four in a Box.

Bench Stones

Lily White Washita Oil Stones	Size Nos	6	7	8
	Size, inch	5¾-6x2x¾-1	6¾-7x2x¾-1	7¾-8x2x¾-1
	Each	$0.60	.65	.75

Packed—One in a Box.

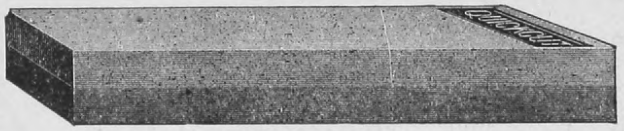
No. 1 Washita Oil Stones	Size Nos	5	6	8
	Size, inch	4¾-5x2x¾-1	5¾-6x2x¾-1	7¾-8x2x¾-1
	Each	$0.25	.35	.50

Packed—Each Stone wrapped in paper and carried in Open Stock.

Queer Creek Oil and Water Stones, 7x2x¾-1 inch ..... Each, $0.25

Packed—One in a Carton.

QUICKCUT EMERY OIL STONES



Made of Turkish Emery, one side coarse, other side fine Grit.

Nos.	C	D	E
Size, inch	4x1½x½	6x2x¾	8x2x1
Each	$0.15	.25	.35

Packed—One in a Box.

COMBINATION OIL STONES

This Combination possesses the fine qualities of the Washita in addition to the quicker cutting quality of the India.

India Washita Combination Oil Stones, 7x2x1 inch ..... Each, $1.25

Packed—One in a Box.

MOUNTED OIL STONES

Mounted in Handsomely Polished Hardwood Boxes.

No. 1 Hard Arkansas	Inches	4x1½	6x2
	Each	$1.25	2.50

Lily White Washita, 7x2 inches ..... Each, $0.90
No. 1 Washita, 7x2 inches ..... Each, .75
Queer Creek, for Oil and Water, 7x2 inches ..... Each, .40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ROUND EDGE SLIPS

No. 1 Hard Arkansas Round Edge Oil Stone Slips

No. 1—Size 3 { Length, inches 2¾ to 3½; Width, inches, 1¾ to 2..... } Each, $0.75
{ Thick Edge, inches ¼ to ⅜; Thin Edge, inches 1/16 to ⅛..... }

Packed—Six in a Box.

Washita Round Edge Oil Stone Slips

Size Nos	3	4	5
Size, inches	2¾-3½x1¾-2x⅜-½x⅛-¼	3¾-4½x1¾-2x⅜-½x⅛-¼	4¾-5½x1¾-2x⅜-½x⅛-¼
Lily White Washita..Each,	$0.20	.25	.35
No. 2 Washita.....Each,	.05	.10	.15

Packed—Lily White, Twelve in a Box; No. 2, Washita, In Open Stock.

IDEAL ASSORTMENT

Ideal.

The Ideal Assortment consists of a selected variety of Pike India Oil Stones and several high grade Razor Hones. Cabinet is made of well seasoned oak, finished in a very dark Mission Green.

Ideal Assortment

Quantity	Kind	Each	Total
1 No. 0	Combination India	$1.50	$1.50
1 No. 0	Medium India	1.25	1.25
2 No. 1½	Combination India	1.25	2.50
2 No. 29	Combination India	1.00	2.00
2 No. 1½	Medium India	1.00	2.00
2 No. 29	Medium India	.75	1.50
2 No. 2	Combination India	.75	1.50
2 No. 2	Medium India	.60	1.20
1 No. 24	Combination India	.60	.60
1 No. 24	Medium India	.50	.50
4 No. 3	Medium India	.35	1.40
1 No. 13	Fine India	.50	.50
1 No. 14	Medium India	.50	.50
1 No. 15	Coarse India	.50	.50
6 No. 61	India Pocket Stones	.15	.90
2 Ezy Edge Hones		.50	1.00
3 Handihones		.35	1.05
1 Pike Strop-Hone		1.00	1.00
35 Pieces	Total		$21.40

Ideal Assortment, Weight each, 35 pounds.....Each, $21.40

Packed—Each Assortment in a Box. Size 12x12x5 Inches.

POCKET KNIFE HONES

Fast Cut.

A fast cutting natural stone for Pocket Knives and small Tools.

Fast Cut Pocket Knife Hones, 3½x⅞x⅜ inch.. ..... Per Dozen, $1.20

Packed—One Dozen in a Display Box.

Quick Edge.

Quick Edge Pocket Knife Hones, 4x1 inch. A sharp grit natural stone on hardwood handle, with razor-strop leather back.....Per Dozen, $2.40

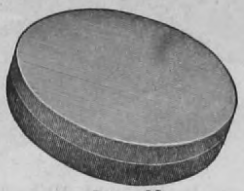
Packed—One Dozen in a Display Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INDIA OIL STONES

AXE STONES

No. 59.



No. 60.

CIRCULAR STONES

No. 63.

Axe Stones

These Stones cut many times faster than a grindstone and set equally as good an edge. Just the right size to carry in the pocket.

No. 59—Coarse, Size 3x1½x½ inch ..... Each, $0.30
No. 60—One side Coarse, other side Fine, Diameter 3 inches, Thickness ⅝ inch ..... Each, .40

Packed—One in a Carton.

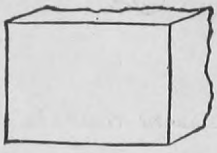
"Combination" Circular Stones. Fine and Coarse Grit.

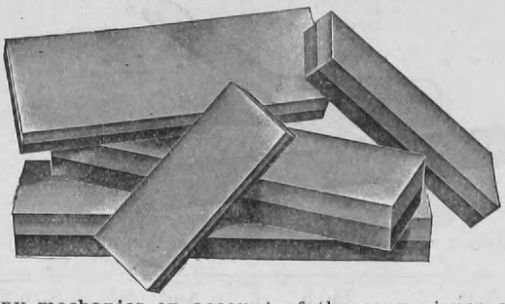
These Stones permit of a broad, rotary sweep in sharpening Chisels, Plane Irons, Scrapers, etc.

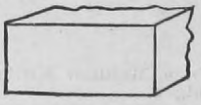
No. 63—Diameter 4 inches, Thickness 1 inch, **without** Box ..... Each, $1.25

Packed—One in a Carton. For Steel Boxes Separate—See page 508.

COMBINATION STONES





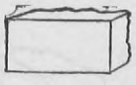


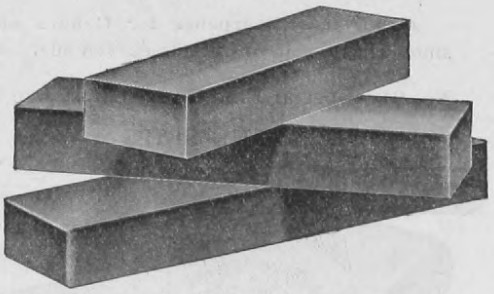
These Stones are preferred by many mechanics on account of the convenience and economy of having two stones in one. The coarse side is for fast work and the medium side for setting a fine smooth edge.

Nos.	00	01½	029	02	024
Size, inches	8x2x1	7x2x1	6x2x1	6x1⅝x¾	4½x1½x⅝
Each	$1.50	1.25	1.00	.75	.60

Packed—Each in a Separate Paper Box.

BENCH STONES





For sharpening Chisels, Plane Irons, Planer Knives, Scrapers, Paper Cutting Knives and all tools with broad flat edges.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
0F	8x2x1	Fine	$1.25	2F	6 x1⅝x¾	Fine	$0.60
0M	8x2x1	Medium	1.25	2M	6 x1⅝x¾	Medium	.60
0C	8x2x1	Coarse	1.25	2C	6 x1⅝x¾	Coarse	.60
1½F	7x2x1	Fine	1.00	24F	4½x1½x⅝	Fine	.50
1½M	7x2x1	Medium	1.00	24M	4½x1½x⅝	Medium	.50
1½C	7x2x1	Coarse	1.00	24C	4½x1½x⅝	Coarse	.50
29F	6x2x1	Fine	.75	3F	4 x1 x½	Fine	.35
29M	6x2x1	Medium	.75	3M	4 x1 x½	Medium	.35
29C	6x2x1	Coarse	.75	3C	4 x1 x½	Coarse	.35

Packed—Each in a Separate Paper Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

INDIA OIL STONES

SQUARE AND TRIANGULAR FILES

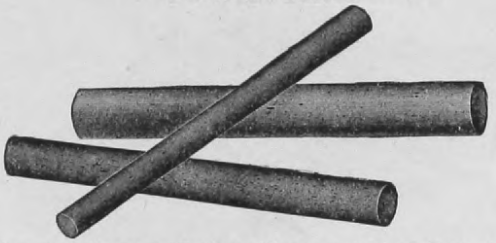
Shape of Nos. 4F to 6C.

Shape of Nos. 7F to 9C.

For Reamers, Dies, Silversmiths', Watch, Clock and Instrument Makers' Tools, and Shoe Machine Tools such as Barber Undertrimmers, Welt Awls, etc.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
4F	4x½	Fine	$0.35	7F	4x½	Fine	$0.45
4M	4x½	Medium	.35	7M	4x½	Medium	.45
4C	4x½	Coarse	.35	7C	4x½	Coarse	.45
5F	4x⅜	Fine	.35	8F	4x⅜	Fine	.45
5M	4x⅜	Medium	.35	8M	4x⅜	Medium	.45
5C	4x⅜	Coarse	.35	8C	4x⅜	Coarse	.45
6F	4x¼	Fine	.35	9F	4x¼	Fine	.45
6M	4x¼	Medium	.35	9M	4x¼	Medium	.45
6C	4x¼	Coarse	.35	9C	4x¼	Coarse	.45

ROUND FILES



For Dies, Moulder Knives, Bead Planers, Channel Knives, Gouges, Auger Bits, Instrument Makers' Tools and all curved cutting edges.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
10F	4x½	Fine	$0.50	11C	4x⅜	Coarse	$0.50
10M	4x½	Medium	.50	12F	4x¼	Fine	.50
10C	4x½	Coarse	.50	12M	4x¼	Medium	.50
11F	4x⅜	Fine	.50	12C	4x¼	Coarse	.50
11M	4x⅜	Medium	.50	.....	.....	.....	.....

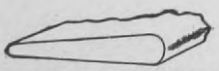
SPECIAL GOUGE SLIPS

No. 21.

A universal sharpener for Gouges and all curved cutting edges, also for smoothing inside or outside curved surfaces.

No. 21—Special Fine Gouge Slips, size 6x2x1x3/16 inch.....Each, $1.00

OIL STONE SLIPS



Shape of Nos. 13M to 22C.

Shape of No. 16M.

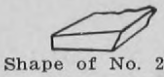
For Dies, Moulder Knives, Bead Planers, Channel Knives, Gouges, Auger Bits, Instrument Makers' Tools and all curved cutting edges.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
13M	4½x1¾x½x8/16	Medium	$0.50	15M	4½x1¾x¼x1/16	Medium	$0.50
13C	4½x1¾x½x3/16	Coarse	.50	15C	4½x1¾x¼x1/16	Coarse	.50
14F	4½x1¾x⅜x⅛	Fine	.50	20M	4x1x7/16x3/16	Medium	.40
14M	4½x1¾x⅜x⅛	Medium	.50	22M	4½x2⅛x⅝x5/16	Medium	.60
14C	4½x1¾x⅜x⅛	Coarse	.50	22C	4½x2⅛x⅝x5/16	Coarse	.60
15F	4½x1¾x¼x1/16	Fine	.50	16M	8x⅝x⅝	Medium	.75

UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

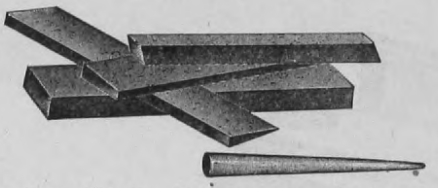
INDIA OIL STONES

MISCELLANEOUS

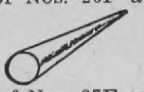


Shape of No. 23M.

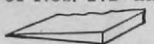
Shape of Nos. 25M and 25C.



Shape of Nos. 26F and 26M.



Shape of Nos. 27F and 27M.



Shape of Nos. 28F and 28M.

Adapted to the following uses: **Nos. 23M to 25C,** for Shoe Machine Tools, such as Needles and Rough Rounders, and for Reamers; **Nos. 26F and 26M,** for Sewing Machine Feeds, Mould and Die work and for taps; **Nos. 27F and 27M,** for Mould and Die work and for Engravers' Tools; **Nos. 28F and 28M,** for Draughtsmen's Pens, Watchmakers, etc.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
23M	3 ½ x ¾ x 3/16 x ⅛	Medium	$0.35	**26M**	4 x 9/16 x 3/16	Medium	$0.60
25F	4 ½ x 1 x 5/16	Fine	.35	**27F**	3 x 5/16	Fine	.60
25M	4 ½ x 1 x 5/16	Medium	.35	**27M**	3 x 5/16	Medium	.60
25C	4 ½ x 1 x 5/16	Coarse	.35	**28F**	4 x 1 x ⅛	Fine	.50
26F	4 x 9/16 x 3/16	Fine	.60	**28M**	4 x 1 x ⅛	Medium	.50

Packed—One in a Carton.

MACHINISTS' SPECIAL

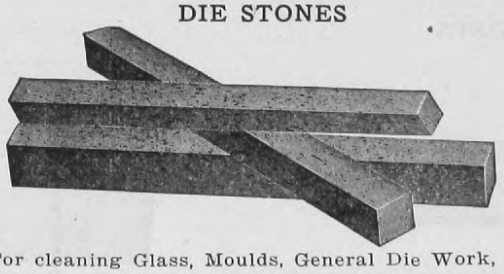
No. 68F.

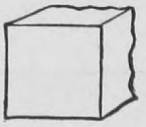
This Stone is especially adapted to sharpening Lathe and Planer Tools, Milling Cutters, Reamers and Drills; also for use in automatic jointing machines. It is not filled with oil like other India Stones, hence, to secure best results it should be thoroughly soaked in a free flowing, non-gumming oil before using.

Nos.	Size, inches	Grit	Each
68F	4 ½ x ¾ x 5/16	Fine	$0.25
68M	4 ½ x ¾ x 5/16	Medium	.25
68C	4 ½ x ¾ x 5/16	Coarse	.25

Packed—One in a Carton.

DIE STONES





For cleaning Glass, Moulds, General Die Work, etc.

Nos.	Size, inches	Grit	Each	Nos.	Size, inches	Grit	Each
31M	6 x ½ x ½	Medium	$0.50	**33M**	6 x ¾ x ¾	Medium	$0.60
32M	6 x ⅝ x ⅝	Medium	.50	**34M**	6 x 1 x 1	Medium	.60
32C	6 x ⅝ x ⅝	Coarse	.50	.....	.....	.....	.....

Packed—Half Dozen in a Carton.

PEN KNIFE PIECES

No. 61.

One of the best all around sharpeners for all sorts of small tools around the home, office and workshop. Made of selected material, gives a sharp, keen edge.

No. 61—Pen Knife Pieces, Size 3 ½ x 1 x ⅜ inch ..... Per Dozen, $1.80

Packed—One Dozen in a Natural Wood Display Stand.

SPORTSMAN'S POCKET STONES

No. 62.

Designed especially for hunters, fishermen and foresters, but also useful for all sorts of small tools around the home and office. One side is a fast cutting Corundum Stone for sharpening hunting and camp knives, axes, hatchets, fish hooks, gaffs, etc., and the other side a fine Washita for finishing. Each stone in a durable leather case.

No. 62—Sportsman's Combination Pocket Stones, Size 3 x 1 ⅜ x ½ inch ..... Per Dozen, $9.00

Packed—Each Stone in a Leather Case.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

INDIA OIL STONE BOXES

OAK

Nos. 0B to 2B.

STEEL

No. 63B.

Oak Boxes for Bench Stones

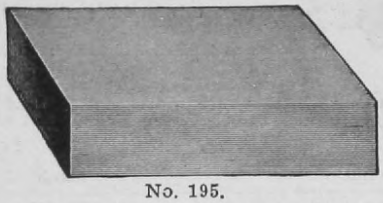
Nos.	0B	1½B	29B	2B
For Stones, inches	8x2x1	7x2x1	6x2x1	6x1⅝x¾
Each	$0.35	.35	.35	.35

Steel Boxes for Round Stones

No. 63B—Steel Boxes for Circular Combination Stones 4 inches in diameter.....Each, $0.75

CARBORUNDUM STONES

AXE STONES



No. 195.

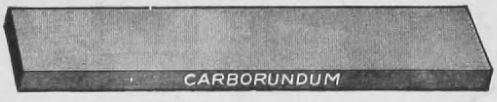
No. 196.

A great stone for lumbermen, hunters and campers. Will put an edge on the dullest axe in a few moments. Made to fit the pocket.

No. 195—Size 2½x2½x½ inch.....Each, $0.30
No. 196—Size 3 inches in diameter, ⅝ inch thick.....Each, .40

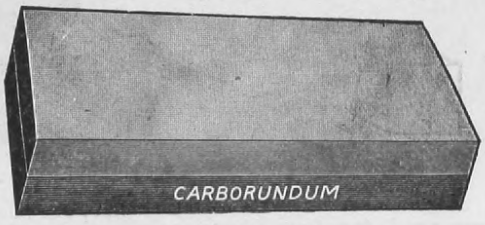
Packed—Each in a Separate Carton.

SHARPENING STONES



Nos. 115 to 146.

COMBINATION STONES



Nos. 108 to 112.

Carborundum Sharpening Stones

Positively unequaled for rapid cutting qualities, used dry or with water or oil. Very porous and may be tempered in their cutting by filling with wax or vaseline.

Nos.	Length, Inches	Width, Inches	Thickness, Inches	Grade	Each	Nos.	Length, Inches	Width, Inches	Thickness, Inches	Grade	Each	Nos.	Length, inches	Width, inches	Thickness, inches	Grade	Each
115	8	2	1	Fine	$1.25	**124**	6	2	⅝	Fine	$0.65	**138**	5	2	⅝	Coarse	$0.60
116	8	2	1	Medium	1.25	**125**	6	2	⅝	Medium	.65	**142**	4	1¾	½	Fine	.50
118	8	2	¾	Fine	1.00	**126**	6	2	⅝	Coarse	.65	**143**	4	1¾	½	Medium	.50
119	8	2	¾	Medium	1.00	**130**	6	1½	½	Fine	.50	**145**	4	1	¼	Fine	.30
121	6	2	1	Fine	.75	**131**	6	1½	½	Medium	.50	**146**	4	1	¼	Medium	.30
122	6	2	1	Medium	.75	**136**	5	2	⅝	Fine	.60	...	..	..	..	.....	....
123	6	2	1	Coarse	.75	**137**	5	2	⅝	Medium	.60	...	..	..	..	.....	....

Packed—Each in a Separate Carton.

Carborundum Combination Stones

Designed especially for carpenters' and mechanics' use. Has coarse side for sharpening dull tools and fine side for giving a keen lasting edge.

Nos.	108	110	109	111	112
Size, inches	8x2x1	7x2x1	6x2x1	5x1⅝x¾	4x1¾x⅝
Each	$1.50	1.25	1.00	.75	.60

Packed—Each in a Separate Carton.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

CARBORUNDUM STONES

ROUND COMBINATION BENCH STONES

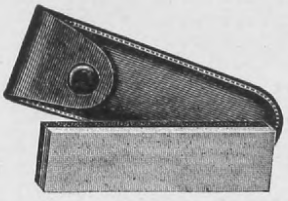
This Stone is designed to meet the sharpening needs of the carpenter and general mechanic and is made round to allow for the circular motion required in sharpening chisels, plane bits and similar tools.

No. 107C.

It is a novel as well as practical addition to the tool box. Has coarse side for taking out nicks and bringing tools to an edge and fine side for giving a keen, finished edge.

No. 107 —Round Combination Bench Stone, 4x1 inches, in Pasteboard Box.....Each, $1.25
No. 107C—Round Combination Bench Stone, 4x1 inches, in Polished, Dust-proof Oak Case.....Each, 2.00

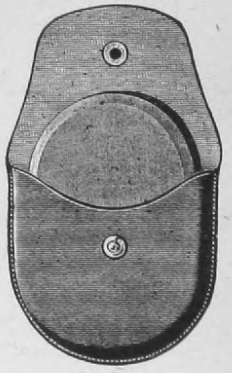
SPORTSMEN'S COMBINATION STONES



No. 114.

Designed for the sportsmen's hunting outfit. Has coarse side for sharpening very dull knives, and fine side for giving the required edge. Can be carried in pocket.

No. 114—Size 4x1 ½x½ inch, in a neat Soft Leather Case .....Each, $0.75



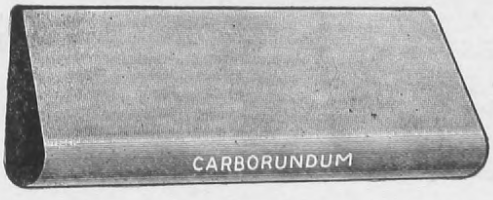
No. 113.

Round Sportsmen's Combination Stones

A handy stone for sharpening hatchets, sheath and clasp knives, etc., and for pointing gaffs and fish hooks. Has coarse side for fast work and fine side for setting a fine smooth edge.

No. 113—Round Sportsmen's Combination Stone, in either Genuine Pig Skin or Imitation Walrus Belt Case
..... Each, $1.00

SLIP STONES



Nos. 177 to 184.

These Stones are very rapid cutters, and being of a uniform degree of hardness and sharpness they never lose their shape.

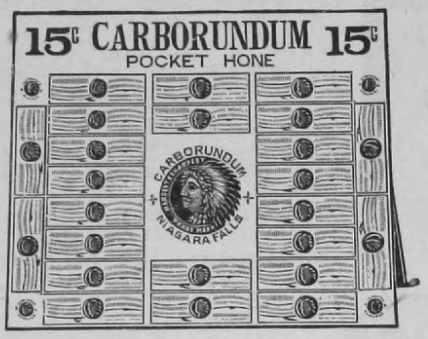
Nos.	177	178	180	181	183	184
Size, inches	4 ½ x 1 ¾ x ¼ –1/16	4 ½ x 1 ¾ x ¼ –1/16	4 ½ x 2 ⅛ x ⅝ –5/16	4 ½ x 2 ⅛ x ⅝ –5/16	4 ½ x 1 ¾ x ½ –3/16	4 ½ x 1 ¾ x ½ –3/16
Grit	Fine	Medium	Fine	Medium	Fine	Medium
Each	$0.50	.50	.60	.60	.50	.50

Packed—Each in a Separate Carton.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

CARBORUNDUM STONES

POCKET HONES



No. 149.

Carborundum Pocket Hones

Made of the finest carborundum powder of a hardness suitable for sharpening pocket knives, ink scratchers, scissors and small tools. Very smooth and fast cutting.

No. 149—Size 3x⅞x⅜ inch.....Per Case, $3.60

Packed—Two Dozen in an Easel Back Display Case.

MACHINISTS' SPECIAL STONES

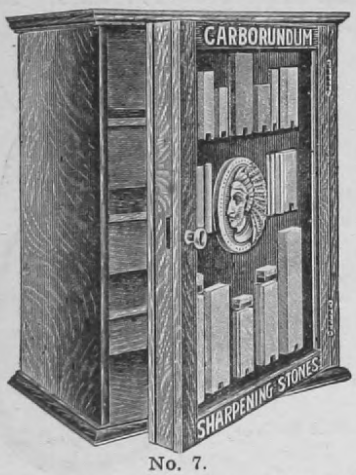
No. 292.

Designed especially for machinists' use, is fast cutting and holds its shape perfectly. The grit and grade of hardness is adapted to sharpening lathe and planer tools, milling cutters, reamers and drills.

No. 292—Fine Grit, Size 4x1x½ inch.....Each, $0.35

Packed—Each in a Separate Carton.

CARBORUNDUM ASSORTMENT



No. 7.

Case made from quartered oak, nicely finished, 24 inches high, 18 inches wide and 12 inches deep.

On Display

The following stones are mounted on the display panel in door of case.

Quantity	Nos.	List Price
1 only	103	$0.75
1 "	200	.75
1 "	109	1.00
1 "	111	.75
1 "	112	.50
1 "	118	.80
1 "	124	.60
1 "	142	.40
1 "	145	.25
1 "	149	.15
1 "	183	.50
1 "	184	.50
1 "	194	.25
1 "	292	.30
2 "	4x⅜ round	.80
2 "	4x⅜ square	.60
2 "	4x⅜ triangle	.70

List amount $9.60

Additional Stock

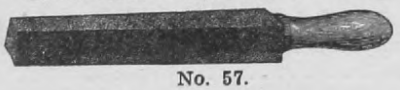
Quantity	Nos.	List Price
2 only	200	$ 1.50
2 "	103	1.50
2 "	102	1.00
1 "	101-A	1.00
2 "	115	2.00
1 "	116	1.00
2 "	118	1.60
1 "	119	.80
2 "	121	1.50
1 "	122	.75
3 "	124	1.80
2 "	125	1.20
2 "	142	.80
1 "	143	.40
2 "	145	.50
1 "	180	.60
1 "	181	.60
2 "	183	1.00
2 "	184	1.00
3 "	292	.90
2 "	107	2.00
1 "	108	1.25
2 "	109	2.00
2 "	110	2.30
2 "	111	1.50
2 "	112	1.00
2 "	194	.50

List amount $32.00

No. 7—Display Case Assortment, complete.....Each, $41.60

CARBORUNDUM FILES

Made to do the general shop work of the ordinary steel file, but has the advantage of doing better and quicker work, and in addition can be used for touching up case-hardened parts and removing scale from metals that cannot be touched by the steel file.



No. 57.

The Carborundum File No. 57 is so shaped that it can be used with good results also in sharpening mower sections, scythes, spades, and other farm implements. The handiest abrasive tool that can be added to any farm equipment.

No. 57—Carborundum File, 13 inches long, Wood Handle.....Per Dozen, $9.00

Packed—In Open Stock—Each Wrapped Separately.

KITCHEN STONES

No. 330.

Carborundum Stone, 6 inches long and 2 inches wide, mounted on a polished wood base.

No. 330—Carborundum Kitchen Stone. Per Gross, $36.00

Packed—One Dozen in a Box.

KNIFE SHARPENERS

No. 76.

A Shaft of Carborundum, firmly secured to handle by a steel rod extending its entire length, giving it strength and durability.

No. 76—Knife Sharpener, Length over all 14 inches.....Per Gross, $36.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO TINNERS' SHEARS

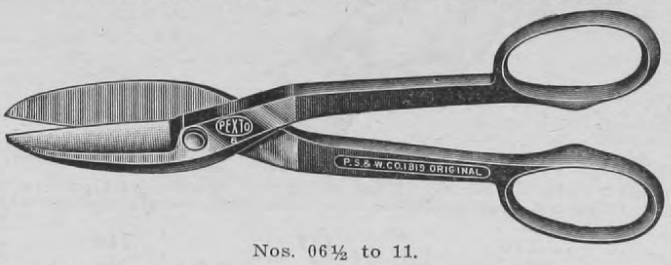
We can furnish any of the following Snips, with Bows made for Left-handed men, at an extra cost of fifty cents each, net. This means a right-hand cut, with Bows made for the left hand.

We sometimes have call for Snips for left-handed men, but a Left-hand Snip, as we apply the term, is not intended for a left-handed man. Confusion often arises as to the meaning of the terms right- and left-hand as applied to Snips. Right-hand are made like Bench Shears, and left-hand opposite. That is, when held in the right hand the lower Blade is on the right side of the Shears in Right-hand Shears, and on the left hand in Left-hand Shears. Left-hand only are shown in the Cuts. Left-hand Snips are more generally used, and are invariably sent unless Right-hand are ordered.

How to Use Tinners' Shears

Make straight up and down cuts. Keep the "set" of the shears right for easy work at all times. Keep the Joint and Bolt well oiled. Take care to sharpen properly, and as frequently as necessary to give an easy cut. P. S. & W. Shears have sufficient tool-steel in the blades to allow proper grinding whenever needed. Don't grind too fine an edge. Don't twist the Shears sidewise when cutting. Don't use the blade for prying or bending purposes. Don't use Snip Shears for cutting heavy iron or steel. Always use the Snips for such work as is adapted to their size. Don't use the cutting-edges of Snips for wire cutters, use Cutting Pliers instead.

STRAIGHT HAND SNIPS OR SHEARS

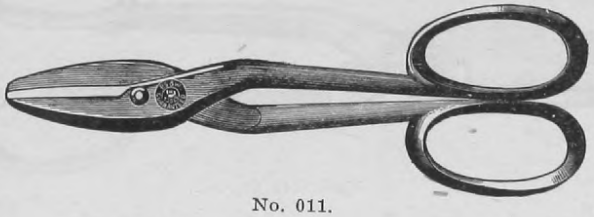


Nos. 06½ to 11.

P. S. & W. Co., Forged from best Norway Iron, Steel laid. Fully Warranted

Nos.	06½	6½	7	8	9	10	11
Cut, inches	4½	4¼	4	3½	3	2½	2¼
Length, inches	17	15¾	14¼	13½	12	11	10½
Each	$8.00	5.35	4.50	3.50	3.15	2.87	2.15

Packed—One Pair in a Package.



No. 011.

No. 82.

Jewelers' Hand Snips

P. S. & W. Co., Solid Steel, nicely finished. Especially adapted for mechanics' use.

No. 011—Cut 1¾ inches, Length 8 inches.....Each, $1.00

Packed—One Pair in a Package.

Pocket Hand Snips

A Pocket Snip, Forged from the best material. Adapted to use by the mechanic, plumber, electrician and automobilist. The Tinsmith and Sheet Metal Worker will find it a very useful, vest pocket shear.

No. 82—Cut 2 inches, Length 7 inches, Japanned.....Each, $0.75

Packed—One Pair in a Box.

CIRCULAR HAND SNIPS

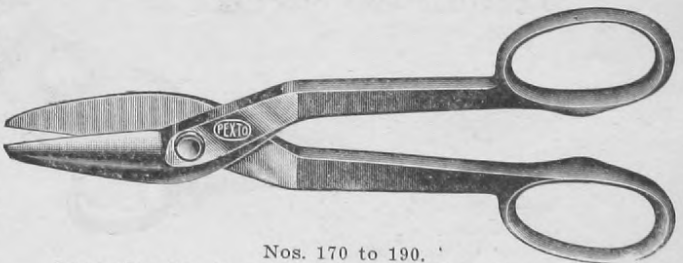
Nos. C6½ to C10.

P. S. & W. Co., Forged from best Norway Iron, Steel laid. Fully warranted.

Nos.	C6½	C7	C8	C9	C10
Cut, inches	4½	4	3½	3	2½
Length, inches	15¾	14¼	13½	12	11
Each	$5.35	4.65	4.00	3.65	3.35

Packed—One Pair in a Package.

COMBINATION SNIPS



Nos. 170 to 190.

Lyon, for **Cornice** and **Tin** work. Forged from the best material, Steel laid and fully warranted. Well adapted for cutting Scrolls and Circles.

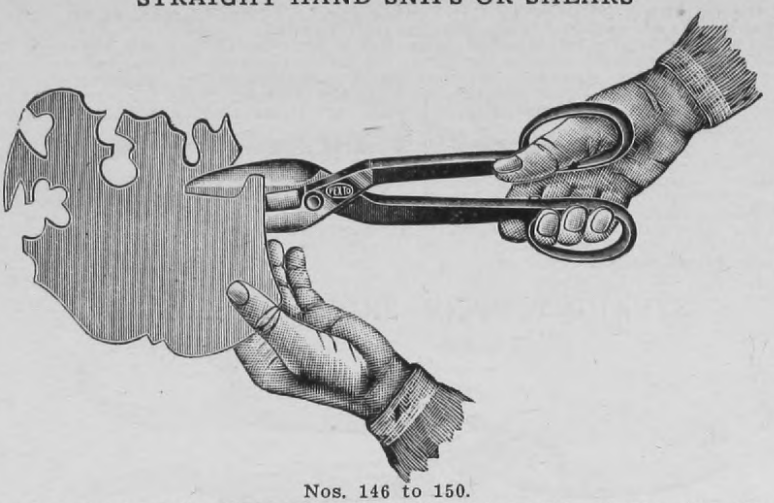
Nos.	170	180	190
Cut, inches	3½	3	2½
Length, inches	14	13	12½
Each	$2.50	2.25	2.00

Packed—One Pair in a Package.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PEXTO TINNERS' SHEARS

STRAIGHT HAND SNIPS OR SHEARS



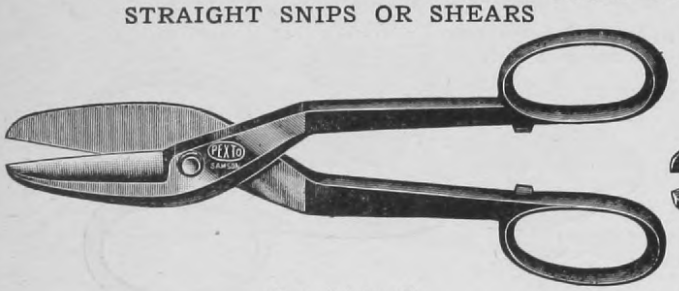
Nos. 146 to 150.

Hercules, for **circular** or **straight** work. Made so as to easily cut scrolls, circles, etc., also adapted to do the same work as the regular snip. Forged from the best material, steel laid, superior style and finish. Jaws are beveled and have straight cutting edges.

Nos.	146	147	148	149	150
Cut, inches	4½	4	3½	3	2½
Length, inches	15¾	14½	14	12¾	11
Each	$3.30	2.85	2.40	2.20	1.90

Packed—One Pair in a Box.

STRAIGHT SNIPS OR SHEARS



Nos. 46 to 53.

CIRCULAR SNIPS OR SHEARS

Nos. C47 to C51.

Straight

Samson. Forged from best quality of stock, Steel laid. Fully warranted.

Nos.	46	47	48	49	50	51	52	53
Cut, inches	4½	4	3½	3	2½	2¼	2	1¾
Length, inches	15¾	14½	14	12¾	11	10½	10	8½
Each	$2.95	2.45	1.95	1.70	1.56	1.20	1.00	.90

Packed—One Pair in Package.

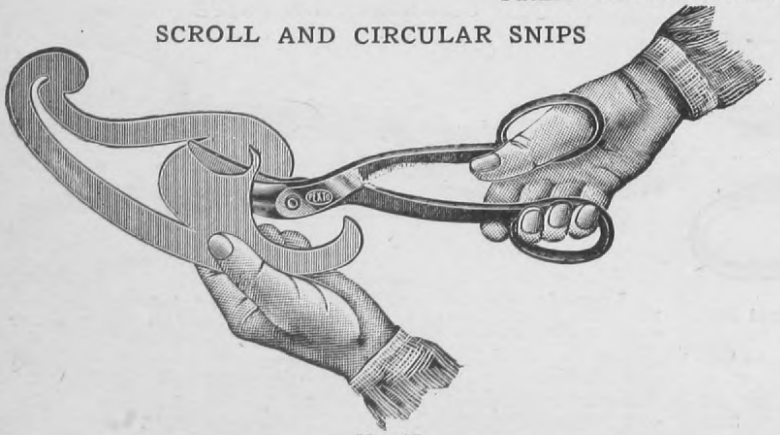
Circular

Samson. Forged from best quality of stock, Steel laid. Fully Warranted.

Nos.	C47	C48	C49	C50	C51
Cut, inches	4	3½	3	2½	2¼
Length, inches	14½	14	12¾	11¾	10½
Each	$3.45	2.95	2.70	2.45	1.96

Packed—One Pair in a Package.

SCROLL AND CIRCULAR SNIPS



No. 15.

Pexto, for **circular** or **straight** work. Blades are hawk billed in shape and have a peculiar clearance bevel between the cutting edges which permits the blades to easily turn a sharp corner or work around a small curve without buckling. Forged from the best material.

No. 15—Cut 3 inches, Length 11¾ inches .....Each, $3.50

Packed—One Pair in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

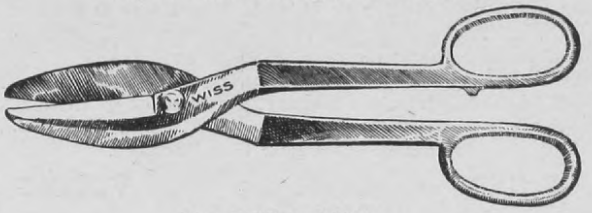
WISS TINNERS' SHEARS

Nos. W100 to W17.

These Snips are made with straight blades, but the jaws are ground and shaped in such a manner that they can be used as readily for cutting curves and irregular shapes as for straight work, thus combining all the advantages of both the circular and straight snip in one tool. Forged from the best of material. Steel laid.

Nos.	W100	W19	W18	W17
Cut, inches	2½	3	3½	4
Length, inches	11½	12½	13½	14½
Each	$2.30	2.55	2.85	3.40

Packed—One Pair in a Package.



Nos. W12 to W6½.

Regular Pattern, forged from the best of material, Steel laid.

Nos.	W12	W11	W10	W9	W8	W7	W6½
Cut, inches	2	2¼	2½	3	3½	4	4½
Length, inches	8	9½	11½	12½	13¾	14½	15¾
Each	$1.25	1.50	2.00	2.20	2.50	3.15	3.75

Packed—One Pair in a Package.

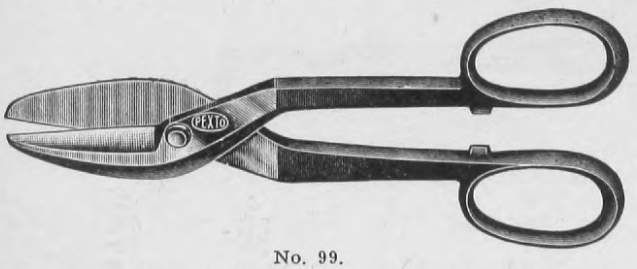
Nos. 12CB to 6½CB.

Circular Blade, forged from the best quality stock, Steel laid.

Nos.	12CB	11CB	10CB	9CB	8CB	7CB	6½CB
Cut, inches	2	2¼	2½	3	3½	4	4½
Length, inches	8	9½	11½	12½	13¾	14½	15¾
Each	$2.20	2.50	3.15	3.45	3.75	4.40	5.40

Packed—One Pair in a Package.

PEXTO TINNERS' SHEARS

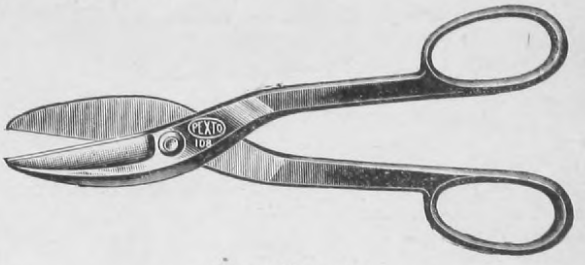


No. 99.

A medium priced Snip for general use. Solid forged Steel, made in one size only.

No.	99
Cut, inches	3
Length, inches	12½
Each	$1.00

Packed—One Pair in a Package.



Nos. 108 to 111.

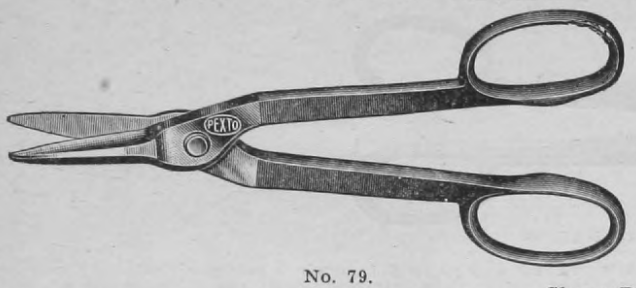
Best Cast Steel, Polished Blades, Japanned Handles.

Nos.	108	110	111
Cut, inches	3	2½	2
Length, inches	11½	11	10
Per Dozen	$4.30	3.95	3.75

Packed—One Pair in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHARP POINTED SNIPS



No. 79.

COMBINATION SNIPS

Nos. 2 to 22.

Sharp Pointed Snips.

Trojan Sharp Pointed Snips for **Scroll** and **Cornice** Work. Forged from high-grade Steel and fully warranted. Will cut straight or curved lines and are very serviceable for scroll and cornice work.

No. 79—Cut 2½ inches, Length 13 inches.....Each, $2.40

Packed—One Pair in a Box.

Combined Snip and Pipe Crimper

Berridge Double-Cutting Shear and Pipe Crimper Combined. The Blade is pointed and readily inserted in the metal at the point desired to begin the cutting. They are adapted to cutting off the bottom of Pails, Cans, etc., and suitable for cutting round or square work. The Crimping Attachment is designed for Crimping any kind of Sheet Metal Pipe, round or square. The parts are interchangeable, and the Crimping Jaws are of Steel.

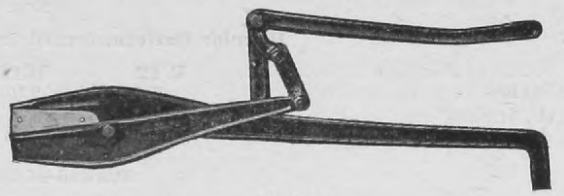
No. 2—Berridge Double Cutting Shears, **with** Crimper, Length 12¾ inches.....Each, $2.75
No. 02—Berridge Double Cutting Shears, **without** Crimper, Length 12¾ inches.....Each, 2.50
No. 22—Berridge Double Cutting Shears, **without** Crimper, Length 8½ inches.....Each, 2.00

Packed—One Pair in a Package.

MECHANICS' SNIPS

Nos. 7S to 14S.

VIKING BENCH SHEARS



Viking.

Searight's Compound Lever Mechanics' Snips

Made of the finest quality Solid Crucible Tool Steel, giving the Snips greater strength and stiffness without adding weight. Each pair guaranteed as to temper and perfection of workmanship.

Nos.	7S	8S	10S	12S	14S
Cut, inches	1¼	1¾	2½	3	3½
Length, inches	7	8	10½	12	14
Each	$1.35	2.00	3.00	4.00	4.65

Packed—One Pair in a Box.

Viking Compound Lever Bench Shear

Viking Bench Shears, for cutting Sheet Metal Plates and Rods. Body made of malleable iron, Blades of high-grade steel. Blades are 5½ inches long by ¼ inch thick and are adjustable and removable. Cuts 12 Gauge Bessemer Steel, ¼ inch Brass, etc. Cuts straight, angle or circle and does not kink the metal out of shape.

Viking Compound Lever Portable Bench Shear.....Each, $12.00

Packed—In Open Stock.

PEXTO BENCH SHEARS

Nos. 00 to 32.

Bench Shears, forged from the best material. Fully warranted.

Nos.	00	0	1	2	3	4	5	6
Cut, inches	11½	10½	9	8¾	7⅝	7⅜	6¼	5¼
Length, inches	46	42½	39	37	31	30	27	25
Each	$26.00	23.00	16.00	15.00	13.50	12.00	10.00	9.50

No. 31—Elbow Bench Shears, Cut 4 inches, Length 26 inches, Weight 9½ pounds. Cap. No. 18 Iron..Each, $11.00
No. 32—Elbow Bench Shears, Extra Heavy, Cut 6 inches, Length 39 inches, Weight 26 pounds, Capacity No. 16 Iron.....Each, 21.00

Packed—One Pair in a Package.

Note—Bench Shears as regularly made have a right-hand cut, that is, the lower blade is on the right side of the shears, but can be furnished with left-hand cut, if desired, at an additional cost.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO SQUARING SHEARS

Nos. 132A and 137A.

Nos. 179 and 180.

Nos. 132A and 137A

These Machines are guaranteed to cut up to their full rated capacity and to give very excellent service. The high-grade quality materials combined with thorough workmanship make them the most desirable medium weight Shears on the market. Complete with Gauge Equipment and One Pair Front Arms.

No. 132A—Length 30 inches, Cuts No. 18 Iron and Lighter, with Wood Top Shelf, Weight 540 lbs...Each, $105.00
No. 137A—Length 36 inches, Cuts No. 18 Iron and Lighter, with Hold Down Attachment but without Top Shelf, Weight 650 pounds.....Each, 126.00
Side Tables—Extra.....Per Pair, 4.25

Nos. 178 to 180

Acme Shears are accurately fitted and are made in the most thorough and substantial manner by skilled mechanics. They are designed for cutting metal but are adapted for a variety of uses and special work as cutting leather, cloth, paper, hard or soft rubber, etc. Complete with Gauge Equipment and One Pair Front Arms.

No. 179—Length 30 inches, Cuts No. 18 Iron and Lighter, Weight 425 pounds.....Each, $105.00
No. 180—Length 36 inches, Cuts No. 18 Iron and Lighter, Weight 700 pounds.....Each, 126.00
Side Tables—Extra.....Per Pair, 4.25

FOOT POWER GAP SHEARS

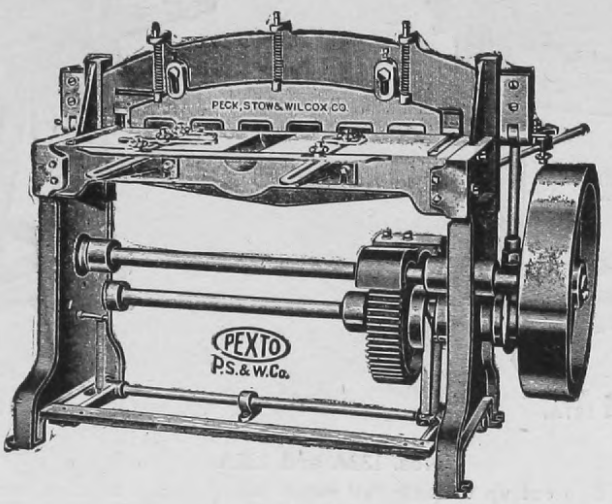
No. 187.

With the use of Gap Shears, sheets 30 inches wide may be cross cut at any point desired. Sheets 37 inches in width may be cut up into strips of ⅛ inch to the full depth of the throat. Removing the Side Guides permits the cutting of sheets in any length and as wide as the depth of the throat. The Hold-down Attachment operates in independent ways by hand. Side Tables are fitted to support sheets of long lengths. **Equipment Furnished**—Hold-down Attachment complete Gauge Equipment, One Set Side Supporting Tables and Two Pairs Front Arms.

No. 187—Length 36 inches, Cuts No. 18 Iron and Lighter, Weight 1630 pounds.....Each, $234.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

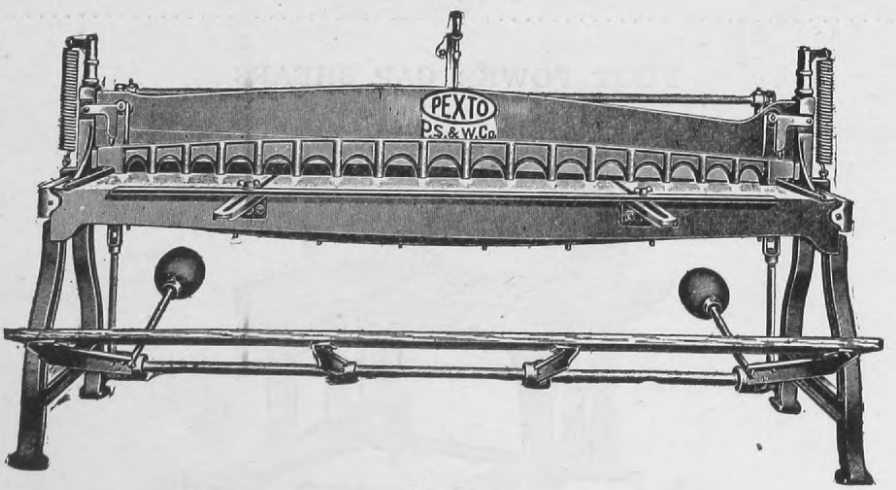
PEXTO SQUARING SHEARS



No. 220.

Where a large variety of work in which the lighter and heavier gauges of iron are used, these Shears will give maximum good service. They are up to the minute in design and substantially constructed. Cutting Knives are of the highest grade hardened steel, scientifically welded to Iron. Will cut the thinnest of paper through the whole length of the blades and are fully warranted to give good service and to cut clean. **Equipment Furnished**—Hold-down Attachment, Complete Gauge Equipment and Two pair Front Arms.

No. 220—Length, 30 inches, Cuts No. 14 Iron and Lighter, Weight 1310 pounds.....Each, $450.00



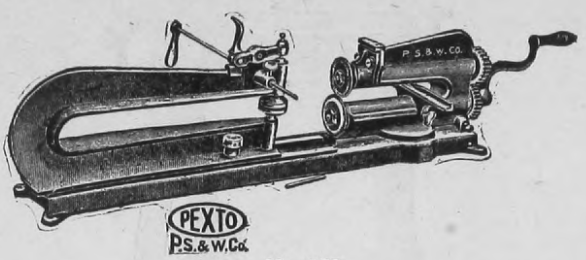
No. 191.

These Shears are designed for cornice work, but are equally valuable in other lines of manufacturing where first-class foot power Shears of great capacity are required. They are built with unusual care, and designed to meet a demand for Shears of accuracy and strength. Fitted with Arched Automatic Hold-Down Attachment, which makes visible a line drawn on the metal for cutting accurately; fitted with gauges for squaring and cutting at angles and our new device for working automatically the back and center of the machine, and position of back gauge is indicated on a graduated steel scale attached to the top of right-hand back arm. Same can be seen at any point from the front of machine. **Equipment Furnished**—Hold-down Attachment, Lever Arc Automatic Back Gauge, Front Gauges and One Pair Front Arms.

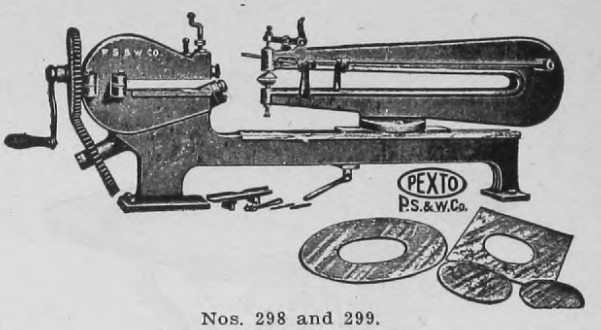
No. 191—Length 96 inches, Cuts No. 18 Iron and Lighter, Weight 2900 pounds.....Each, $467.75

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO CIRCULAR SHEARS



No. 278.



Nos. 298 and 299.

No. 278

These Shears are most suitable for cutting outside circles, trimming or squaring tin plate, sheet iron, brass and copper. A Polished Graduated Scale is attached to the Bed for the purpose of securing quick and accurate adjustment of the Sliding Arm.

Without Squaring and Beveling Attachment.

No. 278—Cuts No. 22 Iron and Lighter, Weight 125 pounds.....Each, $59.00

Nos. 298 and 299

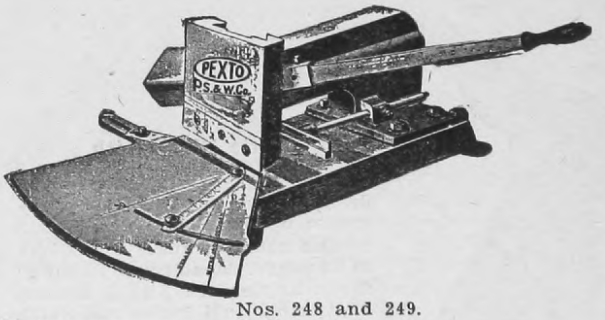
These Machines are intended for cutting circles or internal rings and irregular curves. In circular cutting the blanks are clamped between rubber covered discs by means of a quick acting, eccentric, lever device, adjustable for exerting extreme uniform pressure to prevent the work from slipping and insuring more accurate cutting. The Bed on which the Tail Piece slides is graduated in inches and fractions of inches for quick setting of the Tail Piece for the size circle to be cut. The angular position of Cutters allows for as clean cutting on the inside as on the outside of circle.

No. 298—Cuts No. 20 Iron and Lighter, Weight 195 pounds.....Each, $74.00
No. 299—Cuts No. 20 Iron and Lighter, Weight 290 pounds.....Each, 84.00

PEXTO SCROLL SHEARS

No. 269.

PEXTO SLITTING SHEARS



Nos. 248 and 249.

Scroll Shears

These Shears have created a big demand because of their service and satisfaction to those who use them. They will cut Circles, Ovals, Ogees and all irregular shapes with the greatest ease. They are well adapted for cutting from the center of a sheet. The length of cut is regulated by means of a Set Screw in Frame, back of lower Blade. Upper Blade can be adjusted for wear by means of the two Rear Adjusting Screws.

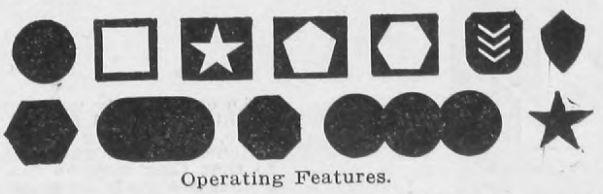
No. 269—Cuts No. 20 Iron and Lighter, Weight 155 pounds.....Each, $60.00

Slitting Shears

These Shears are adapted for range manufacturers and for general use in car shops, automobile plants and other shops where a variety of straight and irregular cutting is being done. They often prove a desirable substitute where work is too large or not of sufficient quantity to warrant the use of costly dies.

No. 248—Cuts No. 18 Iron and Lighter, Blade 6½ inches long, Weight 165 pounds.....Each, $ 53.00
No. 249—Cuts No. 16 Iron and Lighter, Blade 9 inches long, Weight 490 pounds.....Each, 140.00

Illustrations of Work Cut from Blanks to Line



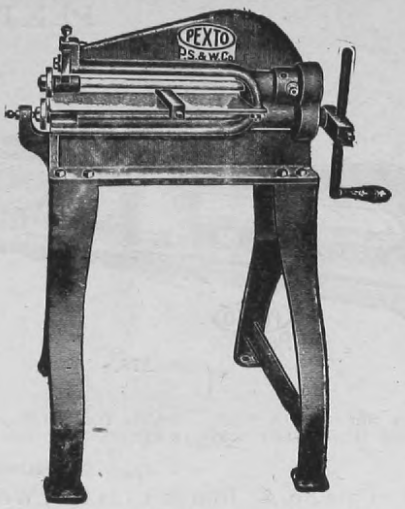
Operating Features.

Note—Nos. 248 and 249 Slitting Shears will do the work of ordinary Bench Shears, over which they have the following advantages: The length of cut is longer to the same movement of the hand; the same pressure of the hand will cut thicker stock; they cut with the same ease at all points of the cut, while ordinary Bench Shears cut harder near the point than near the bolt. The lower Blades of these Shears are stationary, so that when cutting to line the mark may easily be followed with accuracy. The Blades are so constructed that the line drawn is always exposed to the view of the operator.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO SLITTING SHEARS

No. 250.



No. 255.

No. 250

Rotary Slitting Shears of merit, so designed that the frame is exceedingly solid and compact and all adjustments easily made. They are carefully and substantially built and will prove in every way thoroughly reliable machines.

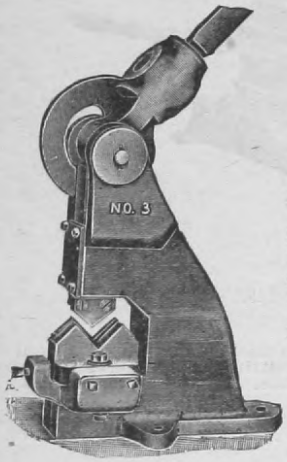
No. 250—Cuts No. 20 Iron and Lighter, Cutter $3\frac{1}{16}$ inches in diameter, Weight 100 pounds.....Each, $48.00

No. 255

These Shears furnish the most rapid means for slitting iron used in cornice, furnace, blow pipe, ventilation work, etc. Cutters are forged from a special high-grade tool steel, properly hardened and tempered and have two cutting edges making them reversible. The Crank is adjustable to different leverages, bearings are adjustable to take up wear of the Cutters and the Cutting Head of compact construction is mounted on heavy, cast iron legs.

No. 255—Cuts No. 16 Iron and Lighter, Cutter $3\frac{1}{16}$ inches in diameter, Weight 325 pounds.....Each, $86.50

ANGLE IRON CUTTERS



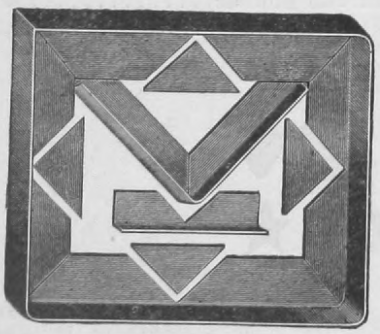
No. 3.

Little Blacksmith

This Angle Iron Cutter was designed to meet the requirements of the shop consuming a great amount of angle iron within its range. **Capacity**—Will cut or shear Angle Iron $2\frac{1}{4}$x$\frac{1}{4}$ inches, Flat Iron $2\frac{1}{4}$x$\frac{1}{4}$ inches and Notch or Slot Angle iron $2\frac{1}{4}$x$\frac{1}{4}$ inches. Weight 325 pounds.

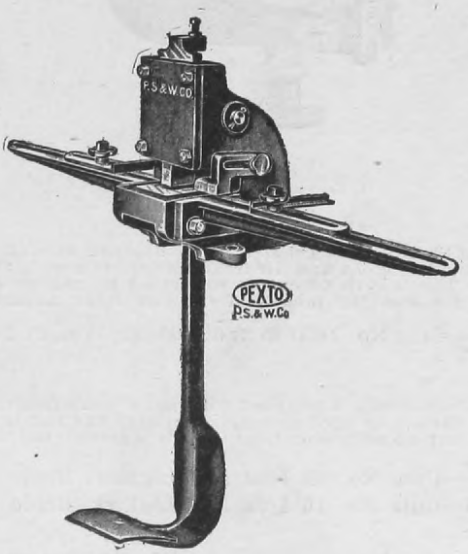
No. 3—With two attachments, one for cutting, the other notching.....Each, $55.00

Illustration Showing Style of Work.



Extra Shear Blades.....Each, $1.00

PEXTO NOTCHING MACHINES



No. 737.

An exceedingly well constructed, pendulum lever Notching Machine intended for notching blanks of pieced sheet metal ware, for cutting the corners of square pans and hinge notches of boxes and similar work. Dies are made in sections so that they may be easily sharpened and reset. Dies and Punch are made from Jessop Tool Steel, scientifically hardened and tempered.

No. 737—Capacity No. 20 Iron and Lighter, Weight 175 pounds.....Each, $82.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

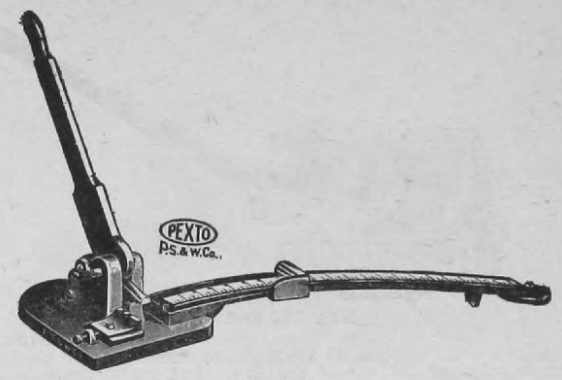
PEXTO LEVER SHEARS

No. 296.

These Shears are highly recommended for slitting sheet iron in any length or width as well as for cutting narrow iron bars. They are patterned to allow sheets to pass freely and proportioned so as to obtain the greatest strength and durability. The Blades are made of the best material, ground to a perfectly true cutting edge. The Lower Blade is fastened to a Plate that is adjustable to take up wear. The Upper Blade is fastened to a Plate that is re-enforced by the frame of machine, making same very rigid and overcoming any spring in cutting. Will cut Bars 5/16 inch square and ¼x½ inch. Cuts No. 10 Iron and Lighter.

No. 296—Blade 8 inches long, Gauge Rod 22 inches long, Weight 130 pounds.....Each, $60.00

PEXTO WIRE CUTTER



No. 490.

A Simple, Cheap, Durable and Economical Machine for general Wire Cutting. It takes wire from the coil and gauges and cuts it to the length desired. It cuts smoothly and easily one-quarter inch wire as well as the smaller sizes from 2 to 60 inches in length. A Circular Attachment graduated in inches and fractions, with a smoothly polished surface and fitted with Adjustable Gauge is provided.

No. 490—Van Bramer's Wire Cutter. Cuts wire up to ¼ inches in diameter, Weight 50 pounds .....Each, $31.00

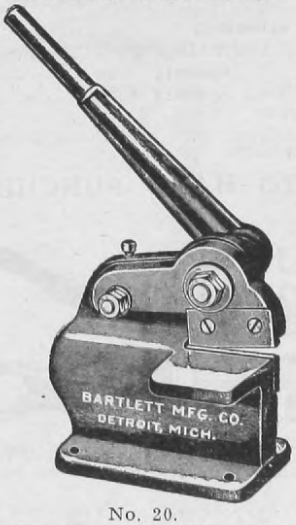
PEXTO BRACE AND WIRE BENDER

No. 402.

A Substantial Brace and Wire Bender intended for making braces for Lookouts, Gutters, Leaders, Cornices, etc. It will bend iron of any size up to ¼ inch thick, 2 inches wide from 0 to 90 degrees. The Top Plate is adjustable for turning sharp or round corners and for different thicknesses of metal, regulated by means of the Hold-down and Set Screws in the Top Plate and Set Screws at the back of the Plate. One side of the Top Plate is cut with grooves in several sizes and when reversed wires can be bent for Pans, Boxes, etc. Several wires can be bent at the same angle at one operation.

No. 402—Bending Plate 2 inches wide, will form wire ⅜ inch in diameter, Weight 60 pounds.....Each, $22.00

BENCH SHEARS

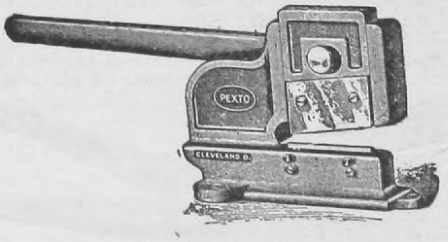


No. 20.

For Tool Room, Garage use and Metal Pattern Shops. The best of material is used in its construction and the blades are made of crucible tool steel. Cuts metal up to 12 Gauge. Blades are adjustable by means of a taper wedge, and they can easily be removed for grinding.

No. 20—Blade 3 inches long, Weight 24 pounds .....Each, $16.00

PEXTO SLITTING AND AUTO-BRAKE LINING SHEARS



Nos. 252 and 253.

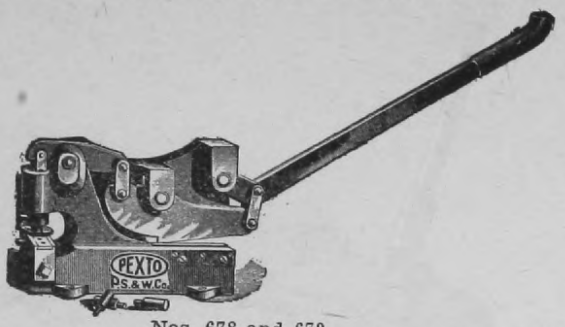
A useful, small, compact machine of great strength and constructed to cut with ease. With the use of this little machine brake band lining up to ⅜x3 inches can be cut with one stroke of lever. Its eccentric cutting device requires very little effort for cutting up to its full rated capacity. It will prove a very desirable machine on the counters of Auto Supply Houses, Hardware Stores selling automobile accessories and on the Bench in the Garage and Shop.

No. 252—For cutting Brake Band Lining ⅜ inch and Lighter, Blade 3½ inches long, Weight 17 pounds.....Each, $20.00

No. 253—For cutting Iron and Steel 3/32 inch and Lighter, Blade 3½ inches long, Weight 17 pounds .....Each, 20.00

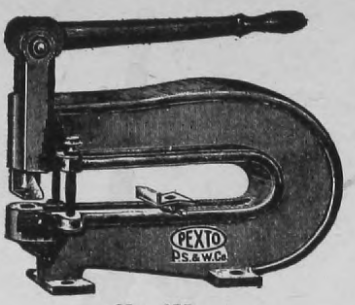
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO SHEARS AND PUNCHES



Nos. 678 and 679.

PEXTO PUNCHES



No. 675.

Nos. 678 and 679

Shears and Punches of high-grade quality, with an extremely wide range of cutting and punching usefulness, possessing a combination of individual features that make them highly adaptable for general use. Will cut Iron ⅛ inch thick and Narrow Bars 3/16 and ¼ inch thick.

No. 678—Length of Cut 4¼ inches, will punch ⅛ inch Iron. Furnished with One Combination Die and Four Punches, ⅛, 3/16, ¼ and 5/16 inch. Weight 100 pounds ..... Each, $32.00

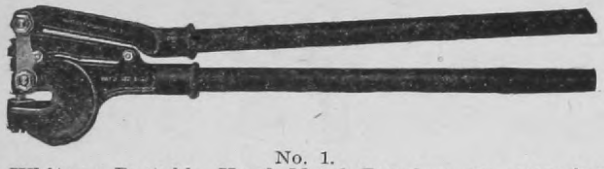
No. 679—Length of Cut 4¾ inches, will punch 3/16 inch Iron. Furnished with One Combination Die and Five Punches, ⅛, 3/16, ¼, 5/16 and ⅜ inch. Weight 120 pounds ..... Each, 40.00

No. 675

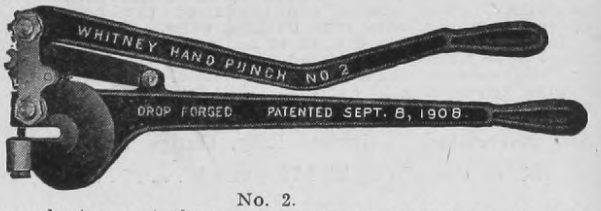
Pexto Samson Punches are designed for great strength and rigidity, making them exceptionally useful machines for general work. The deep throat in these machines will be found a great advantage. The Dies and Punches, as regularly made, are intended for use on stock up to their full rated capacity, but where clean punching in tin or light metal is desired a closer fitting Die is preferable, which can be furnished when so ordered, at the price of the regular Dies. Fitted with adjustable Gauge.

No. 675—Will punch Nos. 9 and 12 Iron. Furnished with Three Dies and Three Punches, ⅛, 3/16 and ¼ inch. Weight 140 pounds ..... Each, $40.00

HAND METAL PUNCHES



No. 1.



No. 2.

Whitney Portable Hand Metal Punches are manufactured expressly to meet the requirements of all Steel and Sheet Metal Workers. Simple in construction, light, strongly proportioned and reinforced where the strain comes. Operating upon two extra hardened inclined roller surface bearings, assisted by two sets of cogs, the combination formed is the most powerful leverage ever applied to a mechanical tool. The size of the punch can be instantly changed, by throwing over the upper lever and raising the intermediate piece. The dies are divided and self-centering and can be easily and instantly changed.

No. 1

Length 34 inches, weight 21 pounds. Detachable Pipe Handles. **Capacity**—½ inch hole through ¼ inch Boiler Plate or equivalent. Equipped with One Die and Two Punches of corresponding size, 3/16, ¼, 5/16, ⅜, ½ or 9/16 inch.

No. 2

Length 23 inches, weight 12 pounds. **Capacity**—5/16 inch hole through ¼ inch iron, or equivalent. Equipped with One Die and Two Punches of corresponding size, ⅛, 3/16, ¼, 5/16, ⅜, 7/16 or ½ inch.

Specify size of Punch and Dies wanted when ordering.

No. 1—Whitney Portable Punch ..... Each, $18.75

Extra... { Dies, **Specify** Size ..... Each, .60
{ Punches, **Specify** Size ..... Each, .60

No. 2—Whitney Portable Punch ..... Each, $15.00

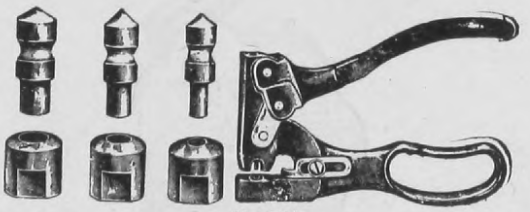
Extra.. { Dies, **Specify** Size ..... Each, .60
{ Punches, **Specify** Size ..... Each, .60

Packed—Each Machine in a Separate Box.

Note—Each Tool is equipped with one die and one punch inserted in the machine, and one extra punch same size as the one contained in the machine. Nos. 1 and 2 Punches or Dies will **not** interchange.

No. 02

PEXTO HAND PUNCHES



No 790.

This **Channel Iron Punch** is interchangeable with No. 2 Punch shown above. The only part that is different is the Drop Forged Lower Jaw, which has the opening, back of die socket, that allows Channel and Angle Iron to be pushed through from the side and punched in web between the flanges.

No. 02—Whitney Portable Channel Iron Punch ..... Each, $15.00

Extra... { Dies, **Specify** Size ..... Each, .60
{ Punches, **Specify** Size ..... Each, .60

Packed—One in a Box.

These Punches are furnished with 3 sets of Dies and Punches, ⅛, 3/16 and ¼ inch. The toggle movement on this practical and handy tool works easily and rapidly. May be carried in the pocket and will prove a very useful tool for outside work.

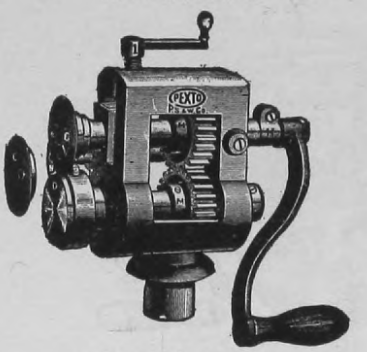
No. 790—Length 7½ inches, Height 4 inches, Weight 2½ pounds ..... Each, $4.25

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO BURRING MACHINES

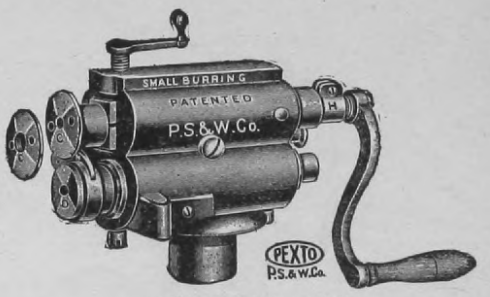
COLUMBIAN



Nos. 577 to 576½.

Used for creasing, edging rims of covers for pails, boilers, etc., and for preparing circular edges of bottoms and bodies of vessels for double-seaming.

STOW'S ENCASED



Nos. 580 to 579½.

Columbian Burring Machines

For No. 22 Iron and lighter. Furnished with One Extra Upper Face. Solid Frame and Duplicate Parts.

Large Size. Diameter of Faces, 2⅛ inches

No. 577 —With Standard, wt. 25 lbs....Each, $21.75
No. 577½—**Without** Standard, wt. 14 lbs..Each, 20.40

Small Size. Diameter of Faces 1½ inches.

No. 576 —With Standard, wt. 21 lbs....Each, $21.00
No. 576½—**Without** Standard, wt. 10 lbs..Each, 19.75

Stow's Encased Burring Machines

For No. 24 Iron and lighter. Furnished with One Extra Upper Face. Solid Frame and Duplicate Parts.

Large Size. Diameter of Faces, 2⅛ inches

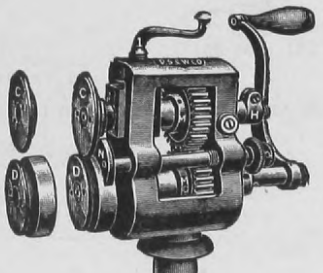
No. 580 —With Standard, wt. 23 lbs....Each, $28.50
No. 580½—**Without** Standard, wt. 12 lbs..Each, 27.25

Small Size. Diameter of Faces 1½ inches.

No. 579 —With Standard, wt. 21 lbs....Each, $27.50
No. 579½—**Without** Standard, wt. 10 lbs..Each, 26.25

PEXTO TURNING MACHINES

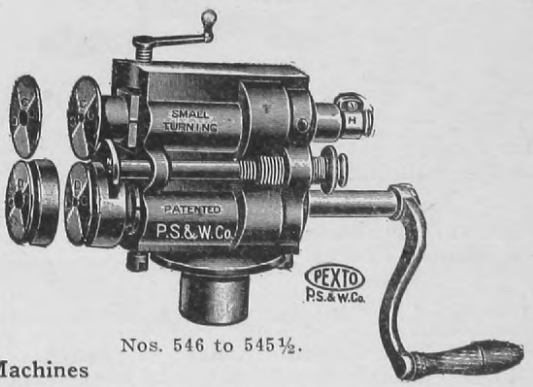
COLUMBIAN



Nos. 542 to 541½.

Intended for turning or curving the tops of vessels to receive wire.

STOW'S ENCASED



Nos. 546 to 545½.

Columbian Turning Machines

For No. 22 Iron and lighter. Furnished with Two Sets of Faces, One set each, thick and thin. Adjustable Boxes and Duplicate Parts.

Large Size. Diameter of Faces 3 inches.

No. 542 —With Standard, wt. 31 lbs....Each, $24.75
No. 542½—**Without** Standard, wt. 20 lbs..Each, 23.50

Small Size. Diameter of Faces 2 1/16 inches.

No. 541 —With Standard, wt. 25 lbs....Each, $23.25
No. 541½—**Without** Standard, wt. 14 lbs..Each, 22.50

Stow's Encased Turning Machines

For No. 24 Iron and lighter. Furnished with Two Sets of Faces, One set each, thick and thin. Adjustable Boxes and Duplicate Parts.

Large Size. Diameter of Faces 3 inches.

No. 546 —With Standard, wt. 28 lbs....Each, $30.25
No. 546½—**Without** Standard, wt. 17 lbs..Each, 29.00

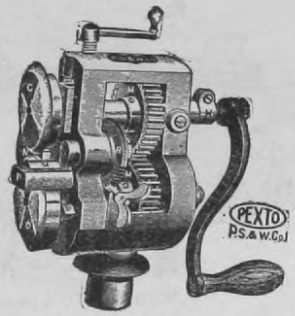
Small Size. Diameter of Faces 2⅛ inches.

No. 545 —With Standard, wt. 23 lbs....Each, $29.50
No. 545½—**Without** Standard, wt. 12 lbs..Each, 28.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO WIRING MACHINES

COLUMBIAN



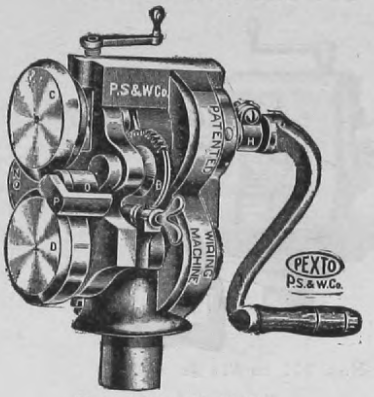
Nos. 525 and 525½.

Intended for rolling sheet metal tightly around wire after its seat has been prepared by the turning machine. Cylindrical or straight work can be wired with these machines.

For No. 22 Iron and lighter. Diameter of Faces 3 inches. Solid Frame and Duplicate Parts.

No. 525 —With Standard, wt. 31 lbs. . . . Each, $25.00
No. 525½—Without Standard, wt. 20 lbs. . Each, 23.75

STOW'S ENCASED

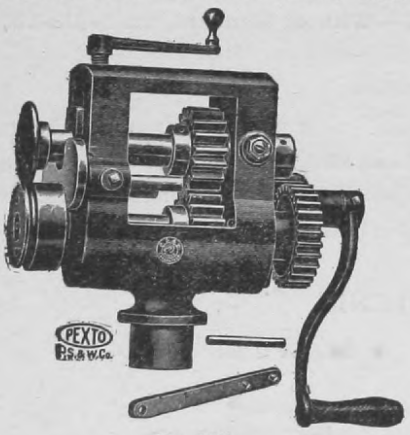


Nos. 526 and 526½.

For No. 24 Iron and lighter. Diameter of Faces 3 inches. Adjustable Boxes and Duplicate Parts.

No. 526 —With Standard, wt. 28 lbs. . . . Each, $32.50
No. 526½—Without Standard, wt. 17 lbs. . Each, 31.25

PEXTO TURNING AND WIRING MACHINES



No. 547.

PEXTO ELBOW EDGING MACHINES

Nos. 551 and 551½.

No. 547

These Machines are made from heavy patterns and with the proper rolls and gauges they are suited for a variety of operations. Machine cut steel connecting gears are used and the driving gears are cut from solid cast iron. Frames are extra heavy and the machine throughout is proportioned for giving the very best of good satisfaction up to the full rated capacity.

No. 547—With Standard, weight 115 pounds. . . . . Each, $59.00

Extra Attachments

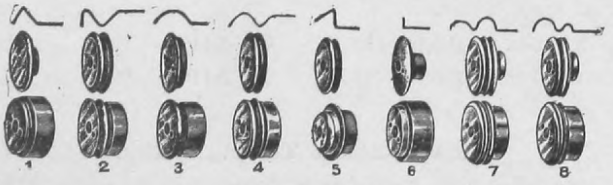
Regular Turning, Wiring and Burring Rolls. . . . . Per Pair, $10.00
Extra Regular Gauges. . . . . Each, 3.65

Nos. 551 and 551½

Best suited for light work and meets the requirements of the Tinsmith and Sheet Metal Worker, for turning out elbows of special sizes.

No. 551 —With Standard, weight 25 pounds. . . . . Each, $23.25
No. 551½—Without Standard, weight 14½ pounds. . . . . Each, 22.00

PEXTO ELBOW EDGING ROLLS



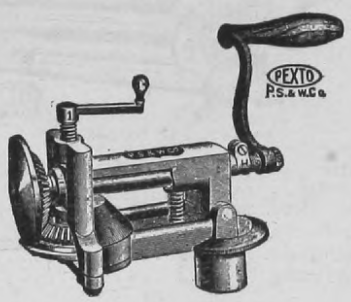
Designs 1 to 8.

Rolls type No. 1 produce V shaped edges on both elbow sections. Rolls type No. 2 are desirable for edging inside and outside sections of riveted elbows with tight or loose joint. Rolls type No. 5 can be used for the outer edge of riveted or grooved elbows. The inner edge should be turned on Regular Burring Machine or with Rolls Design type No. 6. Rolls type Nos. 3 and 4 are preferable for elbows riveted or grooved with loose joint. Rolls type Nos. 7 and 8 produce a double head adjustable elbow with snug fitting seams.

Elbow Edging Rolls in Designs 1 to 8. . . . . Per Pair, $6.25

Digitized by Google Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

PEXTO SETTING DOWN MACHINES



Nos. 555 to 556½.

Nos. 561 and 561½.

Columbian Setting Down Machines

With Solid Frame and Duplicate Parts. For No. 24 Iron and lighter and for seams of vessels that are of a uniform character. These Machines press the edge of the bottom onto the flange of the body making the work ready for double seaming.

For Seams up to ⅛ inch.

No. 555 —With Standard, wt. 21 lbs....Each, $23.25
No. 555½—Without Standard, wt. 10 lbs..Each, 22.00

For Seams up to 3/16 inch.

No. 556 —With Standard, wt. 23 lbs....Each, $24.75
No. 556½—Without Standard, wt. 12 lbs..Each, 23.50

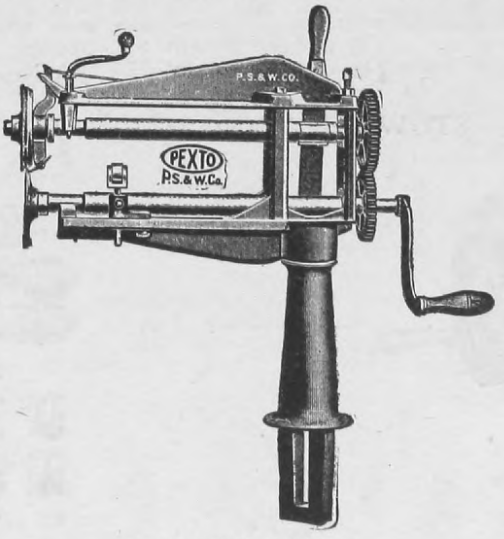
Pexto Pattern Setting Down Machine

The improvements in Pexto Pattern Setting Down Machines adapt them for setting down the seams on differently shaped vessels to better advantage than any other design. The inclined position of both upper and lower faces allows work to be held up or down and seams to be started inward while setting down, thereby facilitating the operation of double seaming. Adjustable Gauges and Idler Rollers are fitted.

For Seams up to ⅜ Inch

No. 561 —With Standard, Weight, 50 pounds.....Each, $28.00
No. 561½—Without Standard, Weight 27 pounds.....Each, 26.75

PEXTO DOUBLE SEAMING MACHINES



Nos. 644 and 646.

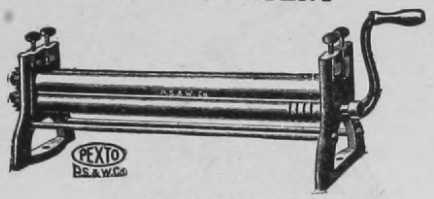
These Double Seaming Machines are adapted for general use. They are well suited to the wants of the trade, who desire a machine for small work. The size of the lower face determines the smallest size bottom that can be double seamed. With these machines extra Discs are not required. They are so simple in construction and easy to operate, that they are preferred for all around double seaming over other types.

No. 644—Receives work 15½ inches in depth, weight 100 pounds .....Each, $56.00
No. 646—Receives work 10 inches in depth, weight 60 pounds .....Each, 49.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

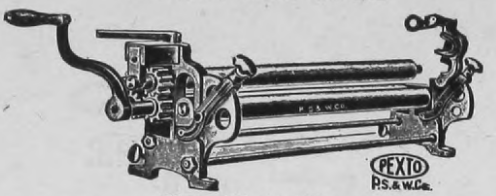
PEXTO FORMING MACHINES

STOW'S PATENT



Nos. 355 to 358.

PATENT SLIP ROLL



Nos. 381 to 383.

Stow's Patent Forming Machine

These Formers have nicely finished Rolls made from special rolled hard steel, free from indentations and imperfections. Grooves are cut in the Rolls to allow work being formed after wiring. Nos. 355, 357 and 358 for stove pipe.

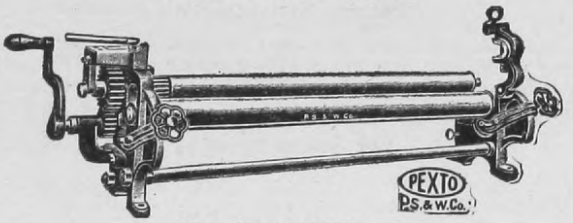
No. 355—37 inches long, Diameter of Rolls 2 inches, Weight 175 pounds.....Each, $38.00
No. 357—31 inches long, Diameter of Rolls 2 inches, Weight 140 pounds.....Each, 33.75
No. 358—31 inches long, Diameter of Rolls 1¾ inches, Weight 120 pounds.....Each, 30.75

Patent Slip Roll Stove Pipe Formers, with Compensating Gear

These Machines are easily adjusted by means of quick action levers on each end in rear of machine and can be quickly set for forming any desired size of cylinder. Rolls are made of special rolled hard steel; Gears are of machine-cut steel; Grooves are cut in the Rolls to allow cylinders being formed after wiring. No. 382 will form cylinders from IXXX tin as small as 2½ inches in diameter, and from IX tin as small as 2¼ inches. No. 383 will form cylinder from IXXX tin as small as 2¼ inches in diameter, and from IX tin as small as 2 inches.

No. 381—37 inches long, Diameter of Rolls 2 inches, Weight 180 pounds.....Each, $52.50
No. 382—31 inches long, Diameter of Rolls 2 inches, Weight 165 pounds.....Each, 47.50
No. 383—31 inches long, Diameter of Rolls 1¾ inches, Weight 140 pounds.....Each, 44.60

PATENT SLIP ROLL

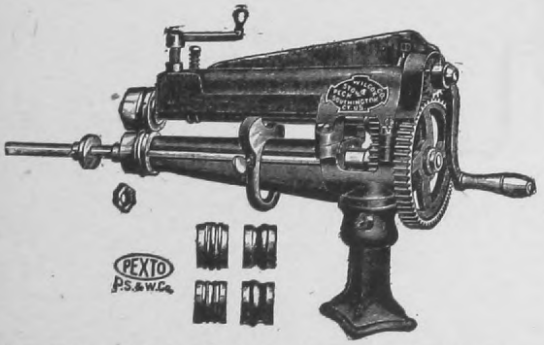


Nos. 390 and 400.

These Formers are substantially constructed with finely finished rolls made from special rolled hard steel. Steel machine cut compensating gears are used and, when furnished for hand power, a crank is fitted on both ends. Grooves are cut in rolls to allow work being formed after wired. Made with slip rolls, so that work may be readily taken from end after being formed, preventing forcing the work out of shape when being removed from the rolls.

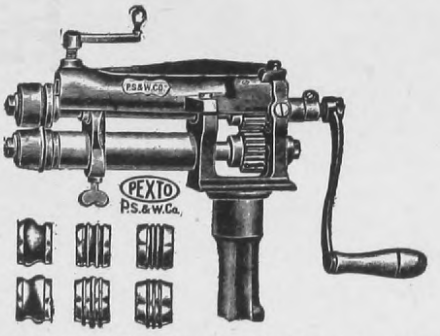
No. 390—37 inches long, Diameter of Rolls 2½ inches, Weight 330 pounds.....Each, $100.00
No. 400—31 inches long, Diameter of Rolls 2½ inches, Weight 275 pounds.....Each, 92.00

STOW'S BEADING MACHINES



Nos. 617 and 619. For No. 20 Iron and lighter.

With Adjustable Boxes and Duplicate Parts. Furnished with Standard.

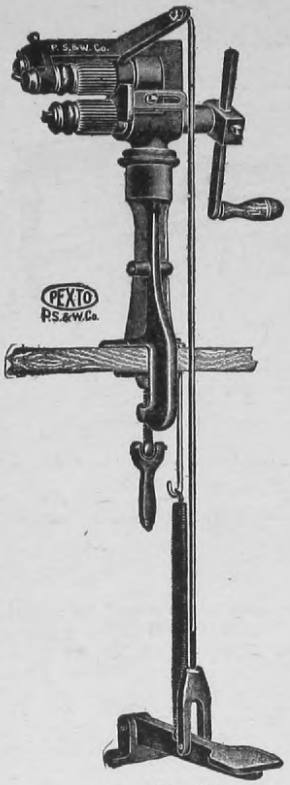


Nos. 620 and 621. For No. 26 Iron and lighter.

Nos.	617	619	620	621
Throat, inches	13	7½	6¼	4¾
Pairs of Rollers	3	3	4	5
Weight, pounds	140	85	50	40
Each	$59.00	49.00	39.50	35.00

Note—Sizes of Beads are as follows: For No. 617, O. G. Bead, 1 inch; Triple Bead, 1 inch; Single Bead, ⅜ inch. For No. 619, O. G. Bead, ⅞ inch; Triple Bead, ⅞ inch; Single Bead, 5/16 inch. For No. 620, O. G. Bead, ¾ inch; Triple Bead, ⅝ inch; Triple Coffee Pot Bead, ½ inch; Single Bead, 3/16 inch. For No. 621, Astragal Bead, 7/16 inch; O. G. Bead, 7/16 inch; Triple Coffee Pot Bead, ⅜ inch; Double Coffee Pot Bead, Fine, ⅛ inch; Single Bead, ⅛ inch.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN



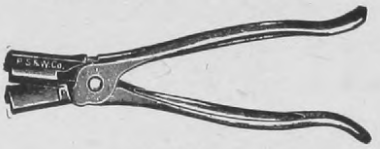
No. 602.

PEXTO CRIMPING AND BEADING MACHINES

These Machines are intended for crimping or beading Stove Pipe, Elbows, Furnace Pipe, etc. The construction throughout is exceedingly strong and rigid, and permits of easy and rapid adjustment. The depression of rolls is accomplished by a foot treadle. The contact of the upper Beading Roll is adjusted by a lever, and this lever also gives an independent adjustment for raising upper Beading Roll, taking same out of contact with lower roll, in case crimping only is desired. The adjustment of this lever is effected by means of an eccentric device, and is handy and practically instantaneous in its action. The application of this feature greatly increases the simplicity of this machine, as the operation of crimping alone can be performed without substituting blank collars for beading rolls. The crank is adjustable to suit light or heavy work.

No. 602—Capacity No. 24 Iron and Lighter, Weight 38 pounds.....Each, $28.00

PEXTO SQUARE PIPE CRIMPERS



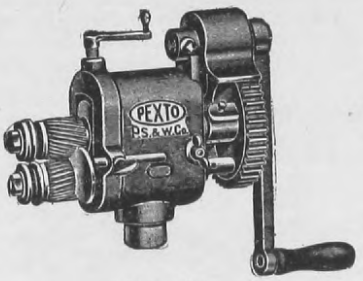
No. 787.

This Hand Crimper is intended for contracting or crimping the corners in square pipe. It makes the assembling of square pipe joints a quick and easy operation, producing tight fitting joints and improving the quality and appearance of the work.

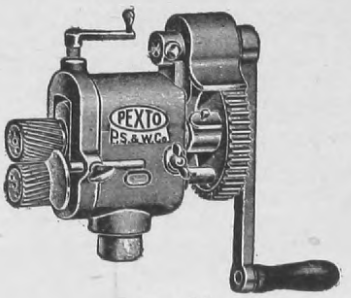
No. 787—Length 11 inches, Weight 2 pounds.....Each, $1.00

Packed—One in a Box.

PEXTO CRIMPING AND BEADING MACHINES



No. 585.
Crimper and Beader.



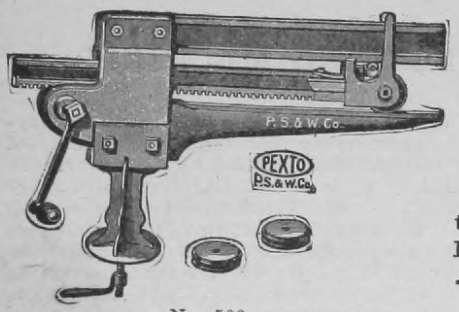
No. 591.
Cornice Makers Crimper

These Machines are well adapted for general pipe crimping or beading. They have been designed with a view to giving maximum strength and rigidity and can be depended upon for producing snug fitting pipe joints that hold when put together. A very practical feature is offered in the arrangement of the driving gears. Two speeds are provided for; back geared for heavy stock and direct drive when lighter gauges of materials are used. The driving gears can be removed and the machine converted instantly into a direct acting Crimper by attaching the crank to lower shaft. Connecting gears are of machine cut steel, the frame and cap machined to insure perfect fit of all working parts for accurate and uniform work. Rolls are made of high-grade steel, scientifically hardened and the gauge is of extra wide proportions. The upper shaft can be tipped toward front or back as desired, thus making a deep crimp and shallow bead or shallow crimp and deep bead.

No. 585—Spiral Crimp, with Crank Screw, Capacity No. 20 Iron and Lighter, Weight 65 lbs.....Each, $28.25
No. 586—Straight Crimp with Crank Screw, Capacity No. 20 Iron and Lighter, Weight 65 lbs.....Each, 28.25
No. 591—Spiral Crimp, with Crank Screw, Capacity No. 20 Iron and Lighter, Weight 63 lbs.....Each, 28.25

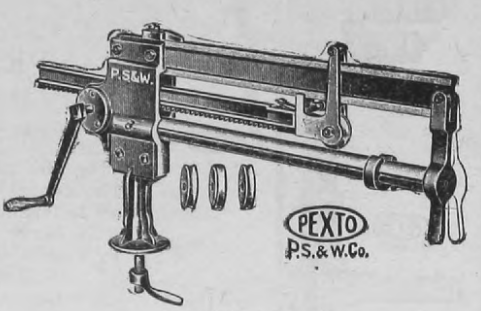
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO GROOVING MACHINES AND ATTACHMENTS



No. 502.

Kennedy Patent Grooving attachment for flattening seams. For Nos. 504 and 505 machines. .....Each, $6.25



Nos. 504 and 505.

Patent Brass Mounted Grooving Machines

With Steel Bar and Milled Horn, very serviceable for grooving the seams on bodies of tin cans, pails, boilers, pans, etc; easy to operate, simple in construction; for use on No. 24 Iron and lighter.

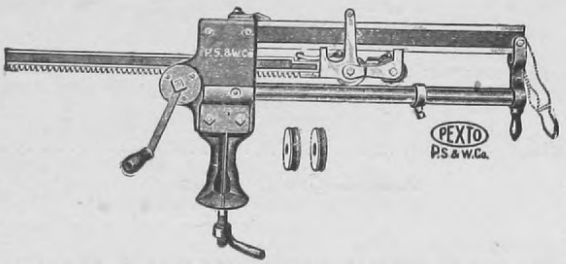
No. 502—20 inches, with Stand and One each ⅛, 5/32 and 7/32 inch Grooving Roll, Weight 102 pounds. Each, $35.00

Improved Patent Grooving Machines

Adapted for grooving the seams of furnace and leader pipe, sheet iron can bodies, etc.; pipe can be grooved as small as 2 inches in diameter; has reversible grooving horn, flat supporting Bar, one smooth or flattening Roll and three grooving Rolls. Adjustable stop on grooving horn prevents work from slipping while being grooved. For use on No. 22 Iron and lighter.

No. 504—20 inches, One each ⅛, 5/32 and ¼ inch, Weight 133 pounds.....Each, $49.50

No. 505—30 inches, One each 5/32, ¼ and ⅜ inch, Weight 153 pounds.....Each, 56.50

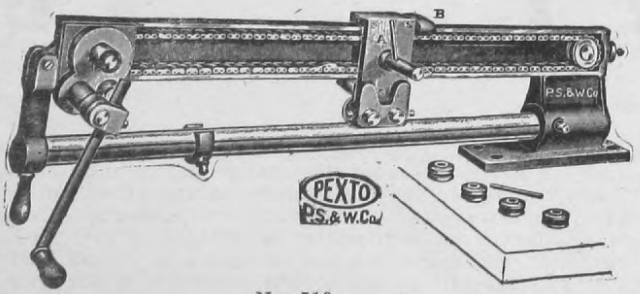


Nos. 506 and 507.

These Machines are constructed for general grooving and have an improvement consisting of an attachment which grooves and flattens the seams of cylinders in one operation. Lower bar of horn is reversible so that either the flat surface or one of the grooves, which is planed into the horn, can be turned upward, permitting the locating of seams on the inside or the outside of the work. The seam is put on the inside of work by means of flat rolls, which press the seam into one of the grooves planed in the horn, outside grooving is done in the usual manner by using the grooved rolls on flat surface of horn.

No. 506—Grooving Horn, 33½ inches long. Will groove work 20 inches in length, Weight 151 lbs..Each, $56.00

No. 507—Grooving Horn, 43½ inches long. Will groove work 30 inches in length, Weight 175 lbs..Each, 63.00



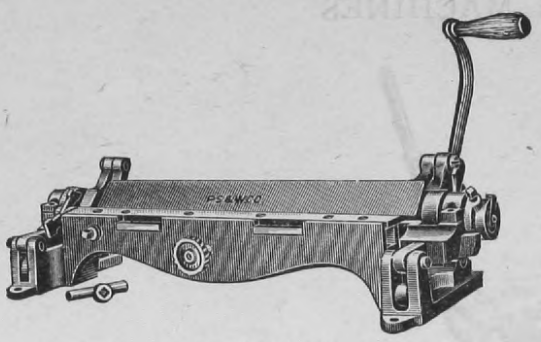
No. 518.

These Machines are used for grooving the longitudinal seams in stove pipe and other sheet metal cylinders. It differs from the ordinary Groover in that it is more rapid, the operator standing in front of the machine does not have to change his position when inserting or removing work and operating the machine. The traveling carriage has two rolls, one for grooving and one for flattening the seam at the same operation.

No. 518—Will groove work 30 inches in length, Weight 200 pounds.....Each, $67.50

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PEXTO TIN FOLDING MACHINES



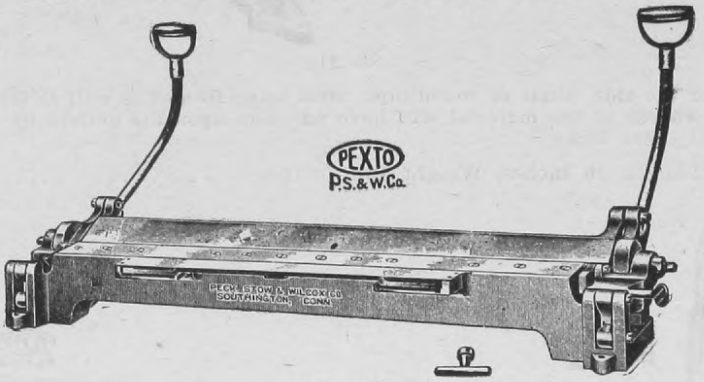
Nos. 62 and 63.

Stow's Patent Adjustable Bar Folders, for No. 22 Iron and Lighter, fitted with improved device for moving and setting the gauge. The movement of the gauge is almost instantaneous and a set screw in front and at the left of the machine holds the gauge firmly in place. Will form square joints or angles, turn narrow or wide locks of uniform width the entire length, sharp edges and also round edges for inserting wire; locks can be formed from ⅛ to 1 inch wide. All parts interchangeable.

No. 62—Length 20¾ inches, Weight 102 pounds. ..... Each, $67.00

No. 63—Length 30 inches, Weight 185 pounds. ..... Each, 77.00

PEXTO SHEET IRON FOLDING MACHINES



No. 55A.

Extra heavy Bar Folding Machine Patterns are made in extra long lengths intended for folding or edging sheets or strips of sheet iron, soft steel, brass and copper. They are adapted for forming the edges of sheet metal at various angles to form locks, square joints and to turn round edges for inserting wire. Open or round locks for wiring are made by dropping wing on the folding bar below edge of gripping jaw. This adjustment is secured through the setting of a wedge, that moves in a slot in the rear and right side of the machine on the Folding Bar. Moving this wedge to left or right will permit the wing swinging on the Folding Bar to drop to proper position for the size of wire to be used. Gauge is adjustable and regulates the width of fold by turning Gauge at right end of machine. Adjustable Stop is provided to permit the forming of any desired angle in addition to regular square and bevel stops. A Gripping Jaw clamps the material securely while the bending takes place, guaranteeing the forming of square joints or angles, narrow or wide locks of uniform width the entire length.

No. 55A—Length 36 inches, Weight 365 pounds ..... Each, $110.00

WRIGHT'S PATENT

Nos. 0 and 1.

For No. 22 Iron and Lighter; will turn 3/16 and 5/16 inch locks.

WRIGHT'S IMPROVED

No. 12A.

For No. 22 Iron and Lighter; will turn 3/16, 5/16, ½ and 5/8 inch locks.

No. 0 —Wright's Patent, Length 42 inches, Weight 135 pounds ..... Each, $44.85
No. 1 —Wright's Patent, Length 30 inches, Weight 85 pounds ..... Each, 28.00
No. 12A—Wright's Improved, Length 30 inches, Weight 90 pounds ..... Each, 32.50

No. 12A—Wright's Improved Sheet Iron Folder as now made, will turn locks of different widths on any length of sheet. To turn an edge longer than the length of the Machine, use the round rod. To turn wider locks than the depth of the Folding Plate, use the Steel Strips under the Plate to increase the width and operate the Machine in the same manner as without them.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO FOLDING MACHINES

No. 11.

For folding the edges for the side seams of round pipe, after being formed as well as for folding the edges of straight sheets. Variations in the hardness of the material will have no effect upon the uniformity of the lock. For No. 22 Iron and Lighter; will turn 3/16 to 7/16 inch locks.

No. 11—Champion Folder, Length 30 inches, Weight 100 pounds ..... Each, $35.00

No. 39.

For No. 22 Iron and Lighter; will turn 3/16 to 1/2 inch locks.

No. 2B.

For No. 22 Iron and Lighter; will turn 3/16 to 5/8 inch locks.

No. 39—Wood Bottom Folder, Length, 30 inches, Weight 75 pounds ..... Each, $28.00
No. 2B—Iron Bottom Folder, Length 30 inches, Weight 105 pounds ..... Each, 21.00

PEXTO GUTTER MACHINES

No. 700.

A—Made with Gutter Beader.

Nos. 709 and 710.

Gutter Beaders are intended for forming a bead on the edge of the gutter. This Machine is so constructed that it can be easily adjusted to be used with Rods from 3/8 to 7/8 inch in diameter. The thickness of the metal is determined by the size of the Rod. It has a Gauge or Stop on the left-hand end, so that after adjusting the Jaws and setting the Gauge for the size of the Rod to be used the Jaws can be easily opened to remove the work and Rod, and then closed to exactly the same position as when the bead was formed, so that the operator can form any number of heads of exactly the same size. The Jaws are adjusted by a Hand Wheel with Back and Pinion, which adjusts both ends of the movable Jaw.

Iron Bottom Gutter Beaders, with Enclosed Rods

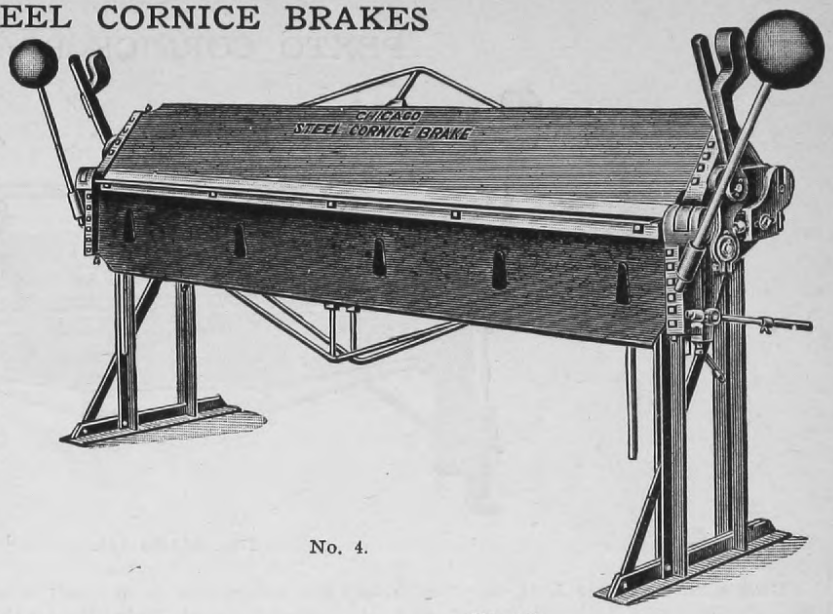
No. 700—30 inches long, Weight 75 pounds ..... Each, $21.00
No. 709—30 inches long, Weight 18 pounds ..... Each, 12.75
No. 710—20 inches long, Weight 11 pounds ..... Each, 9.85

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHICAGO STEEL CORNICE BRAKES

"Chicago Steel Cornice Brakes" are constructed of steel by a patented process in such a way that the strain and pressure is directly against the edge of the various plates. The Apron or bending leaf is reinforced by an angular shaped strengthening plate and substantial truss rods are provided for additional support and adjustment. The hinges and other parts where strength is required are of crucible steel. Legs are made of Angle steel. A steel angle bar is bolted to apron to give additional bending leverage when bending extra heavy material. The Clamping is done by means of an eccentric lever on each end. Handle levers operate independently. Balance weights on apron offer easy operation. The weights on lever handles permit the jaw being opened to any point thereby leaving the workman free to handle material and also doing away with the necessity of foot treadles. Complete with angle steel extension and five formers.

Note.—Special Catalog on request.



No. 4.

No. 2B.

For bending material for cornices and other light work, forms as narrow as ¾ inch edge and more, on No. 18 gauge. Weight 1,900 pounds.

No. 2B—Forming Edge 10 ft. 1 in.....Each, $295.00

No. 4.

Suitable for cornice and other light work, as well as ¾ inch and more, bends on No. 18 gauge. Weight 1,000 pounds.

No.4—Forming Edge 8 ft. 1 in.....Each, $160.00

No. 3B.

Forms a variety of light work up to No. 16 gauge ¾ inch and wider flange. Weight 1,100 pounds.

No. 3B—Forming Edge 6 ft. 1 in.....Each, $170.00

No. 4C.

Bends ¾ inch and wider on No. 18 gauge. Weight 700 pounds.

No. 4C—Forming Edge 5 ft. 1 in.....Each, $115.00

No. 6.

Suitable for medium and also light bending, forms No. 16 gauge with 1 inch edge and wider. Weight 500 pounds.

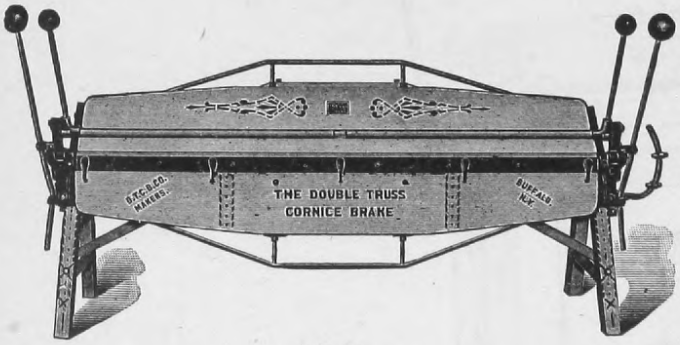
No. 6—Forming Edge 4 ft. ½ in.....Each, $95.00

No. 6B.

Bends 1 inch and larger edge on No. 16 gauge. Weight 400 pounds.

No. 6B—Forming Edge 3 ft. ½ in.....Each, $80.00

STANDARD DOUBLE TRUSS CORNICE BRAKES



No. 8.

"Double Truss Cornice Brakes" are simple, strong and durable, light and portable for contract work and are operated by hand power in the usual way. Curves are formed by bending the material over half-round formers attached to the front leaf. These Brakes will bend or form Sheet Metal to almost any angle or curve or any combination of angles or curves, not only on the edge of the material, but at any distance from the edge, either crosswise or lengthwise of the sheet. The main portion of these brakes is made of good hard maple timber, seasoned bone dry, the parts subject to wear or strain are thoroughly protected and strengthened by steel and iron in the most substantial manner. Each jaw or leaf is strongly trussed with a "Double Truss' system with which extra tension may be applied to the central part of each leaf either on front or rear edge, thus preventing the jaws from being ruined by any overstrain. The bending edge of each leaf is faced with a steel bar planed off true, and all other working parts are thoroughly protected. The front leaf is adjustable and the clamping device simple, strong and quick in action, and the various brakes will bend cross-seamed material without damage to either material or jaws. Being made partially of wood the brakes are light, thus the freignt costs only about one-half the amount as compared to freight on all metal brakes. These machines have been thoroughly tested on all kinds of sheet metal work for 18 years, hence they are a development and not an experiment. They are used by the U. S. Government and are in use in every state in the Union and many foreign countries, and they are guaranteed by the manufacturer to be exactly as represented in every way, hence you run no risk whatever in ordering these machines. **(Note.**—Prompt shipments guaranteed. Send for complete illustrated and descriptive catalog).

No. 3.

Forming edge 3 ft. 1 in. long, ¼ in. wide. Will form No. 22 gauge full length. Shipping weight on skids, 250 pounds; knocked down and boxed, 325 pounds.

No. 3—Forming Edge 3 ft. 1 in.....Each, $45.00

No. 4.

Forming edge, 4 ft. 1 in. long, ½ in. wide. Will form No. 22 gauge full length. Shipping weight on skids, 300 pounds; knocked down and boxed, 375 pounds.

No. 4—Forming Edge 4 ft. 1 in.....Each, $56.00

No. 5.

Forming edge, 5 ft. 1 in. long, ½ in. wide. Will form No. 22 gauge full length. Shipping weight on skids, 575 pounds; knocked down and boxed, 700 pounds.

No. 5—Forming Edge 5 ft. 1 in.....Each, $72.00

No. 6.

Forming edge, 6 ft. 1 in. long, ½ in. wide. Will form No. 22 gauge full length. Shipping weight on skids, 660 pounds; knocked down and boxed, 750 pounds.

No. 6—Forming Edge 6 ft. 1 in.....Each, $90.00

No. 8.

Forming edge, 8 ft. 1 in. long, ½ in. wide. Will form No. 22 gauge full length. Shipping weight on skids, 875 pounds; knocked down and boxed, 1,025 pounds.

No. 8—Forming Edge 8 ft. 1 in.....Each, $115.00

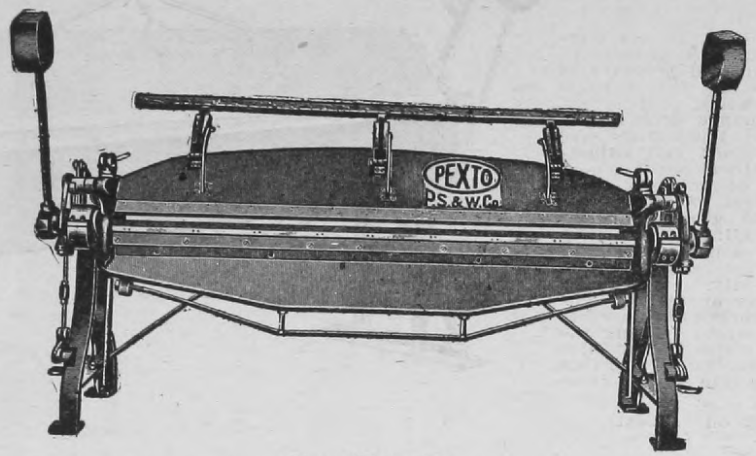
No. 10.

Forming edge, 10 ft. 1 in. long, ½ in. wide. Furnished with 2½ in. angle bar for heavy work. Will form No. 22 gauge full length. Shipping weight on skids, 1,310 pounds; knocked down and boxed, 1,500 pounds.

No. 10—Forming Edge 10 ft. 1 in.....Each, $155.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

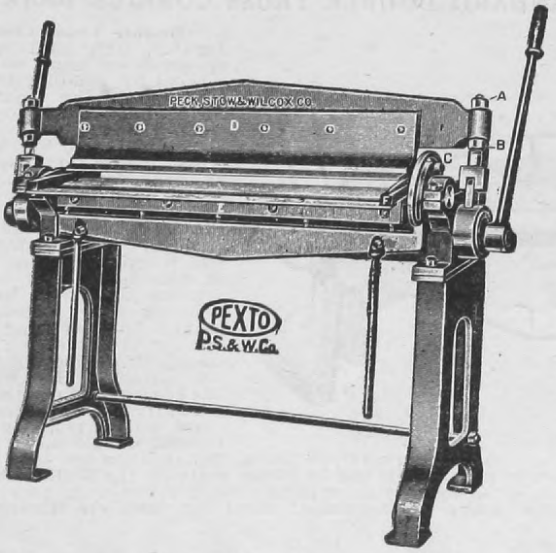
PEXTO CORNICE BRAKES



Nos. 683 to 685.

Hare's Patent Four Leaf Cornice Brakes are deservedly popular all over the world, and are recognized by large Sheet Metal Workers and Railroad Companies as the best Brakes of their kind on the market. They will form long sections easily and quickly, and are well adapted for heating, ventilating and cornice work, for forming Gutters, Valleys, etc. The Bending Leaf is properly balanced by Weights and is provided with a Forcing Bar for bending heavy iron. The parts subject to wear or strain are protected and strengthened in a most substantial manner. The Stop Bracket on right-hand end of Brake can be quickly and easily adjusted to bend any angle wanted. We warrant this Brake to bend No. 18 iron perfectly straight its entire length and without springing. They have an attractive feature, consisting of an Attachment or Fourth Leaf for making circular or semi-circular forms.

No. 683—52 inches long, Weight 1,070 pounds.....Each, $188.00
No. 684—74 inches long, Weight 2,300 pounds.....Each, 269.00
No. 685—98 inches long, Weight 3,650 pounds.....Each, 417.00



No. 93.

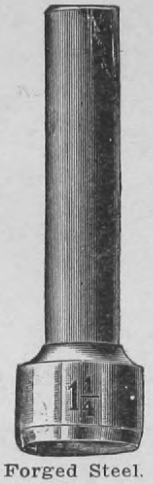
The construction of this Machine is of all iron with steel bending blades and allows for easy and accurate formation of wide angles or narrow locks within the rated capacity, with no danger of springing. The cross head is brought down and the work securely clamped through eccentrics actuated by hand levers from either end of the machine. Adjustments are provided for in the eccentric connection, allowing for a maximum pressure to bear on the work while in the process of forming, preventing the work slipping from a true line. Gauge is adjustable for gauging ⅛ to 4 inches. This Gauge is fitted on front of machine and throws back out of the way during the process of forming. These Machines as made regularly will form locks and angles of unusual sharpness on 16 Gauge Iron and lighter, but where locks or angles of extreme sharpness are desired, special alterations are required, and when so made machine will operate only on the work for which it was made. Will form open or closed locks ½ to 1¾ inches on No. 16 iron, 5/16 to ⅜ inches on No. 18 Iron, ¼ inch on No. 20 Iron, 3/16 inch on No. 22 Iron and ⅛ inch on No. 24 Iron.

No. 93—42 inches long, Weight 950 pounds.....Each, $206.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TINNERS' HOLLOW PUNCHES

Forged Steel.

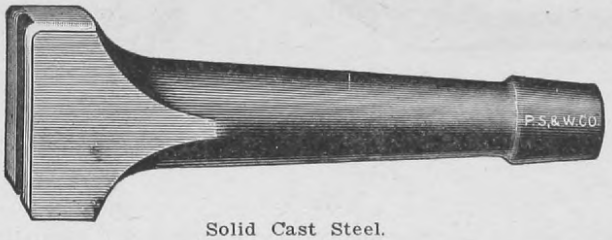


Forged Steel.

Hollow Punches										
Diameter, inches....	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Each	$0.69	.91	1.15	1.38	1.60	1.82	2.28	2.73	3.18	3.64
Sets of 5, One Each,	1/2, 3/4, 1, 1 1/2 and 1 3/4 inches.....Per Set, $8.66									

Packed—One in a Package.

PEXTO TINNERS' HAND GROOVERS

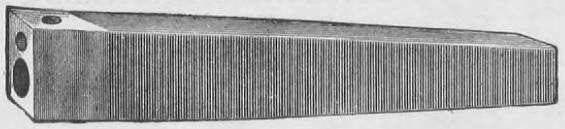


Solid Cast Steel.

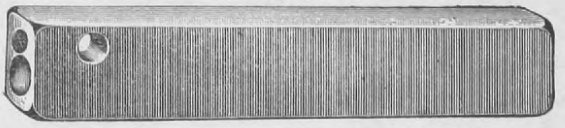
Nos.	000	00	0	1	2	3	4	5	6
Groove, inch....	9/16	1/2	7/16	13/32	3/8	5/16	1/4	3/16	5/32
Each	$2.10	1.37	1.37	1.22	1.22	1.15	1.15	1.06	1.06

Packed—One in a Package.

PEXTO TINNERS' RIVET SETS



No. 46.
Forged Steel, Gun Metal Finish.



No. 66.
Agricultural, Cast Steel, Plain Finish.

Full Size of Holes.....

No. 46—Tinners ..Size	00	0	1	2	3	4	5	6	7	8
For Iron Rivets.....	14	10 & 12	8	6	4 & 5	2 1/2 & 3	1 3/4 & 2	1 1/2	1 1/4 lb.	10 & 12 oz.
For Copper Rivets, Nos. ..		5	6	7	8	9	10 & 11	12	13	14
Each $0.72		.72	.62	.62	.50	.50	.39	.39	.34	.34

Packed—Six in a Box.

No. 66—Agricultural .....Size,	7	8	9	10
For Copper Rivets, Nos.....	7	8	9	10
Per Dozen	$2.00	2.00	2.00	2.00

Packed—Six in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO STEEL STRAIGHT EDGE

Nos. 994 and 995.

These Straight Edges are made of steel and have beveled edges. They are invaluable around the shop for laying out work in general.

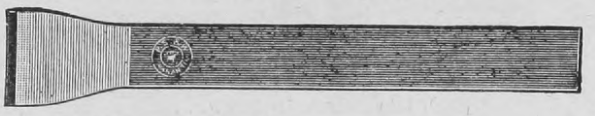
Nos.	994	995
Length, inches	48	96
Width, inches	2¼ x ¼	2¼ x ¼
Weight, pounds	7½	15
Each	$4.20	7.40

PEXTO LANTERN CHISELS

Lantern Chisel—Size ½x5½ inches....Per Dozen, $2.00

Packed—One Dozen in a Box.

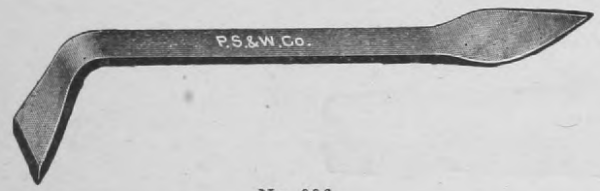
PEXTO WIRE CHISELS



Width of Blade, inches	½	¾
Wire Chisels—Per Dozen	$2.10	2.65

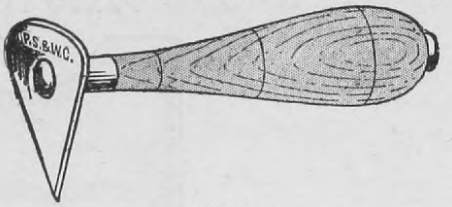
Packed—One Dozen in a Box.

PEXTO ROOFING SCRAPERS



No. 996.

PEXTO PLUMBERS SCRAPERS



No. 11.

No. 996

These Scrapers are forged from the highest grade steel, are well tempered, finely finished and in all respects are perfect tools.

No. 996—Roofing Scraper. Size 3/16x⅝x10 inches.....Per Dozen, $4.00

No. 11

The style and finish of these Scrapers are in keeping with present-day requirements and will prove practical for general use.

No. 11—Plumbers' Scraper. 5 inches long, weight 2 pounds.....Per Dozen, $2.35

Packed—One Dozen in a Box.

MACHINE STANDARDS

Regular Offset No. 975

BENCH PLATES

Nos. 981 and 982.

Cast Iron, Planed Surface.

No. 981—37½x8 inches, Weight 46 pounds.....Each, $10.50

No. 982—30x8 inches, Weight 31 pounds.....Each, 8.10

MACHINE STANDARDS

Wiring Offset No. 976

Offset Machine Standards are adapted to either Columbian or Encased Pattern Bench Machines.

No. 975—Regular Machine Standard, Weight 10½ pounds.....Each, $2.15
No. 976—Wiring Machine Standard, Weight 11 pounds.....Each, 2.15

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PEXTO TINNERS' STAKES

Nos. 943 and 945.

No. 957.

No. 956.

No. 943—Hatchet Stake, Blade 13 inches long, Weight 8½ pounds.....Each, $7.75
No. 945—Hatchet Stake, Blade 9 inches long, Weight 4 pounds .....Each, 7.25
No. 957—Needle Case Stake, Round End 10½ inches, Flat End 8 inches, Weight 4 pounds.....Each, 7.00
No. 956—Candle Mould Stake, Large End 18½ inches, Small End 9½ inches, Weight 7½ pounds.....Each, 7.75

No. 972.

No. 921.

No. 972—Conductor Stake, Large End 14 inches, Small End 10½ inches, Weight 17 pounds.....Each, $ 7.50
No. 921—Double Seaming Stake, Large End 17 inches, Small End 12 inches, Weight 37 pounds.....Each, 23.75

No. 925.

No. 902.

No. 925—Blow Horn Stake, Large End 9 inches, Small End 18 inches, Weight 14 pounds.....Each, $12.00
No. 902—Large Beak Horn Stake, Round End 16½ inches, Flat End 20 inches, Weight 37 pounds....Each, 27.50

No. 935.

No. 935—Coppersmiths' Square Stake, Face 2¾x4½ inches, Weight 11 pounds....Each, $8.50

No. 965

No. 965—Round Head Stake, 3 inch Head, Length over all 12 inches, Weight 10 pounds ..... Each, $3.50

No. 936.

No. 936—Common Square Stake, Face 2¾x4½ inches, Weight 11 pounds....Each, $7.75

Nos 961 and 962.

No. 961—Solid Mandrel Stake, 2 feet 10½ inches long to the Standard, Weight 56 pounds.....Each, $10.50
No. 962—Solid Mandrel Stake, 2 feet 6 inches long to the Standard, Weight 43 pounds.....Each, 8.10

No. 949.

No. 910.

No. 910—Hollow Mandrel Stake, Flat Part 9 inches long, 6 inches wide; Oval Part 31 inches long. Length over all, 3 feet, 4 inches, Weight, 60 pounds .....Each, $11.25

No. 949—Double Seaming Stake, with 4 Heads, A, B, C and D, Weight 110 pounds.....Each, 19.00
Extra Heads, A, B, C or D.....Each, 3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

QUICK-LOCK PIPE MANDRELS

Designed specially for putting together and seaming Quick-Lock Stove and Furnace Pipe easily and rapidly. Heavy cast Socket or Base to bolt to Bench.

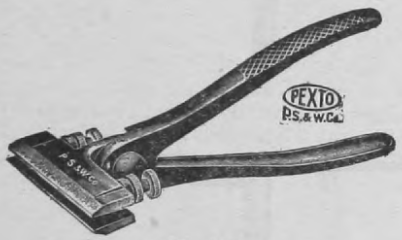
Quick Lock—Wrought Mandrel 36x3 in., with Mallet, ...Each, $2.75

ADAMS STOVE PIPE MANDRELS

The Adams Mandrel fills the demand for a convenient low priced mandrel for a dealer who does not have a regular tin shop. The Saddle which attaches the Mandrel to the Bench is heavy and is used as an Iron to pound upon.

Adams Cast Stove Pipe Mandrels, Length 36 inches. .....Each, $5.00

HANDY SEAMERS



No. 791.

Handy Pocket Seamer, very useful where a larger Seamer would not be practical. It is adjustable for seams of different widths and as it is light, it can be carried in tool kit or pocket making a handy tool for outside work.

No. 791—Blade 3½ inches long, ⅞ inch wide. Weight 1 pound. Each, $1.25

HAND SEAMERS

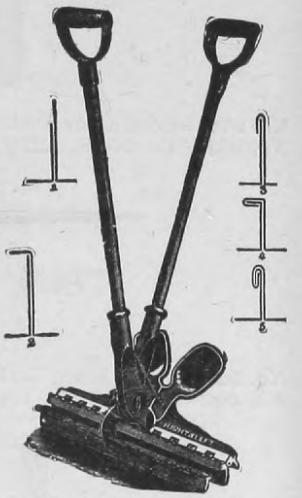
No. 744.

Illustration Shows One Pair.

Hand Roofing Double Seamers, for finished seams ¾ and 1 inch high, or 1 and 1¼ inches high.

Nos.	744	745
Weight Per Set	16 lbs.	19 lbs.
Sizes—Inch	¾x1	1x1¼
To Match Roofing Tongs	1x1¼	1¼x1½
Per Set of Two Pairs	$3.50	4.00

ROOFING DOUBLE SEAMERS



Nos. 742 and 742½.

Burritt's Improved Roofing Double Seamers

The Improved Seamers are so made as to bend the edge down farther than at right angle to facilitate the closing down operation. The Seamers form locks of uniform height and do not crimp the metal. They will double seam hips and ridges with ease and seaming can be done much faster, easier, and better than by use of Hand Seaming Iron and Mallet.

No. 742 —"Common Gauge" Seamers to follow 1 and 1¼ inch Edging Tongs, making a Finished Seam ¾ inch high.....Per Set of Two Pairs, $28.25

No. 742½—"Wide Gauge" Seamers to follow 1¼ and 1½ inch Edging Tongs, making a Finished Seam 1 inch high.....Per Set of Two Pairs, 28.25

Note.—A Set of Two Pairs is required in each instance to make a finished seam of either height.

Illustration Shows One Pair or Half Set.

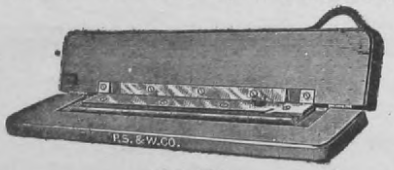
Where Seamers are ordered in half sets, be sure to specify whether the first or second set of Seamers are desired.

PEXTO SQUEEZING TONGS

No. 766.

No. 766—Squeezing Tongs, for Metal Roofing with Roll or Folding Cap, Cast Iron, with Pipe Handles.....Per Pair, $3.40

PEXTO ROOFING FOLDERS



No. 123.

No. 123 — Improved Wood Roofing Folder, with Adjustable Gauge. Length 30 inches, Weight 17 pounds .....Each, $9.00

PEXTO COMMON EDGING TONGS

No. 770½.

No. 770½—Common Roofing Edging Tongs, Steel. Sizes ½, ¾, 1, 1¼, 1½ or 1¾ inches..... .....Per Pair, $5.75

Specify size wanted when ordering.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

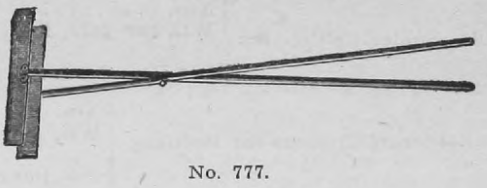
PEXTO TINNERS' TOOLS

ADJUSTABLE EDGING TONGS

No. 773.

No. 773—Stow's Improved Adjustable Roofing Edging Tongs, Steel, Adjustable from ½ to 1½ inches..Per Pair, $7.25

GUTTER TONGS



No. 777.

No. 777—Gutter Tongs, weight 9 pounds.....Per Pair, $7.25

EAVE TROUGH END FORMERS

The Tool.

The Work.

For Closing the Ends of Eave Trough in Corrugations.

For Trough .....Inches,	3½	4	4½	5	6
Net List, each.....	$0.60	.72	.78	.90	1.20

PEXTO SLATERS' TOOLS

Hammer.

No. 987.

Stake.

No. 988.

Ripper.

No. 986.

No. 989.

These Tools, used extensively in the laying and repairing of slate and other kinds of roofing, are drop forged from the Highest Grade materials. The blade of the Ripper is drawn down very thin from tool steel having a forged handle. Hammers are made of solid forgings from crucible cast steel with properly tempered head, point and cutting edges. A leather handle that will not break or wear out easily, smoothly finished to fit the hand snugly, is used on our Slater's Hammer. Stakes and Punches are forged from cast steel.

No. 987—Regular Hammer, Weight 1¾ pounds..... Each, $3.50
No. 988—Regular Stake, Weight 2 pounds 3 ounces..... Each, 1.50
No. 986—Regular Ripper, 24½ inches long, Weight 2 pounds 14 ounces..... Each, 2.50
No. 989—Punch..... Each, .25

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SOLDERING COPPERS

Square Point Soldering Coppers

Nos.	1	1½	2	3	4	5	6	8	10
Wt., per pair, lbs.	1	1½	2	3	4	5	6	8	10

Per Pound ..... $..... .... Nos. 3 to 10 All Sizes, $.....

Flat Point Soldering Coppers for Bottoms

Nos.	30	40	50	60	80
Wt., per pair, lbs.	3	4	5	6	8

Per Pound .....All Sizes, $.....

SOLDERING SETS

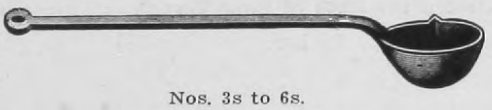
No. 7.

Soldering Set. Contains one heavy Soldering Iron, one Scraper, one piece of Solder, one piece of Resin and one piece of Tin.

No. 7—Complete, as illustrated above.....Per Set, $2.40

Packed—One Set in a Box.

MELTING LADLES



Nos. 3s to 6s.

Melting Ladles, with steel Bowls. Handles carefully welded on.

Regular, "Single" Lip Melting Ladles

Nos.	3S	4S	5S	6S
Inches	3	4	5	6
Holds Lead, lbs.	2¼	4¼	10¼	14¼
Liquid Measure	2¾ oz.	1¼ gills	⅔ pt.	1¼ pts.
Per Dozen	$3.65	5.00	8.35	10.35

Extra Heavy, "Double" Lip Melting Ladles

Nos.	6D	8D	10D
Inches	6	8	10
Holds Lead, lbs.	14¼	27½	50
Liquid Measure	1¼ pts.	2½ pts.	5 pts.
Per Dozen	$16.65	24.65	40.00

MELTING POTS

For Solder, Lead or Babbitt. The Popular Deep Pattern, with Steel Wire Bails. The 5 inch Pot fits the large shield of Coil Fire Pots, the 8 inch Pot fits only the extra large shield.

Size, inches	3½	5	6	8
Each	$0.50	.50	.70	1.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASOLINE TORCHES

No. 18.

Polished Seamless Brass Tank, with concaved bottom. Fitted with Automatic Air Pump with check valve in handle. A safety air tube leading from bottom of pump to top of tank prevents gasoline from escaping through the pump.

No. 19.

Without Soldering Copper Attachment.

No. 18—Capacity One **Pint**.....Each, 6.00

With Soldering Copper Attachment.

No. 19—Capacity One **Pint**.....Each, 6.40

No. 29.

Polished Seamless Brass Tank, with concaved bottom. Fitted with Automatic Air Pump, with check valve, in handle. A safety air tube leading from bottom of pump to top of tank prevents gasoline from escaping through the pump.

No. 30.

Without Soldering Copper Attachment.

No. 29—Capacity One **Quart**.....Each, $7.20

With Soldering Copper Attachment.

No. 30—Capacity One **Quart**.....Each, $7.60

No. 31. Style of No. 37.

Polished Seamless Brass Tank, with concaved bottom. Fitted with improved Burner which protects the gas or vapor from the wind and cold and an Automatic Air Pump, with check valve, which insures the desired air pressure at all times.

No. 32. Style of No. 38.

Without Soldering Copper Attachment.

No. 31—Capacity One **Quart**.....Each, $7.60
No. 37—Capacity One **Pint**.....Each, 6.80

With Soldering Copper Attachment.

No. 32—Capacity One **Quart**.....Each, $8.00
No. 38—Capacity One **Pint**.....Each, 7.20

No. 120.

Polished Seamless Brass Tank, with concaved bottom. Fitted with Air Pump with single spring check valve, which closes off the air automatically after each stroke of the plunger.

No. 122.

No. 120—With Soldering Copper Attachment, Capacity One **Quart**.....Each, $6.00
No. 122—With Soldering Copper Attachment, Capacity One **Pint**.....Each. 5.60

Packed—Entire Page—One in a Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KEROSENE TORCHES

No. 97.

General Description.

These Kerosene Torches produce an intensely hot blue flame, and are indispensable for starting Gasoline and Kerosene Engines where a large steady blue flame is required. Tank is made of heavy gauge seamless drawn brass, reinforced and fitted with patented automatic brass pump, with double springs in handle which easily and quickly supply the required air pressure. Burner is made of special generator metal and so arranged that it can be cleaned readily.

Note—The No. 98 is similar to No. 97, except fitted with Shut-off Valve at base of Burner.

No. 98.

No. 97—Capacity One Quart ..... Each, $ 9.20
No. 98—Capacity One Quart ..... Each, 10.00

Packed—One in a Carton.

"HANDY ANDY" GASOLINE TORCHES

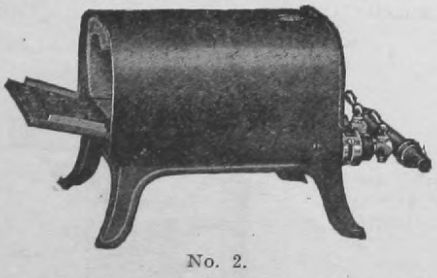
Closed. Ready to Operate.

The "Handy Andy" Torch is used in all trades and professions when a small flame is required. Burns constantly for about three hours with one filling.

No. 7—Nickel Plated, Capacity ¼ Pint ..... Each, $1.00

Packed—One in a Carton.

GAS SOLDERING FURNACES

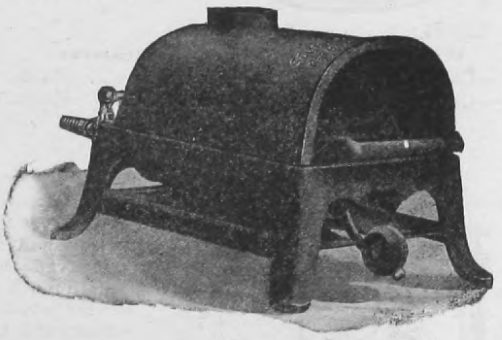


No. 2.

Superior Gas Soldering Furnace. For Natural, Illuminating or Producer Gas. Fitted with Adjustable Air Mixers. Burns a mixture of air and gas, in proportion of about 92 per cent air and 8 per cent gas. The gas consumption with both burners at full blaze is less than 8 feet per hour with ordinary gas pressure.

Double Burner, with Cast Iron Top.

No. 2—With Fire Brick Lining ..... Each, $4.00



No. 8.

Estate Automatic **Gas** Soldering Furnace. Strong and scientifically built, yet so simple that it cannot get out of order. Automatically shuts off the gas supply when the soldering iron is taken from the furnace, and instantly relights when iron is replaced.

No. 8—Estate **Automatic** Gas Soldering Furnace.. ..... Each, $6.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASOLINE FIRE POTS

No. 5.

No. 1.

These Fire Pots are light, strong, and capable of bearing hard usage. The flame is blue, free from smoke, and intensely hot. The No. 5 will heat a pair of 10-pound Coppers hot enough to draw in six to nine minutes. A kettle of Solder or Lead and a pair of Coppers may be heated at the same time, as there is heat enough for both. The flame heats the Coppers from heel to point, thus avoiding the common trouble of burning off the tinning. The Burner, being outside the hood, does not get clogged or eaten out by drippings. Each Burner has clean-out Plugs, which make it easy to keep in order. By removing a Spring Pin, the Top section may be removed, exposing an open fire, which may be used as a torch and will do any and all work that can be done with a torch. Our latest improvement is the Brass Air Pump, which we use in the place of the Bulb. This Pump will enable the user to put in a strong air pressure.

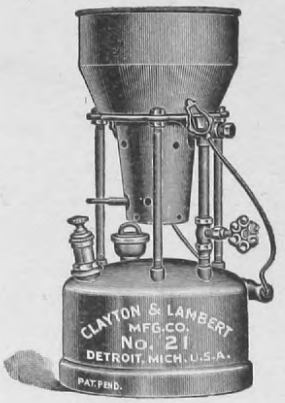
No. 5—Capacity Five Pints, Height over all 12 inches, Diameter at Base 8½ inches, Diameter at Top 6 inches ..... Each, $10.40

No. 1—Capacity Seven Pints, Height over all 12½ inches, Diameter at Base 9¾ inches, Diameter at Top 6¾ inches ..... Each, 13.60

No. 11.

GASOLINE FIRE POTS

The latest, improved, up-to-date Gasoline Fire Pots. Made with **Seamless Drawn Steel Tank,** large Funnel and Filler, heavy Uprights, large Valve, heavy Malleable Top Plate and One-Piece Steel Shield. They produce a maximum degree of heat at smallest cost and retain a steady blue flame in hard wind or extreme cold. Extra heavy Steel Burners and Coils. All parts are interchangeable. Capacity One Gallon.



No. 21.

No. 11—With Bulb Pump ..... Each, $8.80 | **No. 21**—With Automatic Pump ..... Each, $9.60

No. 71.

Noiseless, Smokeless and Odorless.

Sub-flame for the generator permits flames to be turned very low when not in use. Burner has double heating surfaces and the gas is superheated before it is burned, producing intensely hot blue flames which burn from each side to the center. A pot of lead can be melted and a pair of coppers heated at the same time. Tank is Galvanized Iron fitted with automatic Brass Pump.

No. 72.

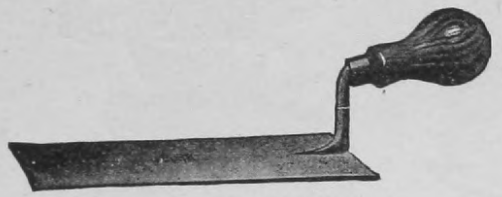
No. 71—Capacity Seven Pints ..... Each, $13.60 | **No. 72**—Capacity Five Pints ..... Each, $10.40

Packed—Entire Page—Each in a Shipping Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

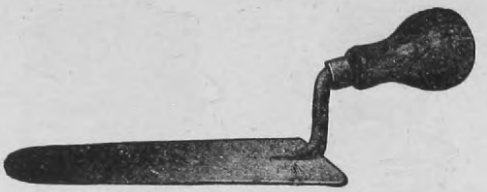
BURR'S DAMASCUS MOLDERS' TOOLS

The Quality of these Tools is of the Highest Standard



Square Trowel.

Size, inches...	1¼x5½	1¼x6	1½x5½	1½x6
Each	$0.65	.70	.75	.80



No. 1 Finishing Trowel.

Size, inches..	1¼x5	1¼x5½	1¼x6	1½x5½	1½x6
Each	$0.60	.65	.70	.75	.80

Fig. 2—No. 2 Stove Tool.

Width, inches.....	⅝	¾
Each	$0.40	.45

Fig. 3—No. 3 Stove Tool.

Width, inches.....	⅝	¾
Each	$0.40	.45

Fig. 4—No. 4 Stove Tool.

Width, inches.....	¾
Each	$0.50

Fig 5—No. 5 Stove Tool.

Width, inches.....	⅝	¾
Each	$0.40	.45

Fig. 9—Slick and Spoon.

Width, inches	⅜
Each	$0.45

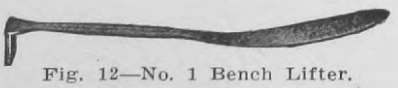


Fig. 12—No. 1 Bench Lifter.

Width, inches.....	½	⅝
Each	$0.50	.55

Fig. 13—No. 2 Bench Lifter.

Width, inches.....	7/16	9/16	11/16
Each	$0.40	.45	.50

Fig. 14—Bench Lifter (Bent).

Width, inches.....	⅜	½	⅝
Each	$0.45	.50	.55

Fig. 15—Yankee Lifter.

Width, inches	½	⅝
Each	$0.50	.55

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BURR'S DAMASCUS MOLDERS' TOOLS

The Qulaity of these Tools is of the Highest Standard

Fig. 22—Heart and Leaf.

Width, inches	¾	1
Each	$0.45	.50

Fig. 24—No. 1 Taper and Square.

Width, inches	¾	1
Each	$0.50	.55

Fig. 26—No. 3 Taper and Square.

Width, inches	1
Each	$0.55

Fig. 27—Slick and Square Spoon.

Width, inches	1⅛
Each	$0.60

Fig. 28—Taper and Square Spoon.

Width, inches	1
Each	$0.55

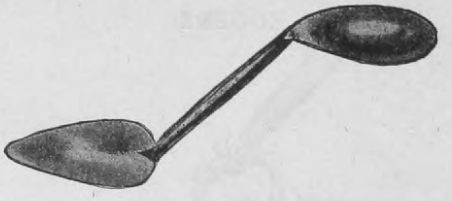


Fig. 28½—Taper and Oval Spoon.

Width, inches	¾	1	1¼
Each	$0.50	.55	.65

Fig. 29—Slick and Oval Spoon.

Width, inches	¾	1	1¼	1½
Each	$0.50	.55	.65	.75

Fig 30—Heart and Square Spoon.

Width, inches	1	1¼
Each	$0.50	.60

Fig. 31—Heart and Oval Spoon.

Width, inches	1	1¼
Each	$0.50	.60

Fig. 42—Lifter.

Size, inches	¼x12	¼x14	½x14	½x16
Each	$0.50	.55	.65	.70

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ABRAM DOUBLE ACTION CEMENT TOOLS

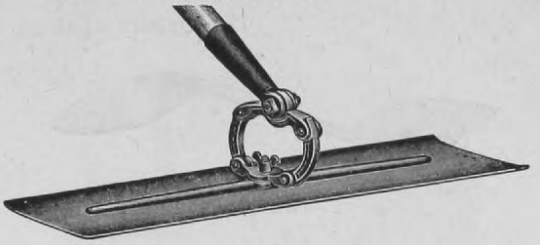
FINISHING TROWELS

No. 1.

Abram Double Action Finishing Trowel. Blade is made of Silver Steel, 24 inches long by 5 inches wide. Weight 5 pounds. Length of handle 6 feet.

No. 1—24 inch Double Action Trowel.....Each, $7.50

FLOATS



No. 4.

Abram Double Action Float. Blade is made of cold Rolled Steel, 24 inches long by 6 inches wide with beveled face, has 6 foot handle. Weight 8 pounds.

No. 4—24 inch Double Action Float.....Each, $7.50

JOINTERS

No. 2.

Abram Double Action Jointer. Blade is made of Silver Steel, 16 inches long by 5 inches wide. The Joint is a Bronze or Nickeled Metal, slip on attachment, and any number may be used on the same tool. Weight 5 pounds. Length of handle 6 feet.

No. 2—16 inch Double Action Jointer.....Each, $7.00

No. 20.

Abram Double Action Jointer. Made of Nickeled Iron, 10 inches long by 3¼ inches wide. Cuts groove ⅞ inch deep by ⅝ inch wide at surface, has 6 foot handle. Weight 6 pounds.

No 20—10x3¼ inch Double Action Jointer..Each, $5.00

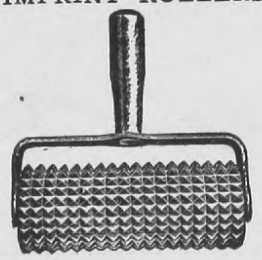
EDGERS

No. 30.

Abram Double Action Edger. Made of Nickeled Iron 10 inches long by 3¼ inches wide, with ⅞ Form face, about ½ inch radius, 5½ foot handle. Weight 6 pounds.

No. 30—10x3¼ inch Double Action Edger..Each, $3.50

IMPRINT ROLLERS



Nos. 60C to 60E.

Cast Iron, Aluminum Dipped, with 5¼ inch Iron Handle.

Dot Roller	Length	Diameter	Each
No. 60C.....	4 inches	3½ inches	$3.00
No. 60D.....	6 inches	3½ inches	3.50
No. 60E.....	8 inches	3½ inches	4.00

SIDEWALK OR IMPRINT ROLLERS

No. 70A.

Aluminum Line Roller, 12 inches long, 3½ inches in diameter, grooves 5/16 inches wide, 5½ foot handle.

No. 70A—Sidewalk **Line** Roller.....Each, $8.70

No. 100A.

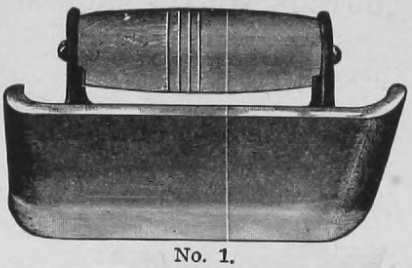
Aluminum Dot Roller, 12 inches long, 3½ inches in diameter, dots ⅜ inch center, has 5½ foot handle.

No. 100A—Sidewalk **Dot** Roller.....Each, $9.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CEMENT WORKING TOOLS

SIDEWALK EDGERS

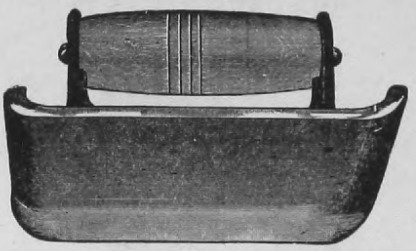


No. 1.

Length 6 inches, Width 3 inches, Radius ⅜ inch.

No. 1—Sidewalk Edgers, Iron, Nickel Plated... Each, $0.60

Packed—Six in a Box.

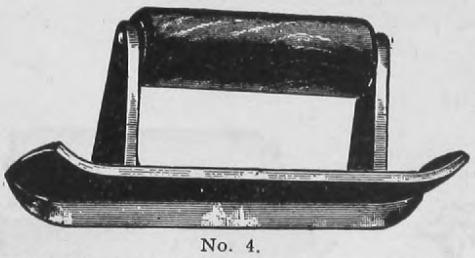


No. 3.

Length 6 inches, Width 3 inches, Radius ¾ inch.

No. 3—Sidewalk Edgers, Iron, Nickel Plated... Each, $0.65

Packed—Six in a Box.

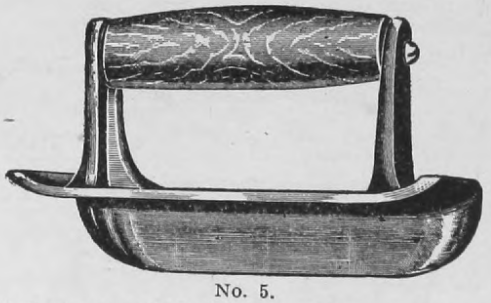


No. 4.

Length 9 inches, Width 3 inches, Radius ¾ inch, ¾ inch Turned Edge.

No. 4—Sidewalk Edgers, Iron, Nickel Plated.... Each, $1.00

Packed—Six in a Box.



No. 5.

Length 7 inches, Width 3 inches, Radius ¾ inch, 1½ inch Turned Edge.

No. 5—Sidewalk Edgers, Iron, Nickel Plated.... Each, $0.75

Packed—Six in a Box.

SIDEWALK EDGERS

No. 8.

Length 6 inches, Width 2⅜ inches.

No. 8—Sidewalk Edgers, Iron, Nickel Plated..... Each, $0.60

Packed—Six in a Box.

BEVEL EDGERS

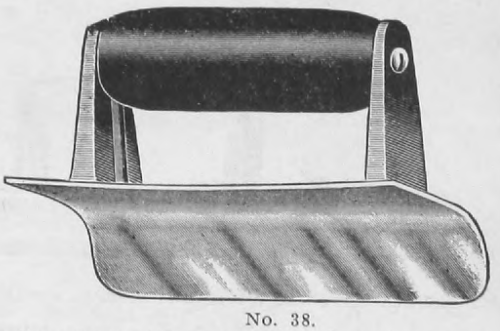
No. 6.

Length 6 inches, Width 2¾ inches.

No. 6—Bevel Edgers, Iron, Nickel Plated... Each, $0.60

Packed—Six in a Box.

CURBING EDGERS



No. 38.

Length 7½ inches, Width 5½ inches, 2 inch Turned Edge, ½ inch Radius.

No. 38—Curbing Edgers, Iron, Nickel Plated.... Each, $1.00

Packed—Six in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CEMENT WORKING TOOLS

IN-CURVE EDGERS

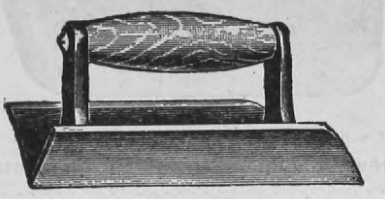
No. 44.

Length 4½ inches, Width 2 inches, ⅝ inch Turned Edge, ½ inch Radius.

No. 44—In-Curve Edgers, Iron, Nickel Plated . . . . . Each, $0.50

Packed—Six in a Box.

OUTSIDE SQUARE ANGLES



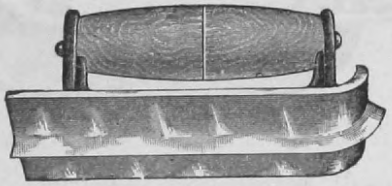
No. 31½.

Length 6 inches, Height of sides 1½ inches.

No. 31½—Outside Square Angles, Iron, Nickel Plated . . . . . Each, $0.60

Packed—Six in a Box.

SIDEWALK JOINTERS



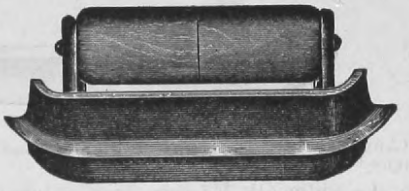
No. 20.

Length 6 inches, Width 3 inches, One end straight to cut joint in sharp corners. Cuts thin groove for sidewalks.

No. 20—Sidewalk Jointers, Iron, Nickel Plated . . . . . Each, $0.60

Packed—Six in a Box.

View Showing thin edge



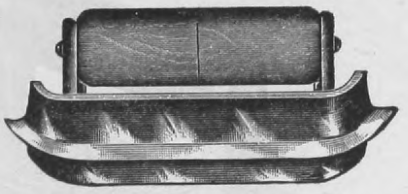
No. 22.

Length 6 inches, Width 3 inches. Cuts thin grooves for sidewalks, ½ inch deep.

No. 22—Sidewalk Jointers, Iron, Nickel Plated . . . . . Each, $0.60

Packed—Six in a Box.

View Showing thick edge

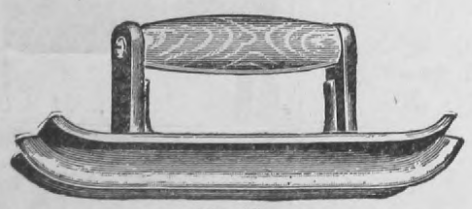


No. 23.

Length 6 inches, Width 3 inches. Cuts heavy grooves for carriage-ways, ½ inch deep.

No. 23—Sidewalk Jointers, Iron, Nickel Plated . . . . . Each, $0.65

Packed—Six in a Box.



No. 25.

Length 9 inches, Width 3 inches. Cuts thin groove for sidewalks, ½ inch deep.

No. 25—Sidewalk Jointers, Iron, Nickel Plated . . . . . Each, $0.85

Packed—Six in a Box.

No. 28.

Length 6 inches, Width 4¾ inches. Cuts thin groove for sidewalks, ⅝ inch deep.

No. 28—Sidewalk Jointers, Iron, Nickel Plated . . . . . Each, $0.75

Packed—Six in a Box.

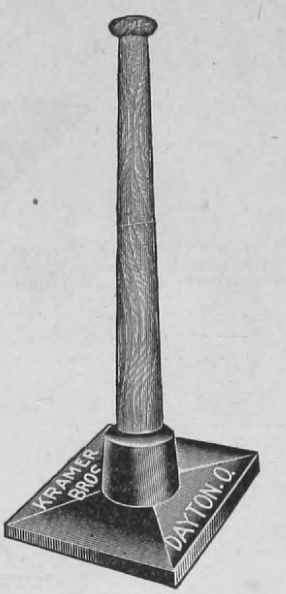
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DIRT AND SOD TAMPERS

Round.

Maple Handles, 4 feet long, 3 inches in diameter.

Round	Diameter, inches ...	4	7
	Weight, each.....	6 lbs.	9 lbs.
	Each	$1.15	1.45



Square

Maple Handles, 4 feet long, 3 inches in diameter.
Weight each 13 pounds.

Square Dirt and Sod Tampers, 6x6 inches...Each, $1.30
Square Dirt and Sod Tampers, 9x9 inches...Each, 1.45

Note—Weights given above do not include handles. For weight on handles add 5 pounds each.

DARBIES

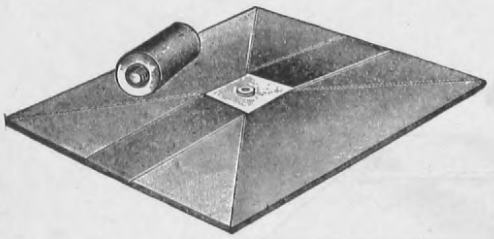
No. 2A.

With One Handle and 18 inch Rib, Size 3½x44 inches.

No. 2W—Wood Darbies, very serviceable.....Per Dozen, $ 7.50
No. 2A—Aluminum Darbies, stronger, lighter and more flexible than wood .....Per Dozen, 36.00

Packed—Half Dozen in a Box.

CEDAR HAWKS



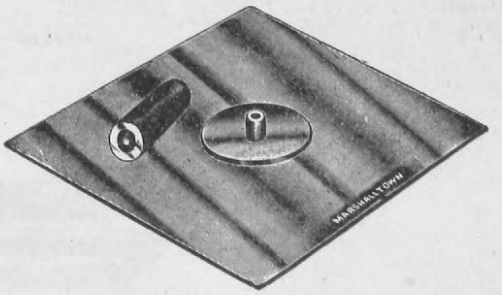
No. 22.

Made of first quality Cedar, with Dove-tailed cross piece and Detachable Handle. **In ordering** specify size of handle, as we can furnish either 5 or 6 inch.

No. 22—Size 13½x13½ inches.....Per Dozen, $12.00

Packed—One-third Dozen in a Box.

ALUMINUM HAWKS



No. 2.

Made of hard rolled Aluminum, with Detachable Handle. A 3¾ inch flange with hub extended ⅞ of an inch, to receive thread on handle, makes the hawk very strong and durable.

No. 2—Size 13½x13½ inches.....Per Dozen, $34.00

Packed—Quarter Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

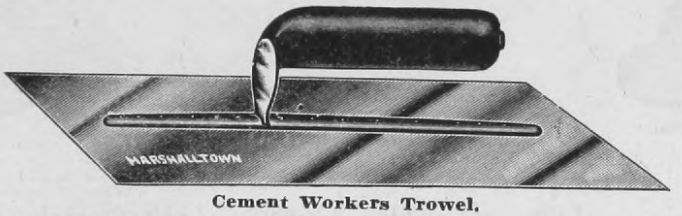
PLASTERING TROWELS

Plastering Trowel.

Cincinnati Pattern Plastering Trowel. The only Cincinnati Trowel made with Straight Edge Blades. Long Mounting, Slanting Post which fits the hand. Blades No. 22 Gauge Crucible Spring Steel. Long Mountings, Blade and Mountings Full Polished. Five Rivets, Plain Varnished Handles.

Nos.	MC1	MC2	MC3	MC4
Inches	10½x4¾	11x4¾	11½x4¾	12x4¾
Per Dozen				All Sizes, $20.00

Packed—One-Third Dozen in a Box.

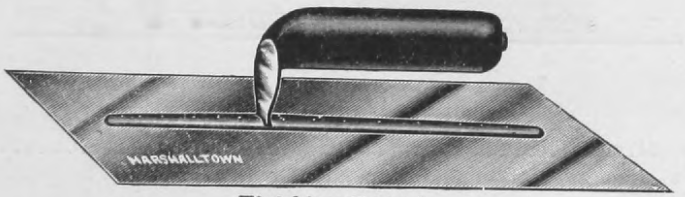


Cement Workers Trowel.

Marshalltown "Cement Workers" Trowel. The only Trowel for Cement men. A Perfect Trowel with Crucible Spring Steel Blades and Hardened Mountings. Blades Oval Face, Ground 22 Gauge in Center and 24 Gauge on Edge. Plain White Handles.

Nos.	MCW1	MCW2	MCW3
Inches	11x4¾	11½x4¾	12x4¾
Per Dozen			All Sizes, $30.00

Packed—One-Third Dozen in a Box.



Finishing Trowel.

Marshalltown "Finishing" Trowel. A Perfect Trowel with a Perfect Hang and Perfect Grip. Finest quality Crucible Spring Steel. Oval Face Blades Ground 23 Gauge in Center to 25 Gauge on Edge. Hardened Mountings, Blade and Mountings Full Polished. Ten Rivets, Plain White Handles.

Nos.	MF3	MF4	MF5	MF6	MF7
Inches	11x4¾	11½x4¾	12x4¾	11½x5	12x5
Per Dozen					All Sizes, $30.00

Packed—One-Third Dozen in a Box.

Browning Trowel.

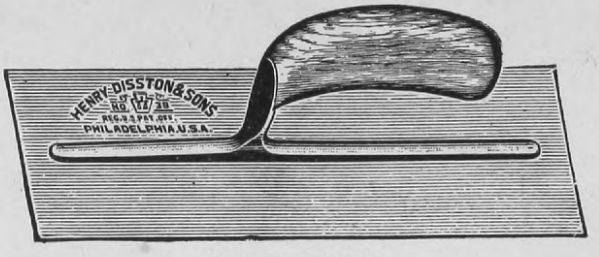
Marshalltown "Browning" Trowel, Blades all Ground Full Taper. Crucible Spring Steel. Flat Face. Hardened Mountings. Twelve Rivets. Blades and Mountings Full Polished, Plain White Handles.

Nos.	MB4	MB5	MB6	MB7
Inches	11½x4¾	12x4¾	11½x5	12x5
Per Dozen				All Sizes, $30.00

Packed—One-Third Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PLASTERING TROWELS

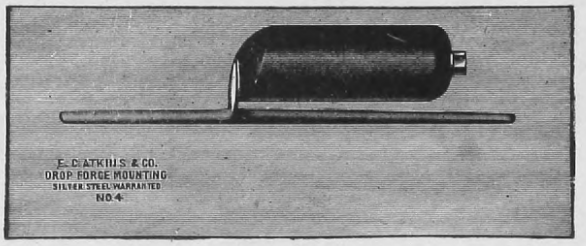


Finishing Trowel.

Disston's Plasterers' "Finishing" Trowels. Made of highest grade Crucible Steel; accurately ground blades extra thin, 24 gauge, slightly concaved. Extra long mounting, fastened to the blade with ten rivets. The handle is specially shaped and formed to fit the hand.

No. 38—Inches	11	11½	12
Per Dozen	$18.25	18.75	19.25

Packed—Half Dozen in a Box.



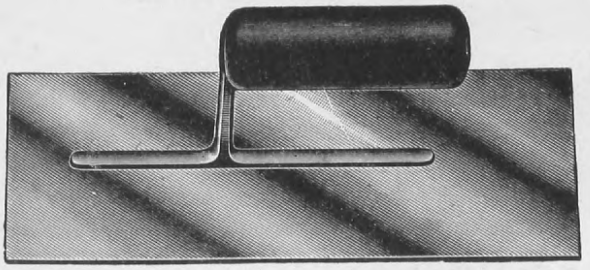
Finishing Trowel.

Atkins Silver Steel Plasterers' "Finishing" Trowels, Cast Steel Mounting with Ten Rivets. Handle is Ebony Finish; Nicely polished, beveled off on nose and fastened to shank with a hexagon nut.

No. 4—Inches	10½	11	11½	12
Per Dozen	24.50	25.50	26.75	28.00

Packed—Half Dozen in a Box.

PLASTERING TROWELS



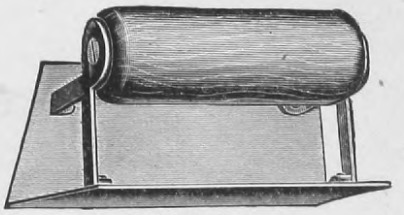
Iowa, Style of Handy.

Iowa and Handy Cast Steel Plastering Trowels

Inches	10	10½	11	11½
Iowa—Per Dozen	$6.50	7.00	7.50	8.00
Handy—Per Dozen	4.00	4.50	....

Packed—Quarter Dozen in a Box.

CORNER TROWELS



No. 65.

Iowa's Corner Trowel, made from good quality Steel. Malleable Mountings; Blades Full Polished, with very Sharp Angle. Hardwood Handles.

No.	**65**
Inches	6
Per Dozen	$7.50

Packed—Half Dozen in a Box.

POINTING TROWELS

Iowa, Cast Steel Pointing Trowels

Inches	4	4½	5	6
Per Dozen	$2.95	3.00	3.10	3.40

Packed—One Dozen in a Box.

Handy, Cast Steel Pointing Trowels

Inches	5½
Per Dozen	$1.50

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

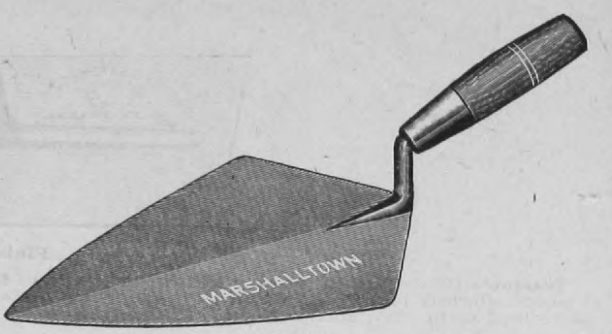
BRICK TROWELS

No. 21W.

Marshalltown "Expert" Wide Heel Brick Trowel, Forged from Best Quality Crucible Trowel Steel. Taper Ground, Light Blades, Oil Tempered, Full Polished. Hickory Handles.

No. 21W—Inches.....	10½x6	11x6	11½x6¼
Per Dozen.....	All Sizes, $17.00		

Packed—Half Dozen in a Box.



No. 19W.

Marshalltown "Philadelphia" Pattern Extra Wide Heel Brick Trowel, Forged from Highest Quality Crucible Trowel Steel. Full Taper Ground, and Highly Polished. Hickory Handles.

No. 19W—Inches ...	10½x5¼	11x5½	11½x5¾
Per Dozen	$17.25	17.50	17.75

Packed—Half Dozen in a Box.

Nos. 110 and 221.

Wm. Rose, Philadelphia Pattern Cast Steel Brick Trowels.

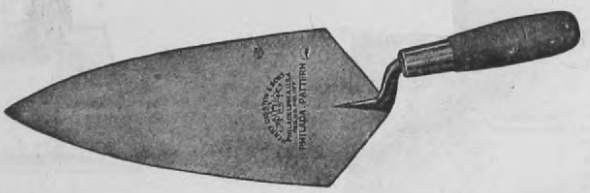
No. 110—Inches....	10½	11	11½	12
Per Dozen.....	$13.75	14.25	14.75	15.25

Packed—Half Dozen in a Box.

Wm. Rose, Philadelphia Pattern **Wide Heel, Cast Steel** Brick Trowels.

No. 221—Inches ...	10	10½	**11**	11½
Per Dozen.....	$13.25	13.75	**14.25**	**14.75**

Packed—Half Dozen in a Box.

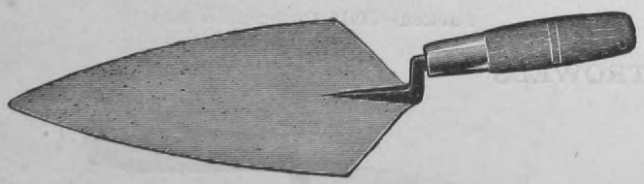


No. 10.

Disston, Philadelphia Pattern Cast Steel Brick Trowels

No. 10—Inches.....	10	10½	11	11½	12
Per Dozen.....	$11.00	11.50	12.00	12.50	13.00

Packed—Half Dozen in a Box.

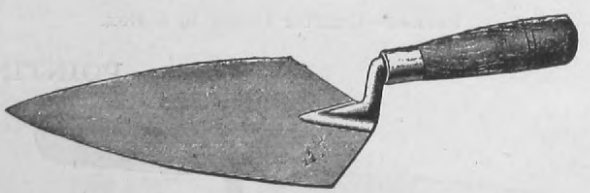


Iowa.

Iowa, London Pattern Cast Steel Brick Trowels.

Inches	10	10½	11	11½	12
Per Dozen	$7.25	7.50	7.75	8.00	8.25

Packed—Half Dozen in a Box.



Handy.

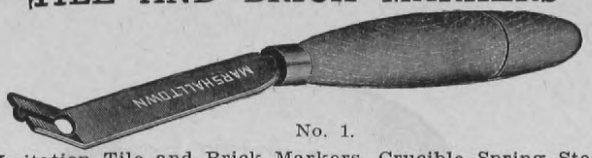
Handy, Cast Steel Brick Trowels.

Inches	10
Per Dozen	$2.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TILE AND BRICK MARKERS



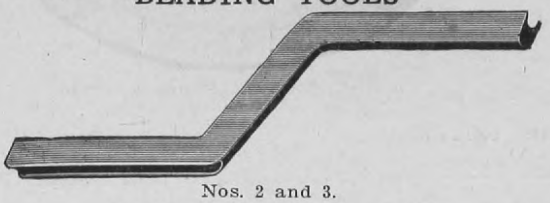
No. 1.

Imitation Tile and Brick Markers, Crucible Spring Steel, tempered, Black Enameled Handle. Cuts both ways so as to cut into corners. Groove is gauged to the proper depth.

No. 1—Tile and Brick Markers.....Per Dozen, $6.00

Packed—Half Dozen in a Box.

BEADING TOOLS



Nos. 2 and 3.

Tool Steel, both ends concave.

No. 2—Size ¼ and 5/16 inch.....Per Dozen, $4.50

No. 3—Size 5/16 and ⅜ inch.....Per Dozen, 4.50

Packed—Half Dozen in a Box.

BRICK JOINTERS

No. 402.

Tool Steel, Full Polished, ⅝ inch at center, ⅛ inch at points, 8 inches long. One end is round, other end diagonal.

No. 402—Masons' Brick Jointers.....Per Dozen, $6.00

Packed—Half Dozen in a Box.

BRICK CHISELS AND SETS

Nos. 55 to 85.

Brick Chisels

Drop Forged Tool Steel, Natural Finish, **Chisel Edge**, ⅞ inch Octagon Steel

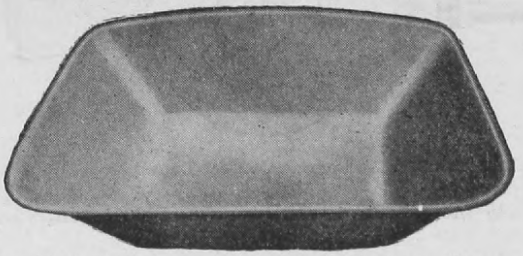
Nos.	55	65
Size, inches	4	4½
Weight each, pounds	1⅛	1¼
Per Dozen	$7.00	7.50

Brick Sets

Drop Forged Tool Steel, Natural Finish, **Bevel Edge**, ⅞ inch Octagon Steel

Nos.	75	85
Size, inches	4	4½
Weight each, pounds	1⅛	1¼
Per Dozen	$7.00	7.50

MORTAR TUBS



Made of Heavy Sheet Steel with a 5/16 inch rod around the top. Mortar will not adhere to them and they will not absorb water. They have no sharp corners and will outwear three wooden boxes.

Steel Mortar Tubs, 28 inches square on top, 17 inches square on bottom, 7 inches deep.....Each, $4.00

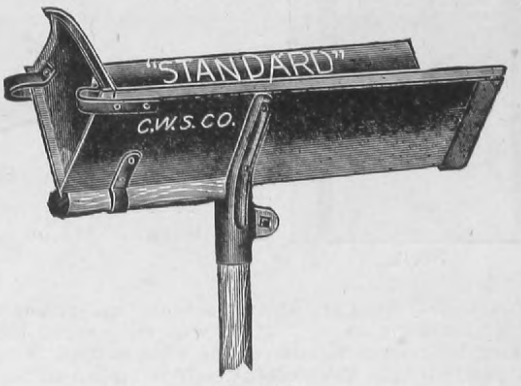
MORTAR HODS

No. 158.

Iron Clad Never Drip Steel Mortar Hods, made from one piece of Sheet Steel. Improved Socket Handle Fork and Wooden Shoulder Saddle.

No. 158—Size 24x11¾x12 inches, Weight each with Handle, 11 pounds.....Per Dozen, $26.00

BRICK HODS



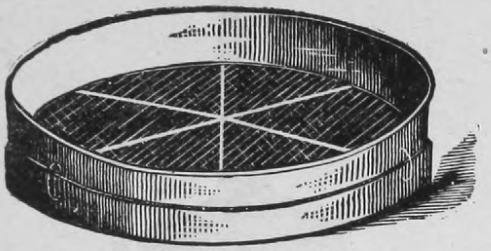
No. 162.

Standard Steel Brick Hods, made from one piece of Sheet Steel with double head end. Improved Socket Handle Fork and Wooden Shoulder Saddle.

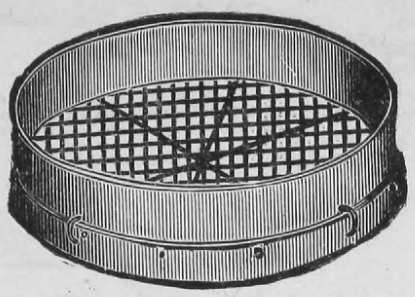
No. 162—Size 22x7x10 inches, Weight each with Handle, 8 pounds.....Per Dozen, $20.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SAND RIDDLES



No. 23. Farmers' Grade.



Nos. 25 to 27. Foundry Grade.

No. 23—Farmers' Grade, Iron Wire, Mesh Nos. 2, 4, 6, 8, 10 and 12.....Per Dozen, $ 7.00

No. 25—Foundry Grade, Steel Wire, Mesh Nos. 2, 4, 6, 8, 10 and 12.....Per Dozen, 11.50

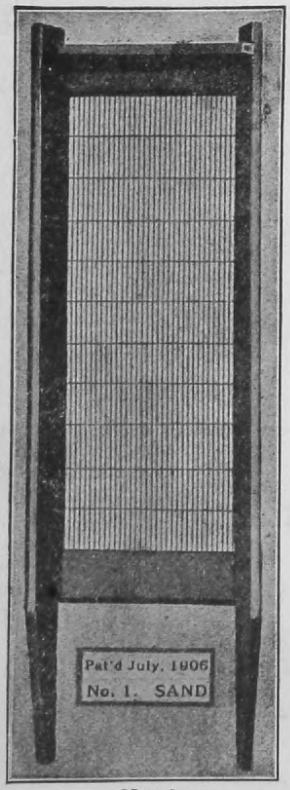
No. 26—Foundry Grade, G'lv'd Wire, Mesh Nos. 2, 4, 6, 8, 10 and 12.....Per Dozen, 14.00

No. 27—Foundry Grade, Brass Wire, Mesh Nos. 2, 4, 6, 8, 10 and 12.....Per Dozen, 36.00

Packed—Half Dozen in a Bundle.

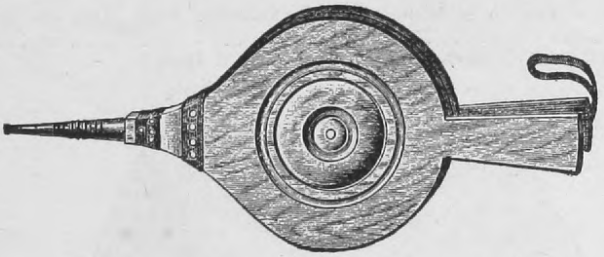
Note—In ordering Sand Riddles be sure and **Specify** Stock Number and the Number of Mesh desired.

SAND SCREENS



No. 1.

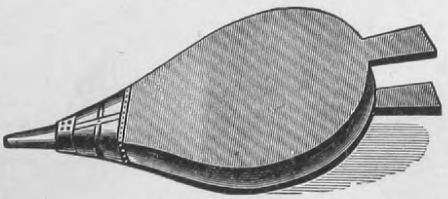
FRENCH PARLOR BELLOWS



Fine Leather, Assorted Colors, Brass Nose.

No. 16—6½ inch.....Per Dozen, $9.60

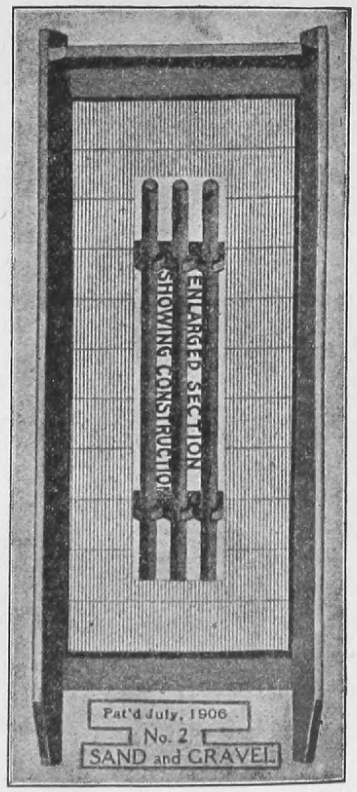
MOULDERS' BELLOWS



Extra Quality.

Inch	8	9	10	12	14	16
Per Dozen..	$16.00	18.00	20.00	26.00	32.00	36.00

SAND SCREENS



No. 2.

Union Steel Sand and Gravel Screens will screen more and last longer than any other make, their mesh is accurate and there is absolutely no sag. Each wire is swedged into cross-bar at intervals of about 4½ inches, the fingers of the cross-bar being bent or swedged over the wire, holding it securely in place. Frames are made of first class lumber, 1⅛ inches thick, painted red. The Screen itself is dipped in the best black asphaltum paint.

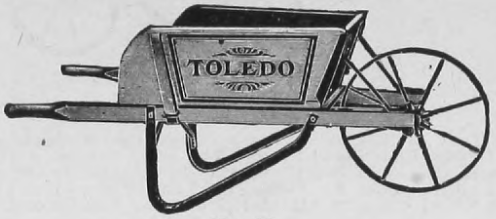
No. 1—Sand Screen, 23x72 inches, Mesh Nos. 2, 3, 4, 5 and 6.....Per Dozen, $58.50

No. 2—Sand and Gravel Screen, 29x72 inches, Mesh Nos. 2, 3, 4, 5 and 6.....Per Dozen, 70.00

Note—In ordering Screens, be sure and **Specify** Stock Number and Number of Mesh desired.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

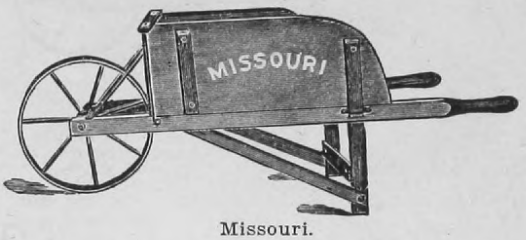
GARDEN BARROWS



No. 25.

The legs of this barrow are made of Angle Steel bent in such a shape as to form sockets for the side boards, notched out to prevent dirt accumulating in the sockets. Bottom and Front are made of 16 gauge Sheet Steel. Tray 28 inches long, 19½ inches wide at wheel end, 25 inches wide at handle end and 12 inches deep. Painted Red, striped and varnished.

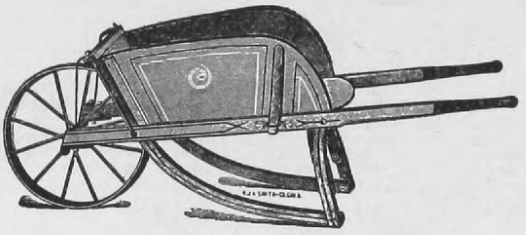
No. 25—With 20 inch Steel Wheel....Per Dozen, $66.00



Missouri.

Made to meet the demand for strong full sized Garden Barrow at a reasonable price. Bottom is put on crosswise and well nailed to the handles making a rigid frame. Tray 28 inches long, 19 inches wide at wheel end, 25 inches wide at handle end and 12 inches deep. Painted Red.

Missouri, with 20 inch Steel Wheel....Per Dozen, $49.50

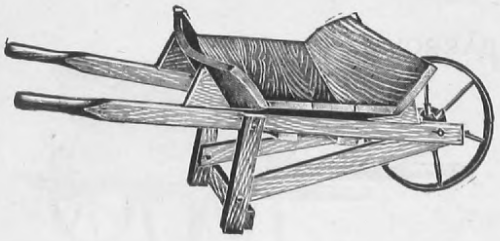


Nos. 2 and 23.

Globe "Garden" Barrows, with 20 inch **Steel** Wheels, Painted and Striped, Bottom matched and glued.
Medium Size, Tray 30 inches long, 19 inches wide at wheel end, 24 inches wide at handle end and 12 inches deep.

No. 2—With Steel Wheel, ¼x1½ inch Tire.....Per Dozen, $69.00
No. 23—With Steel Wheel, ¼x3 inch Tire.....Per Dozen, 72.00

WHEEL BARROWS



No. 01.

Common Bolted Railroad Wheel Barrow, Bent Tray, Legs well braced. Tray is 29 inches long on top, 34 inches wide, 8 inches deep at wheel end and 10 inches deep at handle end. Handles are 1½x2x56 inches.

No. 01—With Steel Wheel.....Per Dozen, $36.00

Nos. 03 and 33.

Michigan Jr. Wheel Barrows, Full Bolted, Barrel Tray, Legs well braced. Staves are held in place by two long steel bolts that pass clear through each stave. Tray is 33 inches long, 27 inches wide and 7 inches deep at its greatest depth.

No. 03—With Steel Wheel, ¼x1¼ inch Tire.. .....Per Dozen, $34.50
No. 33—With Steel Wheel, ¼x3 inch Tire.... .....Per Dozen, 42.00

Extra Steel Wheels for Nos. 01 and 03 Barrows.....Per Dozen, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL TRAY WHEEL BARROWS

No. 100.

The Tray of this barrow is pressed from a single piece of No. 18 Gauge Best Sheet Steel. The edge is turned over a 5/16 inch Steel Rod, which stiffens the tray and gives it a round finished edge. Tray 33 inches long, 32 inches wide, 11 inches deep at wheel end and 7½ inches deep at handle end.

Per Dozen

No. 100—With 16 inch Steel Wheel..... $66.00

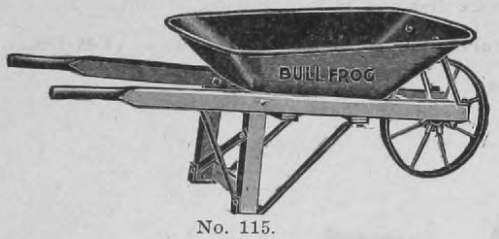
No. 30.

The Tray of this barrow is pressed from a single piece of No. 16 Gauge Best Sheet Steel. The edge is turned over a 5/16 inch Steel Rod, which stiffens the tray and gives it a round finished edge. Tray 33 inches long, 32 inches wide, 11 inches deep at wheel end and 7½ inches deep at handle end.

Per Dozen

No. 30—With 16 inch Steel Wheel..... $82.50

CONTRACTORS' STEEL TRAY BARROWS



No. 115.

The Tray of this barrow is pressed from one piece of No. 14 Gauge Best Sheet Steel, beaded on the top edge. The wooden legs are well bolted to the frame, a heavy iron brace extending around the bottom of the legs and bolted to the handles. Legs are also cross braced with iron braces, to prevent racking. Tray is 32 inches long, 28 inches wide, 7 inches deep at wheel end and 5 inches deep at handle end.

Per Dozen

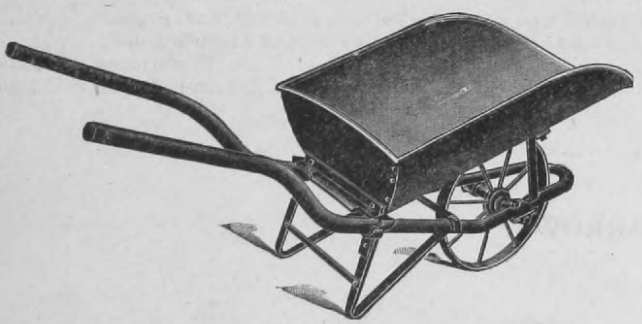
No. 115—With 16 inch Steel Wheel..... $86.25

No. 50.

The Tray of this barrow is pressed from one piece of No. 16 Gauge Best Sheet Steel, beaded on the top edge. Has two angle iron cross pieces under the tray and angle iron legs. The Handles extend forward to permit dumping over the wheel. Tray is 37½ inches long, 29½ inches wide, 9¼ inches deep at wheel end and 6¾ inches deep at handle end.

Per Dozen

No. 50—With 17 inch Steel Wheel..... $89.25



No. H21.

LANSING CONTRACTORS' TUBULAR STEEL BARROWS

For handling brick, crushed stone, sand, gravel, mortar or cement. Tray is made of No. 16 Gauge Steel. Load is dumped over wheel. Length over all 65½ inches. Width 23 inches, Depth 13 inches, Height at Nose 23½ inches. Hangs just right for dumping easily. Capacity 4 cubic feet.

Each

No. H21—With 16 inch Steel Wheel..... $12.00

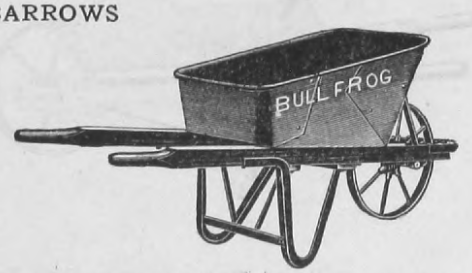
STEEL TRAY MORTAR BARROWS

No. 55.

The Tray of this barrow is made of best Sheet Steel, beaded on top edge. Handles extend forward to permit dumping over the wheel. Tray is 36 inches long, 24 inches wide, 14 inches deep at wheel end and 8 inches deep at handle end. Legs are made of angle iron, well braced and bolted to the frame.

Per Dozen

No. 55—With 17 inch Steel Wheel..... $100.50



No. 65.

The Tray of this barrow is made of No. 15 Gauge Steel with Heavy Rod rolled in top edge. Handles are of Hardwood and legs and braces of angle iron. Tray is 34 inches long, 28 inches wide, 17½ inches deep at wheel end and 8 inches deep at handle end. Extension Handles fitted with angle iron wheel guard.

Per Dozen

No. 65—With 17 inch Steel Wheel..... $105.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Nos. 4 to 10.

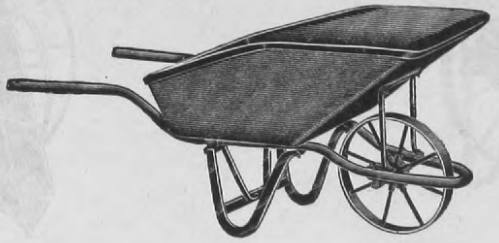
TUBULAR STEEL WHEEL BARROWS

Made entirely of Steel and Iron. Handles are made of one inch tubing bent around in front of the wheel to permit of forward dumping. Legs are made of Angle Iron, well braced and bolted to the frame. Trays are stamped from one piece of Sheet Steel and beaded on the top edge. Fitted with Steel Wheels, having Eight ½ inch Spokes, 7 inch Hubs and ⅝ inch Axles.

Nos.	Gauge of Steel in Tray	Dimensions of Tray, inches				Capacity Cubic Feet	Diameter of Wheel, Inches	Size of Tire Inches	Each
		Length on Top.	Width on Top	Depth at Wheel	Depth at Handle				
4	15	32	28	7	5	3	17	1½x⅜	$ 8.25
4½	14	32	28	7	5	3	17	1½x⅜	9.00
5	15	37	29½	9	6½	4	17	1½x⅜	9.50
7	14	37	29½	9	6½	4	17	1½x⅜	10.00
9	12	37	29½	9	6½	4	17	1½x⅜	11.00
10	13	42½	32½	11½	8	6	17	1¾x⅜	13.50

Extra Parts for Nos.....	4	4½	5	7	9	10
Extra Trays .....Each,	$4.00	4.50	4.90	5.25	5.75	6.50
Extra Wheels.....Each,	2.25	2.25	2.25	2.25	2.50	3.00

SPECIAL COAL BARROWS



No. 52SC.

Top Bound with ⅛x1⅛ inch Bar Iron—Capacity 350 lbs. Hard or 300 lbs. Soft Coal.

This Barrow is made of Steel and Iron and specially designed for the handling of coal. Handles of one inch tubing bent around in front of wheel for forward dumping, and with double bend in frame, placing wheel well back under the load. Tray made of No. 16 Gauge Steel, 44 inches long over all, 27 inches wide at handles, 20 inches at wheel. Bottom 20x20 inches. Greatest depth of Tray 15½ inches, at handles 10 inches. Slant of Front 25 inches.

No. 52SC—With 17 inch Steel Wheel, ⅜x1¾ inch Tire, ⅝ inch Axle.....Each, $11.25

No. 25SC.

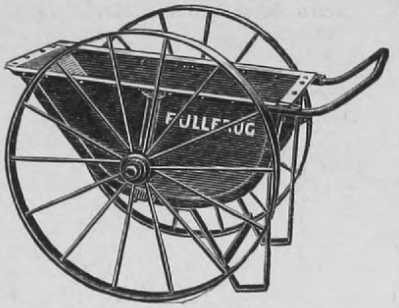
Carrying Capacity 300 lbs. of Hard Coal or 250 lbs. of Soft Coal.

This Barrow is especially designed for the handling of coal. The front is so constructed that the coal can be dumped forward into a basement window. Handles 1¾x2¼x66 inches, Steel Tipped for forward dumping. Tray made of No. 16 Gauge Steel, 42½ inches long and 26 inches wide on top and 18x21 inches on the bottom. Depth of Tray at handles 8½ inches, Slant of Front 23 inches. Angle Iron Legs and Braces.

No. 25SC—With 17 inch Steel Wheel, ⅜x1¾ inch Tire, ½ inch Spokes, ⅝ inch Axle.....Each, $9.75

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CONCRETE CARTS

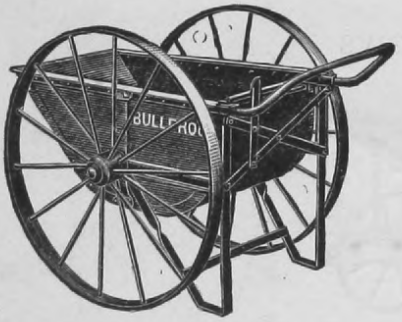


No. 1.

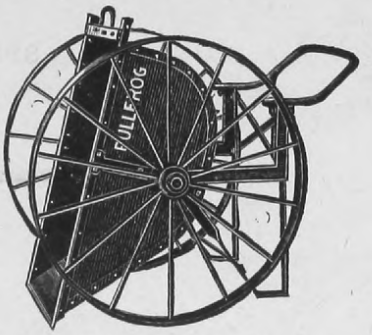
Capacity—5 Cubic Feet of Wet Concrete or 6 Cubic Feet of Dry Material.

The strongest Concrete Cart on the market. Tray is made of No. 14 Gauge Steel, reinforced with angle iron entirely around the bottom and top edges and is 36 inches long, 21 inches wide and 16 inches deep. Capacity 5 cubic feet of wet Concrete. Length over all 51 inches, width over all 36 inches. Fitted with 36 inch Steel Wheels, with ⅜x2¼ inch Tires, fourteen ½ inch Round Spokes, Cast Iron Hubs and 1½ inch Axles.

No. 1—Concrete Carts, Weight 200 pounds.....Each, $32.25



No. 3.



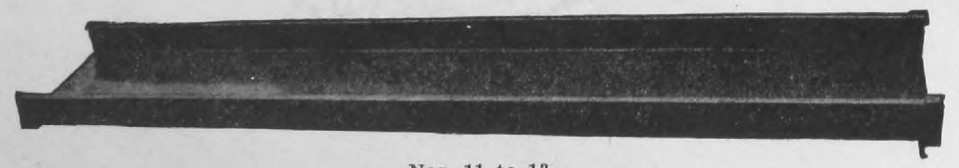
Cut showing Cart dumped.

Capacity—5 Cubic Feet of Wet Concrete or 6 Cubic Feet of Dry Material.

This Cart is so constructed that by releasing a strong spring clip the tray dumps, the handles and legs remaining stationary, preventing the cart from running back on the man handling the cart. Tray is made of No. 14 Gauge Steel, reinforced with angle iron entirely around the bottom and top edges, and is 36 inches long, 21 inches wide and 16 inches deep. Capacity 5 cubic feet of wet Concrete. Length over all 51 inches, Width over all 36 inches. Fitted with 36 inch Steel Wheels, with ⅜x2½ inch Tires, Fourteen ½ inch Round Spokes, Cast Iron Hubs and 1½ inch Malleable Axles.

No. 3—Concrete Carts, Weight 210 pounds.....Each, $36.00

COAL CHUTES



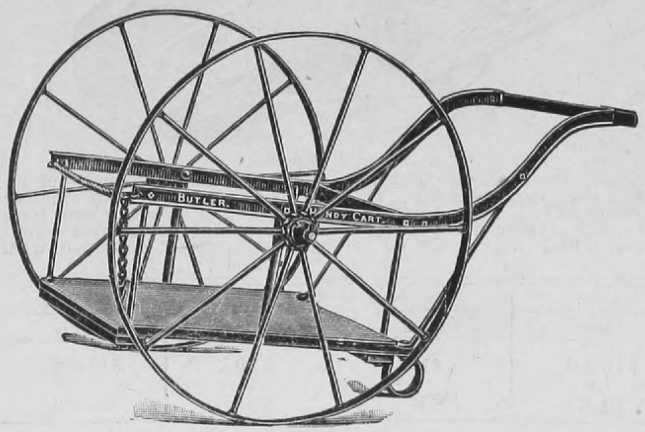
Nos. 11 to 13.

Tapered Wagon Chutes, made of best quality Sheet Steel, with Angle Steel Frame, Ends heavily banded. 18 inches wide at top, 12 inches wide at bottom.

Nos.	11	12	13
Length, feet	8	10	12
Each	$7.75	9.95	11.75

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

HAND CARTS



No. 101.

BUTLER HAND CARTS

Made of Steel with Hardwood Platform; axle extends under the entire body and supports same. Size of platform 28x32 inches, Diameter of wheels 36 inches, width between tracks 36 inches, extreme width from outside to outside of hub 42 inches. This Cart is very desirable for handling grain, fertilizer, vegetables, fruit, merchandise, grass or leaves. The platform is hung low and by tilting the cart and using the handle for a lever, a barrel or package can be easily picked up. Will sustain a load of 500 pounds. Finished in Red with Green Wheels.

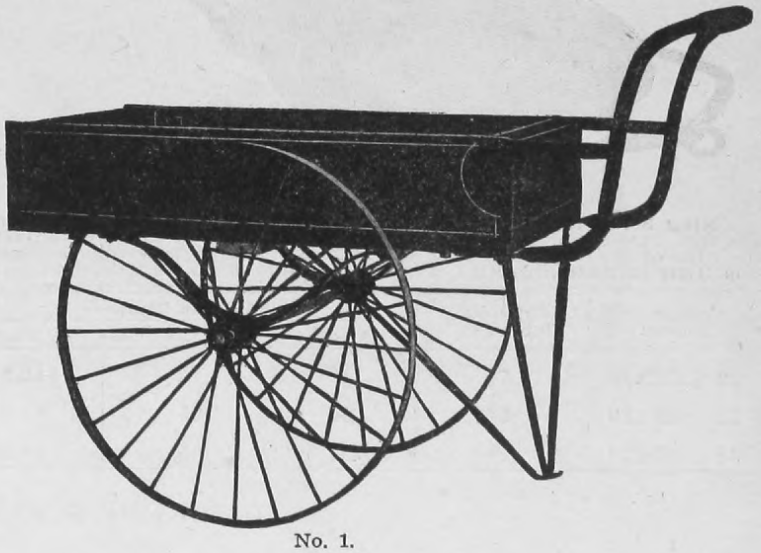
No. 101—With 1¼ inch Tires, Weight 95 pounds
.....Each, $12.00

No. 103—With 3 inch Tires, Weight 120 pounds
.....Each, 14.25

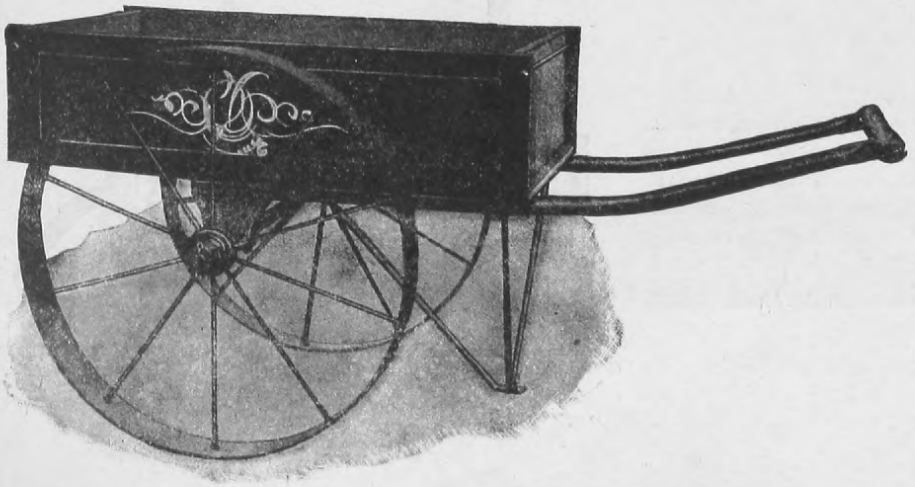
PIONEER HAND CARTS

Size of Body: 37 inches long, 20 inches wide and 8 inches deep. Fitted with Steel Wheels 26 inches in diameter, with 24 No. 8 Wire Spokes and 1⅛x$^{9}/_{32}$ inch Half Oval Tires. Has ¾ inch Axle and Two Leaf Springs. Edges of body are ironed, sides and end boards are detachable.

No. 1—Pioneer Push Carts, Weight 61 pounds.....Each, $10.00



No. 1.



Handy.

HANDY HAND CARTS

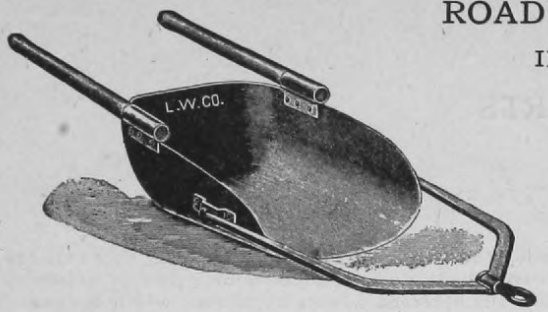
This Cart is more convenient than a wheel barrow, carries a larger load and costs but little more. The wheels having a large tread permits it being run over soft ground easily and prevents cutting up the lawn. Size of Box: 22 inches wide, 40 inches long and 10½ inches deep. Size of Rig over all: 32½ inches wide, 64 inches long and 30½ inches high. **Steel Wheels** 24 inches in diameter, fitted with 2x$^{5}/_{16}$ inch Tires, ⅝ inch Oval Spokes, 5 inch Hub and ⅞ inch Round Steel Axle. Painted Bright Red and varnished.

Handy Hand Carts, weight 100 pounds.....Each, $12.00

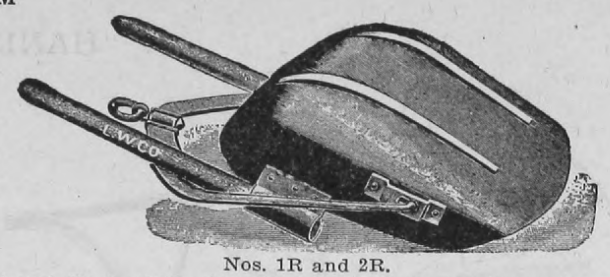
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ROAD SCRAPERS

INGHAM



Nos. 1 and 2.

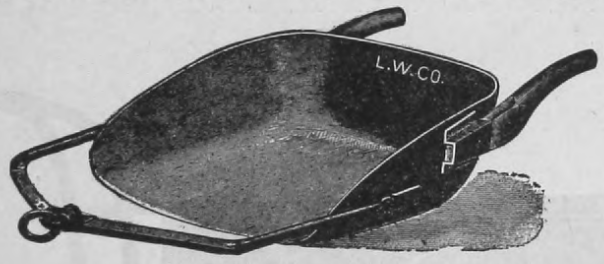


Nos. 1R and 2R.

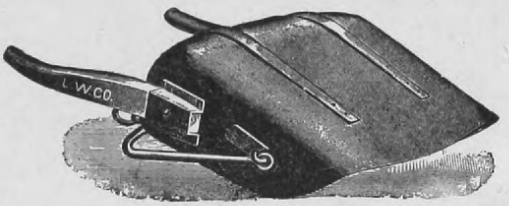
Ingham Scrapers are pressed from a heavy plate of Hardened Steel of the toughest quality, shaped throughout on scientific principles which utilize the great strength of the steel to the best advantage, making these scrapers most efficient for the hard work for which they are built. They fill, draw and dump easily. **No. 1** is adapted for heavy grading and long hauls. **No. 2** is recommended for all railroad, township and farm work and is also used on vessels for righting up cargoes of ore. **Nos. 1R and 2R** are fitted with ½x1½ inch Steel Runners., which fit closely to the bottom and are fastened with countersunk rivets.

Size Inches	Capacity Cubic Feet	Without Runners.			With Runners		
		Nos.	Weight, pounds	Each	Nos.	Weight, pounds	Each
33½x32x11½	7	1	102	$16.50	1R	110	$17.00
31½x29x11½	5	2	94	14.60	2R	102	15.10

KING



Nos. 1K to 3K.



Nos. 1KR to 3KR.

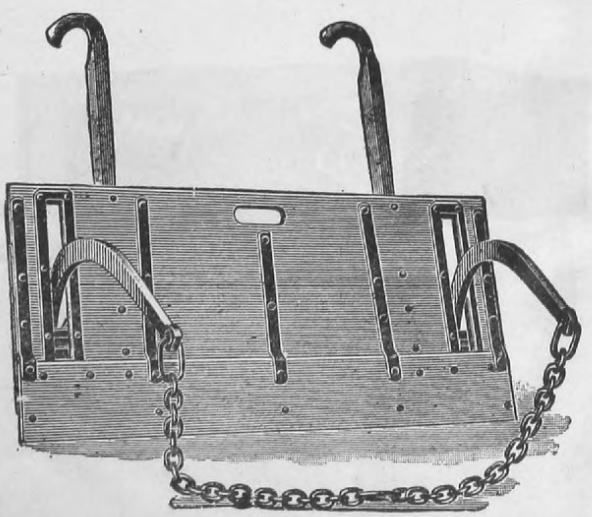
King Scrapers fill the demand for a scraper that will do all regular light work and still cost less than others. They are the same shape as the Ingham shown above but are not as reliable. The flange around the top made by turning back the edge of the bowl reinforces and stiffens the bowl as well as adding much to the strength and capacity of the scraper. **Nos. 1KR to 3KR** are fitted with Steel Runners fastened with countersunk rivets.

Size Inches	Capacity Cubic Feet	Without Runners			With Runners		
		Nos.	Weight, Pounds	Each	Nos.	Weight, Pounds	Each
33½x32x10	7	1K	72	$12.50	1KR	82	$13.00
32 x28x10	5	2K	65	11.60	2KR	75	12.10
32 x25x10	3	3K	55	10.50	3KR	65	11.00

DITCHING SCRAPERS

Especially adapted for clearing out and filling ditches, leveling roads, barnyards and uneven places. Made of Seasoned Hardwood with a Special Steel Blade 48 inches long, 7 inches wide and 3/16 inch thick. The Scrapers are well ironed and bolted, and the hounds are of 1¾x⅝ inch Steel with ⅜ inch Cable Chain.

Doan Ditching Scrapers.....Each, $8.25



Doan.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHOVELS AND SPADES

BUHL EXTRA

One Piece Solid "High Carbon" Steel. The Blade and Straps are without Weld or Rivet. Our Highest Grade.

A Perfect Tool with Thick Center, Carefully Tempered. Extra Select Handles, Finely Finished. Handles 26 inches long.

No. 112.

Square Point. Plain Back. Socket Strap.

No. 112— "D" Handle Shovels, High Carbon Steel, **Polished**, Size 2, 9¾x12 inches.....Per Dozen, $26.00
No. 114—**Long** Handle Shovels, High Carbon Steel, **Polished**, Size 2, 9¾x12 inches.....Per Dozen, 26.00

Packed—Half Dozen in a Bundle, Wrapped in Burlap full length.

RAILROAD SHOVELS

No. 322—**Buhl** "D" Handle, Heavy High Carbon Steel, **Black**, Size 2, 9¾x12 inches.....Per Dozen, $25.00
No. 2 H. B.—**Hussey Binns**—"D" Handle, Heavy Crucible Steel, **Black**, Size 2, 9¾x12 inches....Per Dozen, 27.00

Packed—Half Dozen in a Bundle.

BUHL EXTRA

No. 115.

Round Point. Plain Back. Socket Strap.

No. 113 —"D" Handle Shovels, High Carbon Steel, **Polished**, Size 2, 9½x12½ inches.....Per Dozen, $26.00
No. 115 —**Long** Handle Shovels, **Full Lift**, High Carbon Steel, **Polished**, Size 2, 9½x12½ in..Per Dozen, 26.00
No. 115½—**Long** Handle Shovels, **Half Lift**, High Carbon Steel, **Polished**, Size 2, 9½x12½ in...Per Dozen, 26.00
No. 115L—**Long** Handle Shovels, **Light Weight**, High Carbon Steel, **Pol.**, Size 2, 9½x12½ in...Per Dozen, 26.00

Packed—Half Dozen in a Bundle. Wrapped in Burlap full Length.

No. 162.

Square Point. Plain Back. Socket Strap.

No. 162— "D" Handle Spades, High Carbon Steel, **Polished**, Size 2, 7¼x12 inches.....Per Dozen, $26.00
No. 164—**Long** Handle Spades, High Carbon Steel, **Polished**, Size 2, 7¼x12 inches.....Per Dozen, 26.00

Packed—Half Dozen in a Bundle. Wrapped in Burlap full Length.

BUHL SONS CO.

One Piece Solid Cast Steel. The Blade and Straps are without Weld or Rivet. Our Medium Grade.

Superior Tool with Thick Center, Carefully Tempered, Selected Handles, Well Finished. Handles 26 inches long.

No. 302.

Square Point. Plain Back. Socket Strap.

No. 302— "D" Handle Shovels, Solid Cast Steel, **Black**, Size 2, 9¾x12 inches.....Per Dozen, $21.50
No. 312— "D" Handle Shovels, Solid Cast Steel, **Polished**, Size 2, 9¾x12 inches.....Per Dozen, 24.00
No. 314—**Long** Handle Shovels, Solid Cast Steel, **Polished**, Size 2, 9¾x12 inches.....Per Dozen, 24.00

Packed—Half Dozen in a Bundle.

No. 315.

Round Point. Plain Back. Socket Strap.

No. 313— "D" Handle Shovels, Solid Cast Steel, **Polished**, Size 2, 9½x12½ inches.....Per Dozen, $24.00
No. 315—**Long** Handle Shovels, **Full Lift**, Solid Cast Steel, **Polished**, Size 2, 9½x12½ inches..Per Dozen, 24.00

Packed—Half Dozen in a Bundle.

No. 362.

Square Point. Plain Back. Socket Strap.

No. 362— "D" Handle Spades, Solid Cast Steel, **Polished**, Size 2, 7¼x12 inches.....Per Dozen, $24.00
No. 364—**Long** Handle Spades, Solid Cast Steel, **Polished**, Size 2, 7¼x12 inches.....Per Dozen, 24.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SHOVELS AND SPADES

DETROIT SHOVEL CO.

Our Popular Priced One-Piece Solid Steel Plain Back Shovels and Spades.

No. 512.

Square Point. Plain Back. Plain Strap.

No. 512—"D" Handle Shovels, Cast Steel, **Polished,** Size 2, 9¾x12 inches.....Per Dozen, $21.00

Packed—Half Dozen in a Bundle.

No. 513.

Round Point. Plain Back. Plain Strap.

No. 513 —"D" Handle Shovels, Cast Steel, **Polished,** Size 2, 9½x12½ inches.....Per Dozen $21.00

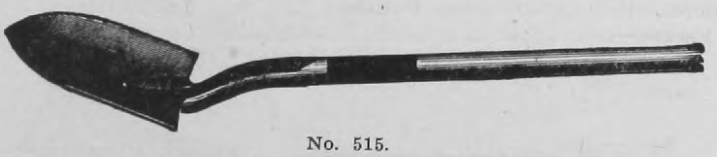
Packed—Half Dozen in a Bundle.

No. 514.

Square Point. Plain Back. Plain Strap.

No. 514—Long Handle Shovels, Cast Steel, **Polished,** Size 2, 9¾x12 inches.....Per Dozen, $21.00

Packed—Half Dozen in a Bundle.



No. 515.

Round Point. Plain Back. Plain Strap.

No. 515 —Long Handle Shovels, **Full Lift,** Cast Steel, **Polished,** Size 2, 9½x12½ inches.....Per Dozen, $21.00
No. 515½—Long Handle Shovels, **Half Lift,** Cast Steel, **Polished,** Size 2, 9½x12½ inches.....Per Dozen, 21.00
No. 515L —Long Handle Shovels, **Light Weight,** Cast Steel, **Polished,** Size 2, 9½x12½ inches.....Per Dozen, 21.00

Spade Handle, or Flat Lift.

No. 516—Long Handle Shovels, Cast Steel, **Polished,** Plain Back .....Per Dozen, 21.00

Packed—Half Dozen in a Bundle.

No. 562.

Square Point. Plain Back. Plain Strap.

No. 562—"D" Handle Spades, Cast Steel, **Polished,** Size 2, 7¼x12 inches.....Per Dozen, $21.00

Packed—Half Dozen in a Bundle.

No. 564.

Square Point. Plain Back. Plain Strap.

No. 564—Long Handle Spades, Cast Steel, **Polished,** Size 2, 7¼x12 inches .....Per Dozen, $21.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHOVELS AND SPADES

OLIVER AMES

The Blade and Strap are Swede Steel with Crucible Cast Steel Edge.

No. 212.

Square Point. Plain Back. Plain Strap.

No. 212—"D" Handle Shovels, Crucible Steel, **Polished**, Size, 2, 9¾x12 inches.....Per Dozen, $30.40
No. 214—Long Handle Shovels, Crucible Steel, **Polished**, Size 2, 9¾x12 inches.....Per Dozen, 30.40

Packed—Half Dozen in a Bundle.

No. 215.

Round Point. Plain Back. Plain Strap.

No. 213—"D" Handle Shovels, Crucible Steel, **Polished**, Size 2, 9½x12½ inches.....Per Dozen, $32.30
No. 215—Long Handle Shovels, Crucible Steel, **Polished**, Size 2, 9½x12½ inches.....Per Dozen, 30.40

Packed—Half Dozen in a Bundle.

No. 262.

Square Point. Plain Back. Plain Strap.

No. 262—"D" Handle Spades, Crucible Steel, **Polished**, Size 2, 7¼x 12 inches.....Per Dozen, $30.90
No. 264—Long Handle Spades, Crucible Steel, **Polished**, Size 2, 7¼x12 inches.....Per Dozen, 30.90

Packed—Half Dozen in a Bundle.

H. M. MYERS

No. S112.

Square Point. Solid Socket and Shank.

No. S112—"D" Handle Shovels, High Carbon Steel, **Polished**, Size 2, 9½x11¾ inches.....Per Dozen, $28.00

Packed—Half Dozen in a Bundle.

No. S115.

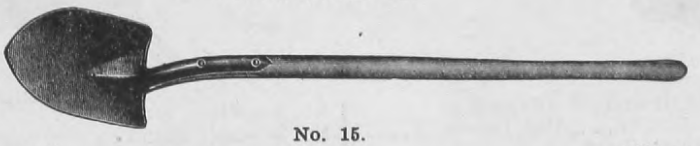
Round Point. Solid Socket and Shank.

No. S115—Long Handle Shovels, High Carbon Steel, **Polished**, Size 2, 9¼x11¾ inches.....Per Dozen, $28.00

Packed—Half Dozen in a Bundle.

BOY SCOUT SHOVELS AND SPADES

"Detroit Shovel Co."



No. 15.

"Spades"

Square Point. Plain Back. Plain Strap.

No. 62—Boys, Malleable "D" Handle **Spades**, Cast Steel, **Polished**, Size 6½x9½ inches, Length 34 inches over all.....Per Dozen, $17.00

Packed—Half Dozen in a Bundle.

"Shovels"

Round Point. Plain Back. Plain Strap.

No. 15—Boys, Long Handle **Shovels**, Cast Steel, **Polished**, Size 7¼x9½ inches, Length 45½ inches over all .....Per Dozen, $17.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

VATERLAND HEDGE AND GARDEN SPADES

No. 163.

Diamond Point. Plain Back. Plain Strap.

No. 163—"D" Handle Spades, High Carbon Steel, **Polished**, Size 2, Blades Taper from 7½x7⅛ inches in width and are 12½ inches long.....Per Dozen, $.....

Packed—Half Dozen in a Bundle.

STUMP SPADES

No. 2016.

No. 2016—Hadwin **Stump** and Drain Spade, Narrow Tapering Curved Solid Steel Blade, 4¼ inches at Step, 3½ inches at Point, 16 inches long; **Polished**, Plain Back, Plain Strap, "D" Handle.....Per Dozen, $27.00

Packed—Half Dozen in a Bundle.

DITCHING SPADES

Nos. 1814 to 5818.

Buhl Extra High Carbon Steel, **Polished**, Blade 5¾ inches at Step, 6⅜ inches at Point, Plain Back, **Socket** Strap.

Nos.	**1814**	**1816**	**1818**
Length of Blade, inches	14	16	18
Per Dozen	$31.50	32.50	33.00

Detroit Shovel Co., Cast Steel, **Polished**, Blade 5¾ inches at Step, 6⅜ inches at Point, Plain Back, **Socket** Strap.

Nos.	**5814**	**5816**	**5818**
Length of Blade, inches	14	16	18
Per Dozen	$26.00	27.00	28.00

Packed—Half Dozen in a Bundle.

DRAIN SPADES

Nos. 1914 to 5918.

Buhl Extra High Carbon Steel, **Polished**, Blade 5½ inches at Step, 4½ inches at Point, Plain Back, **Socket** Strap, Round Point.

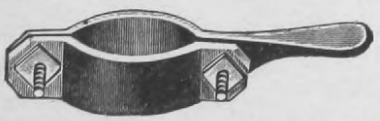
Nos.	**1914**	**1916**	**1918**
Length of Blade, inches	14	16	18
Per Dozen	$31.50	32.50	33.00

Detroit Shovel Co., Cast Steel, **Polished**, Blade 5½ inches at Step, 4½ inches at Point, Plain Back, **Socket** Strap, Round Point.

Nos.	**5914**	**5916**	**5918**
Length of Blade, inches	14	16	18
Per Dozen	$26.00	27.00	28.00

Packed—Half Dozen in a Bundle.

PERFECT SPADE STEPS

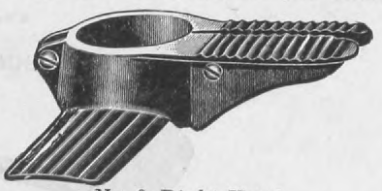


No. 1.

No. 1—Made from Malleable Iron and adapted to all spades.....Per Dozen, $1.80

Packed—In Open Stock.

PICKING SPADE STEPS



No. 2. Right Hand.

No. 2—Right Hand .....Per Dozen, $5.50

No. 3—Left Hand .....Per Dozen, 5.50

Packed—In Open Stock.

Note.—Nos. 2 and 3 are made of malleable iron and may be attached to any spade. They give the user a firm convenient foot-hold on the front of the spade, enabling him to throw his weight on the spade with his foot instead of his arm when cutting down side of ditch. They also have a broad plate resting on spade step plate preventing the foot from slipping. preserving the boot sole and doing away with cumbersome plate worn on the foot.

Made of malleable iron and can be attached or detached at pleasure.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MOULDERS' OR CONCRETE SHOVELS

No. 5342.

Iron Grip.

Square Point, Size 2, 9¾x12 inches.

No. 1142—Buhl Extra, High Carbon Steel, **Polished,** Plain Back, Socket Strap.....Per Dozen, $25.50
No. 5342—Detroit Shovel Co., Cast Steel, **Polished,** Plain Back, Plain Strap.....Per Dozen, 21.00
No. 5442—Detroit Shovel Co., Iron Grip, Cast Steel, **Polished,** Plain Back, Plain Strap.....Per Dozen, ...

Packed—Half Dozen in a Bundle.

SAND SHOVELS

No. 524 and 526.

Square Point, Plain Back, Plain Strap.

No. 524—Detroit Shovel Co., Cast Steel, **Polished,** Size 4, 10¾x12¾ inches.....Per Dozen, $23.50
No. 526—Detroit Shovel Co., Cast Steel, **Black,** Size 6, 11¾x14 inches.....Per Dozen, 25.00

Packed—Half Dozen in a Bundle.

SAND, GRAVEL AND CRUSHED STONE SCOOPS

No. 832.

Round Mouth Sand, Gravel or Crushed Stone Scoop. Made of Steel specially adapted for handling sand and gravel. Good Handle, Medium Weight and well balanced. Blade is 12½ inches wide and 15 inches long. Hollow Back Pattern.

No. 832—"D" Handle Sand and Gravel Scoop, Black Finish .....Per Dozen, $20.00

Packed—Half Dozen in a Bundle.

COAL SHOVELS

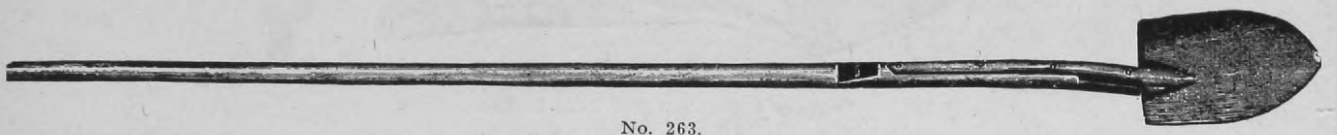
Nos. 631 to 633.

No. 631—Michigan, Size 1, Cast Steel, **Half Polished,** Blade 13½x13¾ inches, Hollow Back Pattern.....Per Dozen, $20.50
No. 632—Michigan, Size 2, Cast Steel, **Half Polished,** Blade 14¼x14¾ inches, Hollow Back Pattern.....Per Dozen, 21.50
No. 633—Michigan, Size 3, Cast Steel, **Half Polished,** Blade 14¾x15¼ inches, Hollow Back Pattern.....Per Dozen, 23.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TELEGRAPH SHOVELS



No. 263.

No. 263—Buhl Sons Co. Telegraph Shovel, Solid Cast Steel, **Black**, Plain Back, Socket Strap, 8 foot Handle ..... Per Dozen, $40.00

Packed—Half Dozen in a Bundle.

TELEGRAPH SPOONS

No. 256.

No. 256—Telegraph Spoon, Cast Steel, **Black**, Socket Strap, Riveted, 8 Foot Handle..... Per Dozen, $42.00

Packed—Half Dozen in a Bundle.

DRAIN CLEANERS

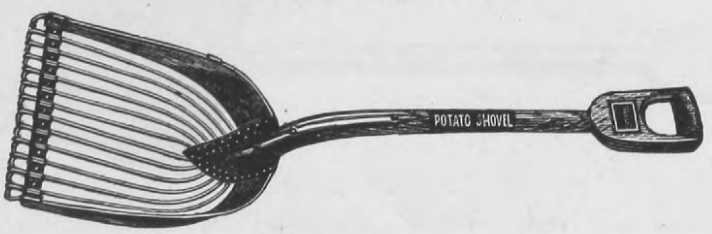
Nos. ½ to 4.

Champion, Cast Steel, Concave, Adjustable to push or pull.

Nos.	**½**	**1**	**2**	**3**	**4**
Size of Blade, inches	3x15	4x15	5x15	6x15	7x15
Per Dozen	$18.00	18.00	18.50	19.00	19.50

Packed—Quarter Dozen in a Bundle.

POTATO SCOOPS



No. 4.

No. 4—Reddick All Steel Wire Potato Scoops, Steel Sides, Patent Socket Strap; light, strong and durable; 13½x16 inches ..... Per Dozen, $22.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GRAIN AND COAL SCOOPS

BUHL EXTRA

Nos. 102 to 110.

Buhl Extra, Eastern Pattern, High Carbon Steel, **Hollow Back** Pattern, **Full Polished.** Extra Fine Finish Handles

Nos.	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**
Size	2	3	4	5	6	7	8	9	10
Width at Mouth, inches	11	11¼	11½	12	12¼	13¼	13½	14¼	15
Length of Blade, inches	15	15½	16	16½	17	17	17¼	18	18¾
Per Dozen	$29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.50	38.00

Packed—Half Dozen in a Bundle. Wrapped in Burlap, full length.

BUHL SONS CO.

Nos. 094 to 0150.

Buhl Sons Co., Eastern Pattern, **Thick Center,** Solid Cast Steel, **Hollow Back** Pattern. **Half** Polished.

Nos.	**094**	**095**	**096**	**097**	**098**	**099**	**0150**
Size	4	5	6	7	8	9	10
Width at Mouth, inches	11½	12	12¼	13¼	13½	14¼	15
Length of Blade, inches	16	16½	17	17	17¼	18	18¾
Per Dozen	$26.50	27.50	28.50	29.50	30.50	31.75	33.00

Packed—Half Dozen in a Bundle.

MICHIGAN

Michigan, Western Pattern, Cast Steel, **Hollow Back** Pattern, **Black** Finish.

Nos.	**802**	**803**	**804**	**805**	**806**	**807**	**808**	**809**	**810**
Size	2	3	4	5	6	7	8	9	10
Width at Mouth, inches	11	11¼	12½	13½	13½	13⅞	14¼	14¼	15
Length of Blade, inches	15	15½	15½	16	16½	17	17½	18	18¾
Per Dozen	$19.50	20.80	22.00	23.00	24.50	25.50	26.50	27.50	28.50

Packed—Half Dozen in a Bundle.

BUHL COAL SCOOPS

Buhl Hollow Back, Black Coal Scoops. A high grade, heavy, specially designed scoop. Adapted purposely for Coal Dock and Coal Yard work and for general use by Ferry, Steamboat and Railroad Companies and Manufacturing concerns. The corners are cut more rounding at the point so that it will enter the coal with the least possible resistance. The Scoop is made with an extra long frog and re-enforced where the frog ends, making it extra strong at this point. Another important factor and one that is to be taken greatly into consideration is that when you release your load from this scoop it is so shaped that the load is completely carried off without leaving any particle on the scoop.

No. 8—Buhl Hollow Back, Black Coal Scoop, Size 8, 13½x17¼ inches.....Per Dozen, $32.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

FURNACE SCOOPS

No. 402.

Hollow Back Pattern. 8½x15 inches. Black Finish.

No. 402—Malleable **D** Handle.....Per Dozen, $11.50

Packed—Half Dozen in a Bundle.

No. 403.

Hollow Back Pattern. 8½x15 inches. Black Finish.

No. 403—Long Handle.....Per Dozen, $10.50

Packed—Half Dozen in a Bundle.

SNOW SHOVELS

Nos. 40 and 400.

Steel Blades. Hollow Back Pattern. 12x14 inches. Black Finish.

No. 40—Malleable **D** Handle, Medium, No. 17 Gauge.....Per Dozen, $12.50

No. 400—Malleable **D** Handle, Heavy, No. 15 Gauge.....Per Dozen, 13.50

Packed—Half Dozen in a Bundle.

Nos. 35 and 350.

Steel Blades. Hollow Back Pattern. 12x14 inches. Black Finish.

No. 35—Long Handle, Medium, No. 17 Gauge.....Per Dozen, $11.00

No. 350—Long Handle, Heavy, No. 15 Gauge.....Per Dozen, 12.00

Packed—Half Dozen in a Bundle.

No. 1341.

Steel Blades. 13½x14½ inches. Black Finish.

No. 1341—Long Handle, No. 16 Gauge.....Per Dozen, $9.00

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SNOW SHOVELS

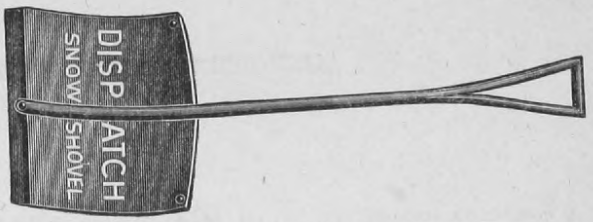
No. 1.

No. 1—Peerless, Straight Handle, Bent Blade, 12x18 inches, Varnished, Folded Steel Tip, Steel Back Plate ..... Per Dozen, $6.70

No. 4—Peerless **Boys'** Snow Shovels. 22 inch Straight Handle; Straight Blade, 9x13 inches. Folded Steel Tip, not Varnished ..... Per Dozen, 3.30

Packed—Half Dozen in a Bundle.

No. 01.



No. 20.

No. 01—Peerless, Split **D** Handle, Bent Blade, 12x18 inches, Varnished, Folded Steel Tip, Steel Back Plate ..... Per Dozen, $7.50

No. 20—Dispatch, Hardwood Split **D** Handle, Curved Blade, 20x14 inches, Varnished, Heavy Folded Steel Tip, Edges inlaid with Steel to prevent splitting ..... Per Dozen, 7.50

Packed—Half Dozen in a Bundle.

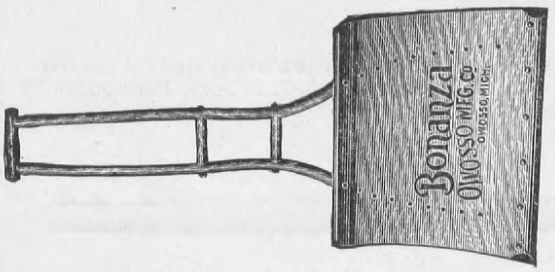
No. 33. Front View.

No. 34. Back View.

Galvanized Steel Blade, with Heavy Corrugations and Extra Heavy Steel Point, reinforced with heavy wire around edges. Split D Handle, made of selected stock, varnished. The handle extending toward the outer points of the blade stiffens same as well as preventing the shovel from tipping when heavily loaded. The small iron bands around the handle prevent breaking.

No. 33—Owosso, Blade 17x15½ inches ..... Per Dozen, $16.00
No. 34—Owosso, Blade 21x16 inches ..... Per Dozen, 17.50
No. 26—Buffalo **Boys'**, Width at Bottom, 10½ inches, Width at Top 8½ inches, Height 7½ inches. Per Dozen, 3.30

Packed—Half Dozen in a Bundle.

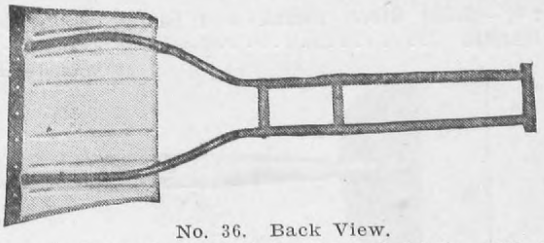


No. 035. Front View.

Bonanza, Bent Blade, made of Three Ply Maple, with Flat Heavy Steel Point. Bent Hardwood Handles protected by galvanized iron shoes. Varnished.

No. 035—Blade 24x19 inches ..... Per Dozen, $21.00

Packed—Half Dozen in a Bundle.



No. 36. Back View.

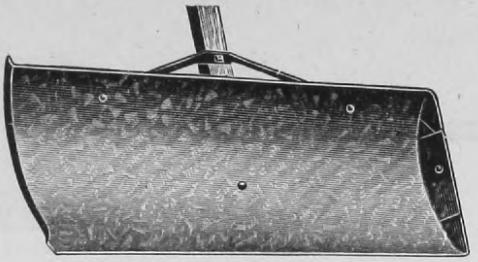
Owosso, Galvanized Steel Corrugated Blade, with Heavy Steel Point. Double Hardwood Handles protected by galvanized iron shoes. Varnished.

No. 36—Blade 21x16 inches ..... Per Dozen, $20.00

Packed—Half Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CONNER'S SNOW PLOWS



No. 21.

A light strong tool that you can push straight with one hand, snow rolls off to the right. Blade made of No. 20 Gauge Galvanized Steel, with Black Iron Brace and Long Hardwood Handle.

No. 21—Blade 23x10 inches.....Per Dozen, $13.00

Packed—Half Dozen in a Crate.

SNOW SCRAPERS

No. 18.

A combined Scraper and Shovel, made of steel with Malleable Iron Socket and 4 foot Rock Maple Handle.

No. 18—Blade 12x18 inches.....Per Dozen, $14.50

Packed—Half Dozen in a Bundle.

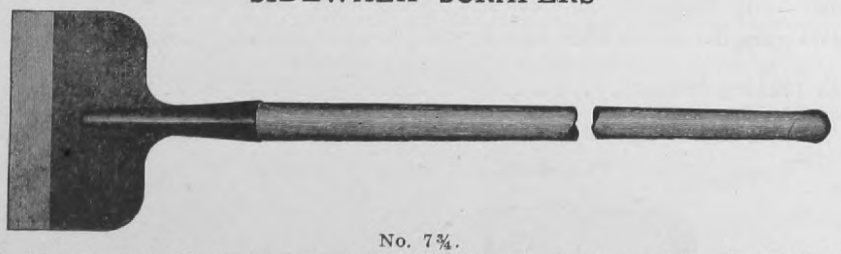
No. 380.

Made from High Carbon Steel of No. 16 Gauge, Malleable Iron Socket and 5 foot Hardwood Handle.

No. 380—Blade 7x18 inches.....Per Dozen, $13.00

Packed—One Quarter Dozen in a Bundle.

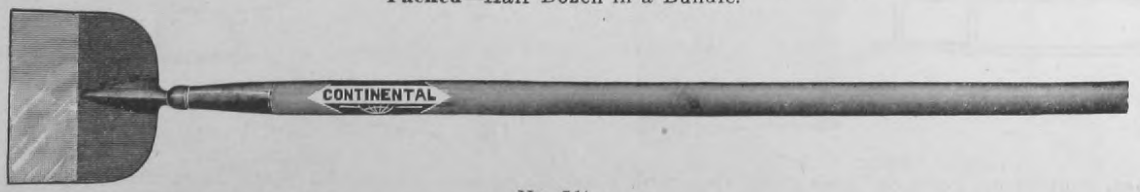
SIDEWALK SCRAPERS



No. 7¾.

No. 7¾—Solid Steel, Shank and Blade in one piece, Blade 7¾ inches wide, Painted Red, 4½ foot Handle.....Per Dozen, $ 7.30

Packed—Half Dozen in a Bundle.



No. 7½.

Solid Steel, Extra Heavy Blades, 7½ inches wide, painted Red. 4½ foot Handles.

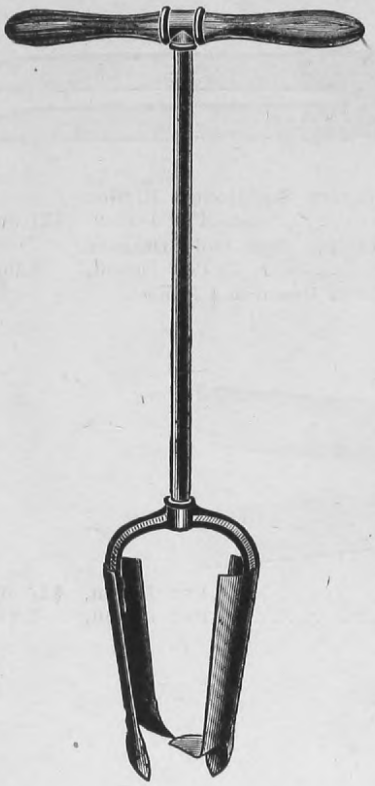
No. 7½—Heavy Shank.....Per Dozen, $10.50 | **No. S7½—Solid** Socket.....Per Dozen, $11.50

Packed—Half Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POST HOLE AUGERS

IWAN'S



VAUGHAN'S

Iwan's

Iwan's Improved Post Hole and Well Auger, is effective in operation and unexcelled for quick and easy work under all conditions and kinds of soil, whether wet or dry. No suction when removed from the hole.

Inches	6	7	8	9
Per Dozen	$28.00	30.00	30.00	32.00

Packed—Quarter Dozen in a Bundle.

Vaughan's Post Hole Augers

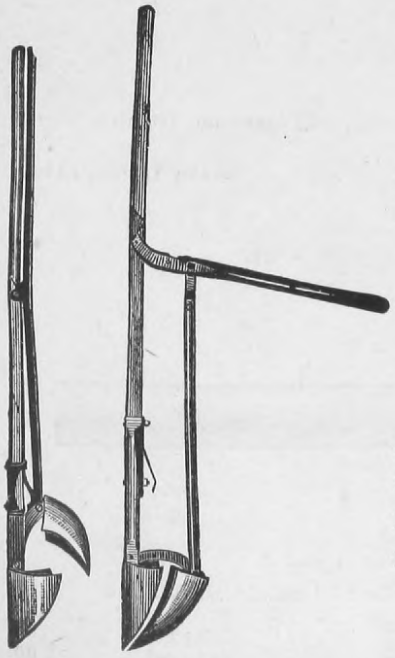
Cast Steel Blades.

Inches	4	5	6	7	8	9
Per Dozen	All Sizes, $18.50					

Packed—Half Dozen in a Bundle.

POST HOLE DIGGERS

UNIVERSAL



GIBBS

Universal Post Hole Diggers

Steel Blades, strong and durable, easily operated. A great favorite with railroads and telegraph companies.

Universal Post Hole Diggers.....Per Dozen, $28.00

Packed—Quarter Dozen in a Bundle.

Gibbs Post Hole Diggers

Single Cast Steel Blade, Malleable Iron Castings, Hardwood Handles. All wearing parts have steel rivets and pins.

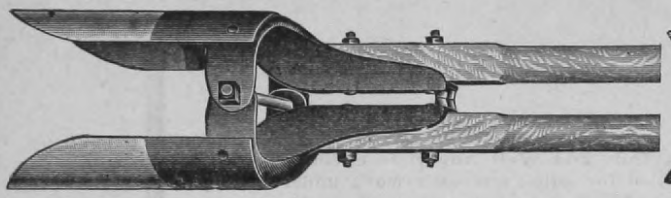
Gibbs Patent Lock Lever Post Hole Diggers	Per Dozen,	$22.00
Extra "Long" Handles	Per Dozen,	4.00
Extra "Short" Handles	Per Dozen,	3.00

Packed—Quarter Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POST HOLE DIGGERS

HERCULES

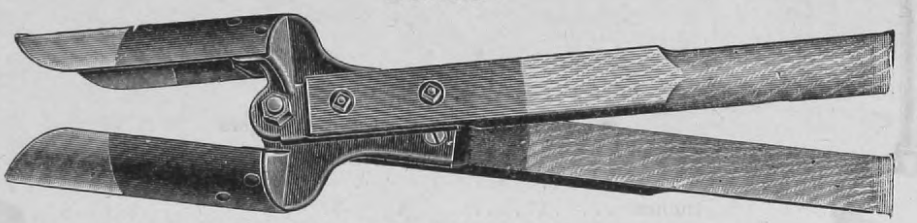


Hercules Post Hole Diggers, Best Cast Steel Blades, Malleable Iron Castings...Per Dozen, $23.00
Extra Handles for Hercules Post Hole Diggers .....Per Dozen, 3.00
Packed—Quarter Dozen in a Bundle.

INVINCIBLE

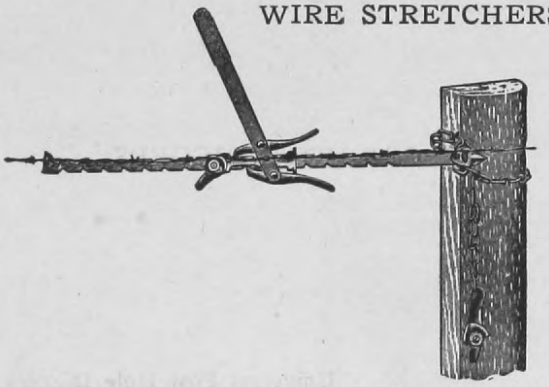
Invincible Post Hole Diggers, Solid Steel Blades and Shanks.....Per Dozen, $21.00
Extra Handles for Invincible Post Hole Diggers .....Per Dozen, 3.00
Packed—Quarter Dozen in a Bundle.

EUREKA



Eureka Post Hole Diggers, Steel Blades, Malleable Castings, Divided Handles.....Per Dozen, $20.00
Extra Handles for Eureka Post Hole Diggers.....Per Dozen, 3.00
Packed—Quarter Dozen in a Bundle.

WIRE STRETCHERS



This Stretcher has great strength, ease of operation and simplicity. Self-supporting, will stand out from the post in a horizontal position ready for use.

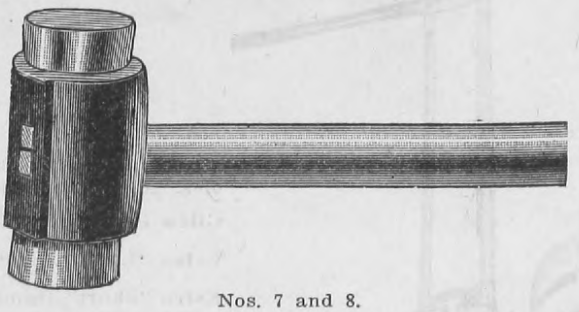
No. 0—Improved Ellwood Lever Self-supporting Wire Stretchers.....Per Dozen, $14.25

POST MAULS

Nos. 3, 4, and 5.

Solid Cast Iron, Handled.

Nos.	3	4	5
Weight each, pounds	13	16	18
Per Dozen	$13.50	15.00	17.50



Nos. 7 and 8.

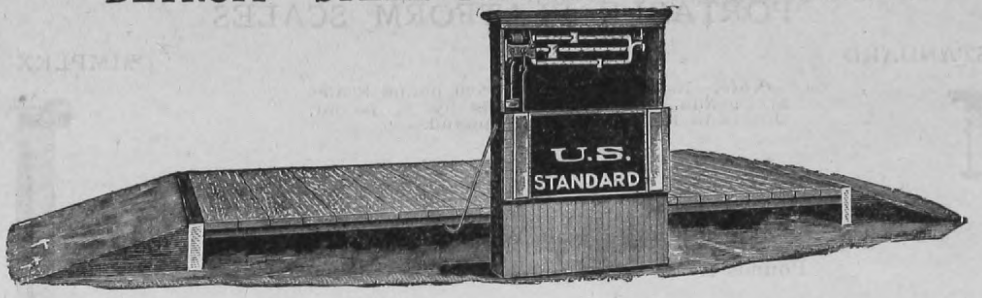
Wooden Faces, Cast Iron Centers, Handled.

Nos.	7	8
Weight each, pounds	13	16
Per Dozen	$14.00	17.00

Extra Handles for Nos. 3 to 5 Post Mauls.....Per Dozen, $3.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"DETROIT" STEEL PITLESS WAGON SCALE



"Ten" Points of Excellence

1. Our Detroit All Steel Pitless Wagon Scale is made with the direct steel lever construction, a feature not found on any other Pitless Scale.

2. The frame is made with heavy steel channel end sills connected by tubular steel cross pieces secured at each corner by strong grey iron brackets which hold in place the heavy hardened loops that support the steel levers in scale frame.

3. The scale levers are made from a single piece of T-shaped rolled steel, the two long levers being trussed with heavy steel bars, making them perfectly rigid under any strain.

4. Heavy steel I-beams are used for stringers which support the platform planks, provision being made for fastening planks to I-beams as explained in building plans furnished with each scale. Purchaser is required to furnish only the platform planks.

5. All pivot bearings throughout the entire scale are made from best tool steel carefully tempered and ground to a knife edge, thus insuring sensitiveness and durability.

6. This High Grade Pitless Scale is provided with combination three-bar solid brass beam graduated to full capacity of scale and fitted with brass faced sliding poises. Beam pivots are of best tool steel carefully tempered, each one being secured in beam by hard friction steels.

7. The heavy steel I-beams are supported on steel levers in frame of scale by carefully chilled bearing feet that rest on carefully tempered tool steel pivots in scale levers.

8. The heavy rolled steel levers are supported at each corner of scale frame by heavy hardened loops hung over the corner brackets, thus insuring strength and durability.

9. Beam box is of selected one-inch tongued and grooved lumber, painted with two coats of best lead paint with a heavy molded top. Beam box door is provided with heavy wrought hinges and flat key lock.

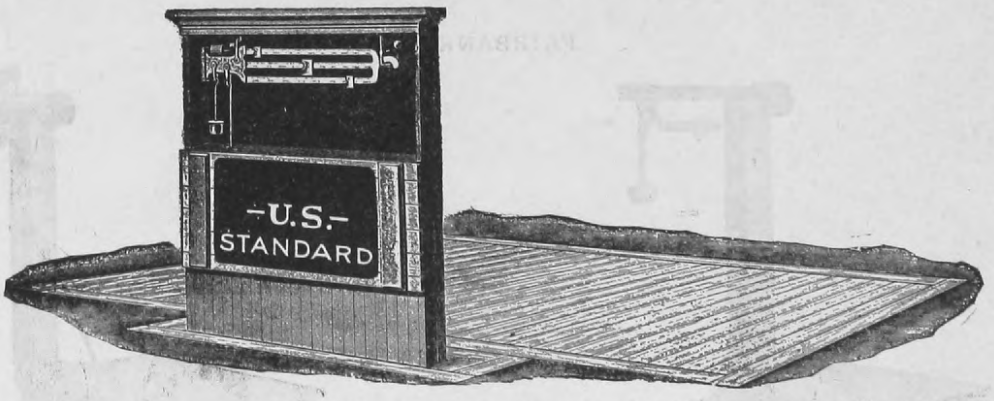
10. The Detroit Steel Pitless Scale is guaranteed to be sealed to U. S. Standard Weights and against defective workmanship and material.

		Double Beam	Combination Beam
No. 123—Capacity 4 Tons; Size of Platform 8x14 feet; Shipping Weight 1000 lbs.	Each,	$117.00	$123.00
No. 124—Capacity 5 Tons; Size of Platform 8x14 feet; Shipping Weight 1050 lbs.	Each,	123.00	129.00

Shipped Direct Only.

Our Celebrated Detroit Steel Pitless Wagon Scale is carefully boxed and crated for shipment with complete printed directions for setting up and installing, and is shipped from factory only F. O. B. Northville, Mich.

"DETROIT" PIT WAGON SCALE



The Detroit Trussed Steel Lever Pit Wagon Scale is a high grade weighing machine and has many exclusive improvements not found in any other type of Pit Wagon Scale. This Scale excels in quality of materials used, accuracy in weighing and is built to withstand the heaviest strain. It is intended for coal and grain dealers, manufacturers and others who use a scale constantly under all conditions and require them to stand under any test.

This scale is furnished with combination three-bar solid brass beam graduated to full capacity of scale and fitted with brass faced sliding poises.

The levers are made from rolled T-shaped steel, each being strongly trussed. Bearings throughout the scale are of best tool steel, carefully tempered and ground to a knife edge.

Our Detroit Trussed Steel Lever Pit Wagon Scales are made upon honor from high grade materials throughout, by skilled scale mechanics and guaranteed to be sealed to U. S. Standard Weights and against defective workmanship or material.

		Double Beam	Combination Beam
No. 127—Capacity 3 Tons; Size of Platform 8x14 feet; Shipping Weight 540 lbs.	Each,	$ 90.00	$105.00
No. 128—Capacity 4 Tons; Size of Platform 8x14 feet; Shipping Weight 560 lbs.	Each,	97.50	112.50
No. 129—Capacity 5 Tons; Size of Platform 8x14 feet; Shipping Weight 580 lbs.	Each,	105.00	120.00
No. 130—Capacity 6 Tons; Size of Platform 8x14 feet; Shipping Weight 620 lbs.	Each,	120.00	135.00
No. 131—Capacity 8 Tons; Size of Platform 8x14 feet; Shipping Weight 640 lbs.	Each,	135.00	150.00
No. 132—Capacity 10 Tons; Size of Platform 8x14 feet; Shipping Weight 660 lbs.	Each,	150.00	180.00

Shipped Direct Only.

This scale is carefully boxed and crated complete with building plans for setting up and installing and shipped from factory only F. O. B. Northville, Mich.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PORTABLE PLATFORM SCALES

BUHL STANDARD

Nos. 600 to 2500.

Note.—Beams on 600 and 800 pound Scales are graduated to 50 pounds by ¼ pound; Others to 100 pounds by ½ pound.

Extra Scale Weights

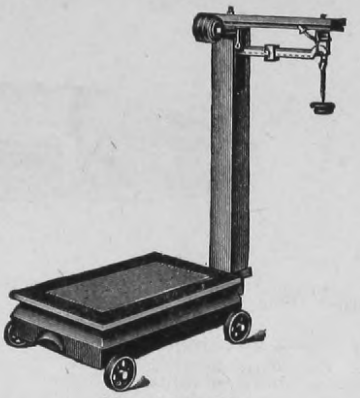
Pounds ...	50	100	200
Each	$.....	.....	.....

Note.—Our Scales are **all** made to comply with the various State Laws recently enacted relating to weights and measures.

Buhl Standard Portable Platform Scales, with **Enclosed** Stationary Wheels supported on steel axles which run clear through under scale frame. Has Brass Sliding Poise.

Capacity Pounds	Platform Inches	Single Beam Nos.	Single Beam Each	Double Beam Nos.	Double Beam Each
600	16½x22	600	$21.75	600DB	$24.75
800	16½x24	800	27.75	800DB	30.75
1000	17 x24½	1000	29.25	1000DB	32.25
1200	17½x25	1200	33.75	1200DB	36.75
1500	18 x26	1500	41.25	1500DB	44.25
2000	20½x29½	2000	46.50	2000DB	49.50
2500	25 x34	2500	48.75	2500DB	51.75

SIMPLEX



Nos. 95 to 99.

Simplex Portable Platform Scales, with Stationary Wheels and Brass Sliding Poise. Axle runs clear through under scale frame.

Capacity Lbs.	Platform Inches	Single Beam Nos.	Single Beam Each	Double Beam Nos.	Double Beam Each
600	15½x21	95	$21.00	95DB	$24.00
800	16½x24	96	26.25	96DB	29.25
1000	17 x24½	97	28.25	97DB	31.25
1200	17½x25	98	33.00	98DB	36.00
1500	18 x26	99	37.50	99DB	40.50

FAIRBANKS

Nos. 11188 to 1120.

Fairbanks Portable Platform Scales, with wheels and Brass Sliding Poise. Nos. 1120 and 1120DB have Iron Braced Pillars.

Nos. 1174 to 1166.

Fairbanks Portable Platform Scales, with Heavy Wheels, Drop Lever and Brass Sliding Poise. Nos. 1170 to 1166 have Iron Braced Pillars

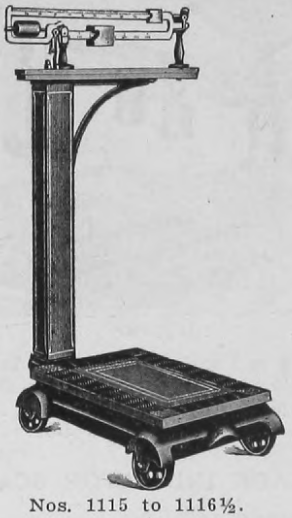
Capacity Pounds	Platform Inches	Single Beam Nos.	Single Beam Each	Double Beam Nos.	Double Beam Each
500	16x22	11188	$30.00	.....	.....
1000	18x27	11189	36.00	.....	.....
1200	20x28	1122	49.00	1122DB	$54.00
1500	22x31	1120	56.00	1120DB	61.00

Capacity Pounds	Platform Inches	Single Beam Nos.	Single Beam Each
1000	18x27	1174	$51.00
1200	20x28	1172	59.00
1500	22x31	1170	70.00
2000	25x32	1168	82.00
2500	25x34	1166	94.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GROCERS' SCALES

NEW DETROIT



Nos. 1115 to 1116½.

New Detroit Grocers or Weightless Portable Platform Scales. Equipped with full capacity Solid Double Brass Beam, fitted with Solid Brass Sliding Poises. **Enclosed** Stationary Wheels supported on Steel Axles which run clear through under scale frame.

Capacity Pounds	Platform Inches	Nos.	Each
600	16½x24	**1116**	$32.00
800	17 x24½	**1115**	34.00
1000	17½x25	**1116½**	36.00

FAIRBANKS

Nos. 505 and 507.

Fairbanks Imperial Grocers Scales, with Nickel Plated Double Beam. Capacity 1 ounce to 250 pounds. Upper Bar is graduated to 10 pounds by 1 ounce, Lower Bar to 50 pounds by ½ pound. Loose weights are provided for the balance of the capacity. Has Scoop Balance at left end of beam for instant adjustment when scoop is removed or replaced. Platform 12x15 inches.

No. 505—With Large Tin Scoop.....Each, $24.00
No. 507—With Large Brass Scoop.....Each, 25.00

Packed—One in a Box.

UNION OR FAMILY SCALES

FAIRBANKS

Nos. 508 and 510.

Fairbanks Union or Family Scales. **Single Beam,** with Two Platforms. Capacity, 30 pounds by ½ ounce for fine weighings, 240 pounds by ¼ pound for coarse weighings. **Lower** Platform 10½x13½ inches.

No. 508—With Tin Scoop.....Each, $14.50
No. 510—With Brass Scoop.....Each, 15.50

Packed—One in a Box.

Nos. 512 and 514.

Fairbanks Union or Family Scales. **Double Beam,** with Two Platforms. Capacity, 30 pounds by ½ ounce for fine weighings, 240 pounds by ¼ pound for coarse weighings. **Lower** Platform 10½x13½ inches.

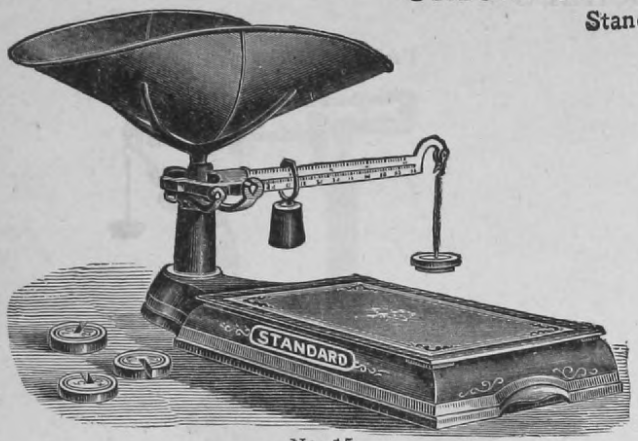
No. 512.—With Tin Scoop.....Each, $15.50
No. 514—With Brass Scoop.....Each, 16.50

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UNION OR FAMILY SCALES

Standard



No. 15.

Standard Union or Family Scales, with Tin Scoop, Capacity ½ ounce to 240 pounds. Platform 10½x13½ inches.

No. 15—Single Beam.....Each, $5.50

Packed—One in a Box.

No. 15½.

Standard Union or Family Scales, with Tin Scoop, Capacity ½ ounce to 240 pounds. Platform 10½x13½ inches.

No. 15½—Double Beam.....Each, $6.00

Packed—One in a Box.

POSTAL SCALES

Empress.

Made of Brush Brass, very attractive. Tells instantly the exact cost of postage in cents on all mail matter. Capacity 1 pound by ½ ounce, size over all 1¾x3x3¼ inches.

Empress Postal Scales.....Each, $3.50

Packed—One in a Box.

POSTAGE INDICATOR SCALES

No. 625.

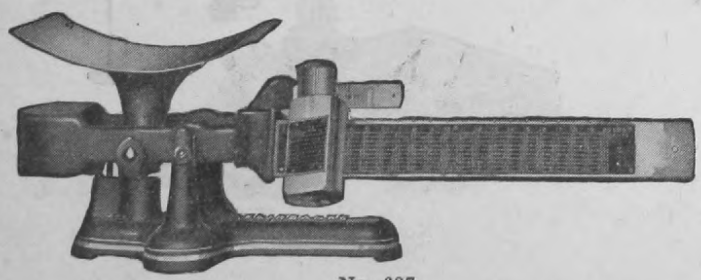
Fairbanks Postage Indicator, arranged to indicate by direct reading in cents the amount of postage required for articles in the different classes of mail matter. The Revolving Beam gives upon one side the postage for letters, books and printed matter, and upon the other side newspapers, periodicals and merchandise. In addition to indicating postage, the beam also indicates in pounds and ounces, thus increasing its utility for general purposes.

No. 625—Brass, Capacity 34 ounces by **1 ounce.**
.....Each, $8.00

Packed—One in a Box.

PARCEL POST SCALES

With Tariff Schedule Beam



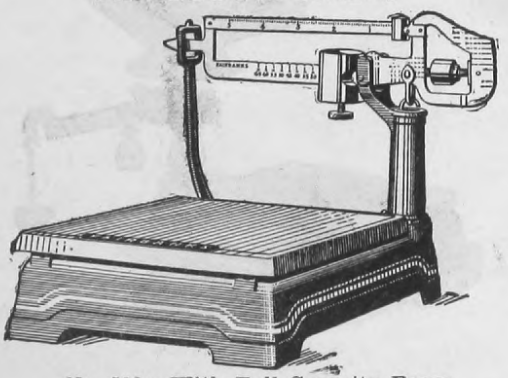
No. 627.

Fairbanks Parcel Post Scale with Tariff Schedule Beam. Arranged to indicate directly the amount of postage in cents on any package up to 20 pounds for any of the eight zones. Has heavy brass curved pan 9x10½ inches, securely supported and beam of solid brass with notched top. An auxiliary Bar graduated 16x1 ounce is used for packages up to 4 ounces. Scale is finished in black enamel with gold striping.

No. 627—Capacity 20 pounds by 1 ounce..Each, $25.00

Packed—One in a Box.

PLATFORM COUNTER PARCEL POST SCALES



No. 532. With Full Capacity Beam.

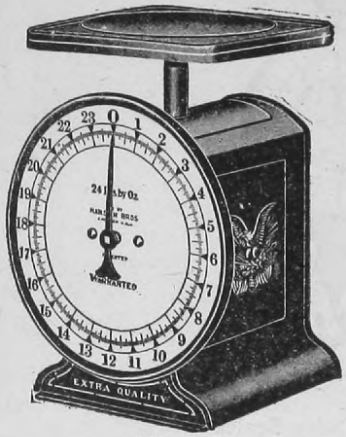
Fairbanks, Especially adapted for the accurate weighing of packages up to 55 pounds, for express or parcel post shipment. Beam is of arrow-tip pattern, of Brass with notched top and brass sliding poises. Upper Bar is graduated 5 pounds by 1 ounce and the lower 50 pounds by 5 pounds. Platform 10½x12 inches.

No. 532—Capacity 55 pounds by **1 ounce**..Each, $15.00

Packed—One in a Box.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

COUNTER AND HOUSEHOLD SCALES



No. 24.

Made of Cold Rolled Drawn Steel with 5½ x 5½ inch Enameled Pressed Steel Top Plate, Single Upright Removable Steel Post and 6½ inch White Enameled Dial. Figures are very distinct and easily read. Beautifully finished and hand striped. Regulated by turning Brass Screw on top, can be instantly adjusted for basket, pan or scoop.
Capacity 24 pounds by ounces.

No. 24—Without Scoop.....Per Dozen, $18.75

Packed—One-Twelfth Dozen in a Box.

TIN SCOOPS

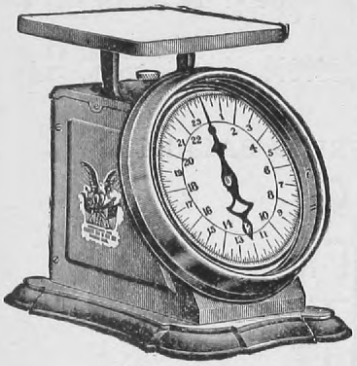
Tin Scoops, for use with Scales shown on this page,
.....Per Dozen, $4.50

No. 024.

Made of Cold Rolled Drawn Steel, with 5½x5½ inch Enameled Pressed Steel Top Plate, Single Upright Removable Steel Post and 6½ inch White Enameled **Slanting** Dial. Figures are very distinct and easily read. Beautifully finished and hand striped. Regulated by turning Brass Screw on top, can be instantly adjusted for basket, pan or scoop.
Capacity 24 pounds by ounces.

No. 024—Without Scoop.....Per Dozen, $18.75

Packed—One-Twelfth Dozen in a Box.



No. 40½.

No. 40½.

Made of Cold Rolled Steel, with 6x6 inch White Tile Platform, Double Upright Steel Posts and 6 inch White Enameled **Slanting** Dial with Glass Sash and Nickel Plated Rim. Figures are very distinct and easily read. Beautifully finished Blue and Ornamented. Regulated by turning Brass Screw on top, can be instantly adjusted for basket, pan or scoop.
Capacity 24 pounds by ounces.

No. 40½—Without Scoop.....Per Dozen, $30.00

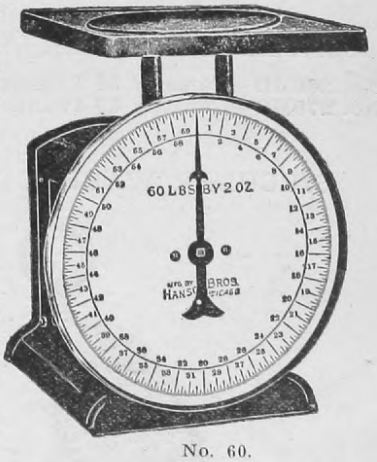
Packed—One-Twelfth Dozen in a Box.

No. 60.

Made of Cold Rolled Drawn Steel, with 7x7 inch Enameled Pressed Steel Top Plate, Double Upright Removable Steel Posts and 8 inch White Enameled Dial. Figures are very distinct and easily read. Beautifully finished and hand striped. Regulated by turning Brass Screw on top, can be instantly adjusted for basket, pan or scoop.
Capacity 60 pounds by 2 ounces.

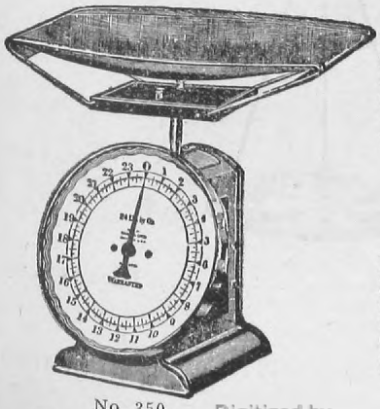
No. 60—Without Scoop.....Per Dozen, $30.00

Packed—One-Twelfth Dozen in a Box.



No. 60.

NURSERY SCALES



No. 350.

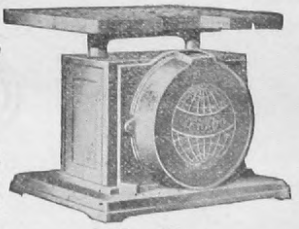
No. 350.

Made of Cold Rolled Steel, White Enameled and handsomely ornamented in light Blue. Platform is fitted with an extra top plate, fastened below the hammock. In removing the hammock, scale is ready for household purposes. Has 6 inch White Enameled **Slanting** Dial with Glass Sash and Nickel Plated Rim.
Capacity 24 pounds by ounces.

No. 350—Nursery and Family Scale..Per Dozen, $42.00

Packed—One-Twelfth Dozen in a Box.

BATH SCALES



No. 23.

No. 23.

Improved Madaco. Well constructed and finished in pure white enamel. Correct weight is instantly ascertained by glancing in the glass aperture set into the top of the outer case, which covers a revolving dial clearly marked with the regular graduations. A cork mat is fitted into the platform to act as an insulator. Platform 8x10 inches.
Capacity 250 pounds.

No. 23—Madaco Physicians' and Bath Scale....
.....Each, $10.00

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MILK SCALES

Nos. 260MD and 270MD.

DAIRY SCALES

No. D40.

Pelouze Dairy Scales

Large Circular Brass Dial, with distinct, Black figures and graduations. Two Indicator hands, one red, to be set at the weight of empty pail.

No. D40—Capacity 40 Pounds by 1/10 pounds..... Each, $3.00

Packed—One in a Box.

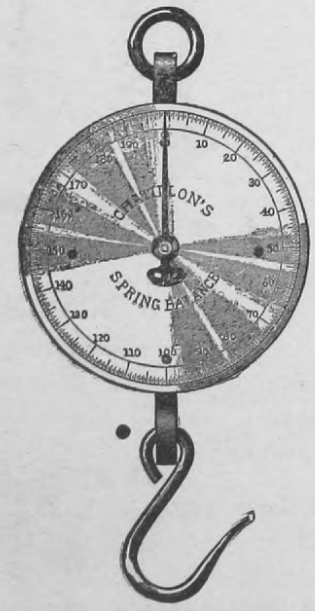
Milk and Cream Scales

These Scales are made with a loose Pointer which by means of a Thumb Screw on the center of the Pointer may be set anywhere on the Dial, thus taking the tare of a Milk Pail, etc.

No. 260MD—Capacity 30 Pounds by 1/10 pounds..... Each, $4.00
No. 270MD—Capacity 60 Pounds by 1/10 pounds..... Each, 5.00

Packed—One in a Box.

CIRCULAR WAREHOUSE BALANCES



No. 6320.

STRAIGHT SPRING BALANCES

No. 41.

Circular Warehouse Spring Balances

No. 6320—Capacity 200 Pounds by 1 Pound, Brass Front, with Hooks, 6 inch Dial.....Each, $10.50

Packed—One in a Box.

Straight Spring Balances

No. 41—Capacity 25 Pounds by ½ Pound, Brass Front, 9 inch Round Tin Pans.....Per Dozen, $7.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPRING BALANCES

No. 20. Style of No. 30.

No. 10

Round Spring Balances, Black Japanned Steel Tube, Brass Dial Plate, with Hooks.

No. 10—Capacity 24 Pounds by ½ pound.....Per Dozen, $4.00

Packed—Half Dozen in a Box.

Straight Spring Balances, Brass Front, with Hooks.

No. 20—Capacity	25 Pounds by ½ pound	Per Dozen,	$ 1.60
No. 30—Capacity	50 Pounds by 1 pound	Per Dozen,	3.00
No. 40—Capacity	25 Pounds by ½ pound	Per Dozen,	4.00
No. 70—Capacity	50 Pounds by 1 pound	Per Dozen,	8.00
No. 90—Capacity	100 Pounds by 1 pound	Per Dozen,	42.00
No. 100—Capacity	125 Pounds by 1 pound	Per Dozen,	48.00

Packed—No. 20, One Dozen; Nos. 30, 40 and 70, Half Dozen in a Box; Nos. 90 and 100, One-Twelfth Dozen in a Box.

No. 40. Style of Nos. 70 to 100.

ICE BALANCES

Nos. 150 and 160

No. 160.

Chatillon's Superior Iron Clad Ice Balances, compact and durable.

No. 150—Capacity 200 Pounds by 5 pounds.....Each, $4.50
No. 160—Capacity 300 Pounds by 5 pounds.....Each, 5.50

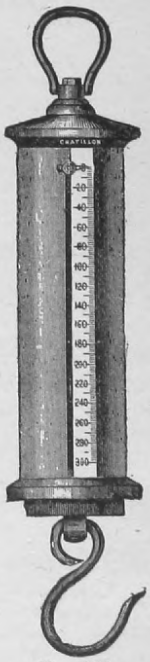
Packed—One in a Box.

Nos. 110 and 120

Chatillon's Tubular Ice Balances, Steel Case, Black Japanned, Brass Nickel Plated Dial Plate.

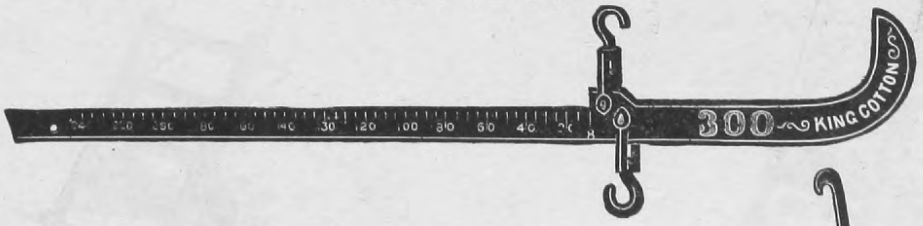
No. 110—Capacity 200 Pounds by 2 pounds.....Each, $10.84
No. 120—Capacity 300 pounds by 2 pounds.....Each, 12.50

Packed—One in a Box.



No. 120.

SCALE BEAMS



Nos. 150 to 500.

Complete with Poises, Japanned and Striped with Bronze.

Nos.	150	200	250	300	400	500
Capacity, pounds	150	200	250	300	400	500
Each	$2.25	2.40	2.85	3.15	4.35	5.25

Packed—Each One Papered Separately and Labeled; Half Dozen in a Case.

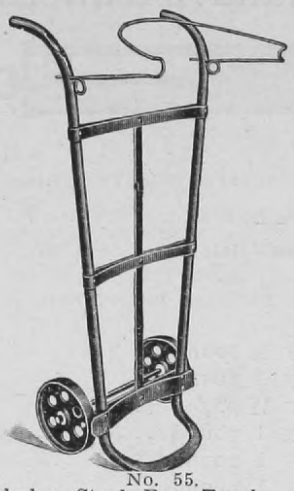
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BAG TRUCKS

No. 50.

Round Stamped Steel Nose, Bent Handles, Turned Axle Bearings, Wheels bored true to center. Length of Handles 42 inches, Width at Nose 11¼ inches, Diameter of Wheels 6 inches.

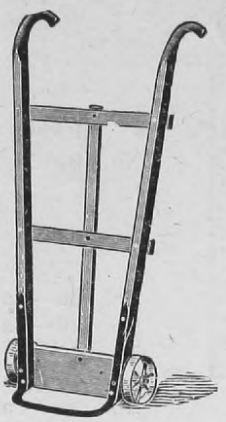
No. 50—Bag Trucks. . . Each, $4.70



No. 55.

Tubular Steel Bag Trucks, Handes and Nose are one continuous piece. Ends of Handles are closed. All joints riveted. Length of Handles 42 inches, Width at Nose 11 inches, Diameter of Wheels 7 inches. **Bag Holder** made of 5/16 inch Spring Steel, easily atached.

No. 55—All Steel Bag Trucks, ... Each, $5.70



No. 441.

Round Nose, Bent Plow Handles, Turned Axle Bearings, Wheels bored true to center. Length of Handles 46 inches, Width at Nose 11 inches, Diameter of Wheels 6 inches.

No. 441—Dandy Bag Trucks . . . . . Each, $5.30

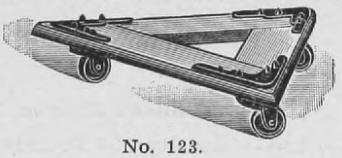
HOTEL TRUCKS

Nos. 01 and 02.

Western Pattern Hotel Trucks, Half Ironed, Patent **Rubber Tired Wheels**, Steam Bent Handles, Steel Nose, Forged Axles and Turned Bearings.

No. 01—Length of Handles 48 inches, Width of Truck 19 inches, Diameter of Wheels 7 inches. . . . . Each, $15.00
No. 02—Length of Handles 52 inches, Width of Truck 20 inches, Diameter of Wheels 8 inches. . . . . Each, 18.50

TRIANGULAR BOX TRUCKS



No. 123.

For moving barrels, cases, tubs, etc.

No. 123—With Three Anti-Friction Casters, Length of Sides, 20 inches. . . . . Each, 3.75

STORE AND WAREHOUSE TRUCKS

Nos. 0 to 3. **Half Ironed.**

Nos. 21 to 24. **Full Ironed.**

Western Pattern Store and Warehouse Trucks, Steel Nose, Steam Bent Handles, Forged Axles, Turned Bearings, Wheels bored true to center. Made of Best Seasoned Lumber, Bolted and Ironed in the most substantial manner. Nos. 0, 1 and 2 have Three Cross Bars, all other Nos. have four.

Half Ironed.

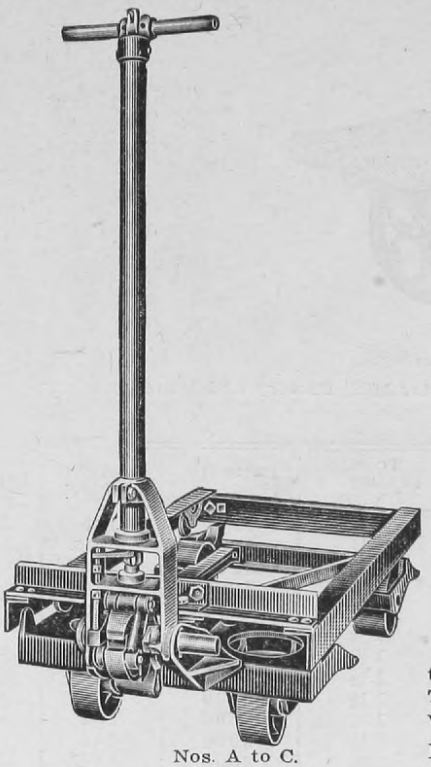
Nos.	Length of Handles Inches	Width of Truck Inches	Diameter of Wheels Inches	Price Each
0	42	18	6	$ 6.00
1	48	19	7½	7.00
2	52	20	8½	9.00
3	56	22	9½	13.00

Full Ironed.

Nos.	Length of Handles Inches	Width of Truck Inches	Diameter of Wheels Inches	Price Each
21	48	19	6½	$ 8.00
22	52	20	7½	10.50
23	56	22	9	15.00
24	60	24	10	18.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LIFTING TRUCKS

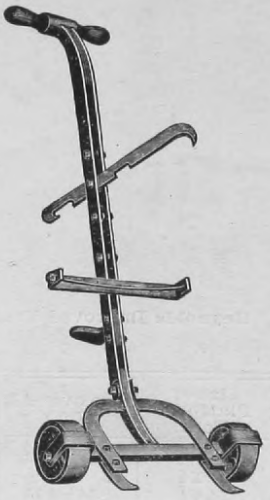


Nos. A to C.

BARREL TRUCKS

No. 10.

STORE TRUCKS



Improved.

Barrel Trucks

For handling Tierces, Barrels and Kegs of all kinds. Not necessary to touch or tip the barrel for loading. All that is required is to move the Truck up against the barrel, throw hook over chime and move off. Hardwood Handle 4 feet long. Wheels 5 inches in diameter, 1¼ inches wide.

No. 10—Barrel Trucks ..... Each, $3.70

Kaysee Lifting Trucks

Made of Malleable Iron and Steel of the very best quality. Equipped with maximum Swivel Casters for the economical handling of all kinds of material. Has elevating capacity of 1½ or 3 inches.

No. A—Capacity 2,000 pounds, Size 18x30 inches ..... Each, $.....

No. B—Capacity 4,000 pounds, Size 20x40 inches ..... Each, ...

No. C—Capacity 6,000 pounds, Size 27x48 inches ..... Each, ...

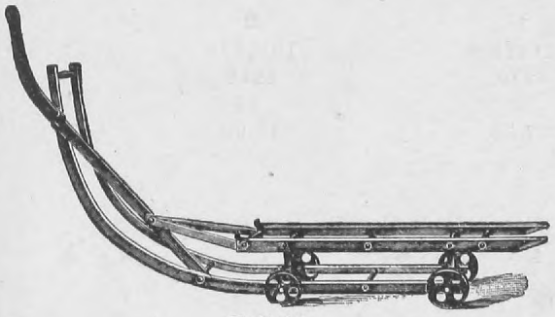
Note—Standard Trucks are equipped with 7 inch Wheels, but in cases where lower platforms are used we furnish the 6 inch Wheels when so ordered.

Store or Warehouse Trucks

For handling heavy barrels, casks or boxes with ease and rapidity. It is practically indestructible, all parts except the Wheels being constructed entirely of Spring Steel. The Wheels have Roller Bearings, making it possible for one man to move a load of 1,000 pounds and over with ease.

Improved Store or Warehouse Trucks ..... Each, $26.00

STOVE TRUCKS

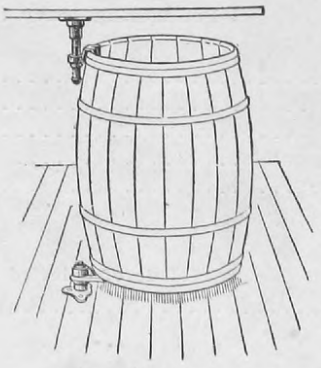


Baltzly.

Made entirely of Steel, when lowered the platform is 4 inches from the floor, when raised it is 7 inches above the floor. Moves stoves whether hot or cold, large or small and the operation is easy and rapid.

Baltzly Stove Trucks ..... Each, $10.00

BARREL SWINGS



No. 13.

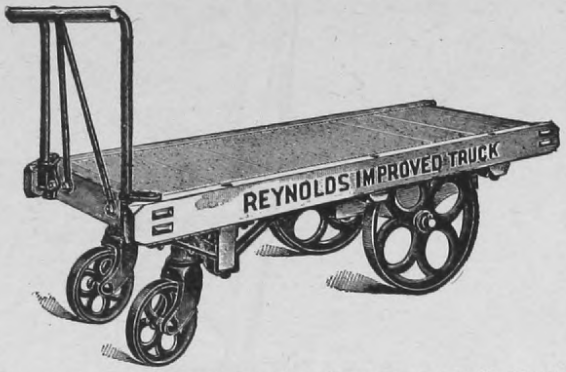
Adjustable for swinging Barrels under Counters and shelves.

No. 13—Barrel Swings ..... Per Dozen Sets, $11.00

Packed—One Twelfth Dozen Sets in a box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

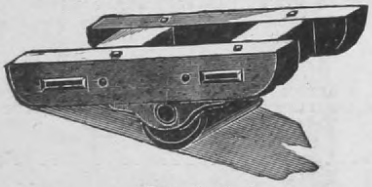
REYNOLDS' TRUCKS



Reynolds Improved Trucks, with Patent Ball Bearing Casters, for Mill, Factory and Warehouse use.

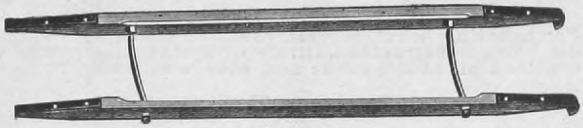
Nos.	Size of Platform Feet	Size over All Feet	Diameter of Wheels Inches	Tread of Wheels Inches	Diameter of Casters Inches	Tread of Casters Inches	Capacity Pounds	Weight Pounds	Price Each
0	2 x3	2 x3 ⅓	12	2	6	1¼	1200	125	$24.00
1	2 x4	2 x4 ⅓	12	2	6	1¼	1200	152	25.00
3	2½ x4	2½ x4 ⅓	12	2	6	1¼	1200	172	26.10
4	2 x5	2 x5 ⅓	12	2	6	1¼	1200	161	26.10
5	3 x4	3 x4 ⅓	12	2	6	1¼	1200	173	27.00
6	2½ x5	2½ x5 ⅓	12	2	6	1¼	1200	175	27.00
8	3 x5	3 x5 ⅓	12	2	6	1¼	1200	192	29.25
9	2 x4	2 x4 ⅓	18	2¼	9	1½	3000	217	30.00
11	2½ x4	2½ x4 ⅓	18	2¼	9	1½	3000	229	31.50
13	2½ x4 ½	2½ x4 ¾	18	2¼	9	1½	3000	237	32.25
15	3 x4	3 x4 ⅓	18	2¼	9	1½	3000	246	33.00
16	2½ x5	2½ x5 ⅓	18	2¼	9	1½	3000	243	33.00
18	2 x5	2 x5 ⅓	18	2¼	9	1½	3000	230	32.25
19	2 x6	2 x6 ⅓	18	2¼	9	1½	3000	240	33.00
20	2½ x6	2½ x6 ⅓	18	2¼	9	1½	3000	255	34.50
21	3 x5	3 x5 ⅓	18	2¼	9	1½	3000	255	35.25
22	3 x6	3 x6 ⅓	18	2¼	9	1½	3000	270	36.00
23	3 x8	3 x8 ⅓	18	2¼	9	1½	3000	310	40.00

TIMBER DOLLIES



Nos. 1 to 3.

SKIDS



Nos. 2 to 9.

Timber Dollies

For moving heavy timbers, made of Selected Timber, with Cast Iron Rollers.

Nos.	1	2	3
Frame, inches	16x19	19½x26	18x24
Roller, inches	6x10	6x12	3x12
Weight each, pounds	58	70	49
Each	$7.50	10.00	5.00

Skids

Made of Selected Timber, Oiled and Varnished, Ends Heavily Ironed.

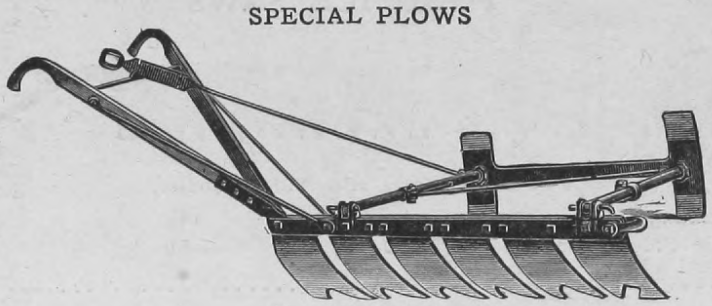
Nos.	2	4	6	7	8	9
Kind	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy
Length, feet	6	7	8	9	10	12
Side Rails, inches	1¾x3	1¾x3¼	1¾x3½	1¾x3½	1¾x3¾	1¾x4
No. of Cross Bars	2	2	3	3	3	4
Weight each, pounds	34	38	40	45	50	65

Heavy Skids, all Lengths, 6 feet and over..... Per Foot, $1.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ICE TOOLS

SPECIAL PLOWS

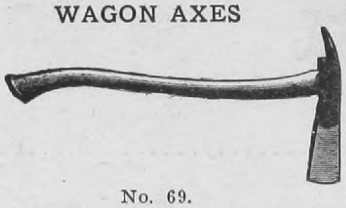


Nos. 15 and 15½.

Extension Swing Guide to mark 18, 22 and 28 inches, 5 Cutting Teeth and 1 Clearing Tooth. Furnished with Painted Iron Case to protect the teeth from injury.

No. 15—Cuts 8 inches deep.....Each, $39.00 | **No. 15½**—Cuts 10 inches deep.....Each, $46.50

WAGON AXES



No. 69.

No. 69—Best Tool Steel Blade, 30 inch Handle; Weight 3 lbs.....Per Dozen, $18.00

ICE SHAVERS

No. 348.

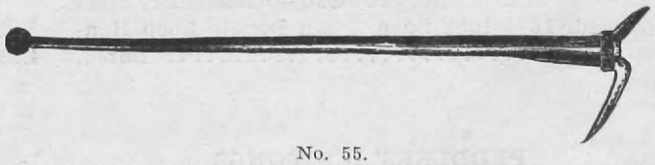
No. 348—Best Tool Steel Blade, Steel Pipe Handle; Weight 4 lbs.....Per Dozen, $20.50

FLOOR SHAVERS

No. 1780.

No. 1780—5 Teeth, 6 inches wide, Length 4 feet 10 inches; Weight 6 pounds.....Each, $4.25

ICE HOOKS

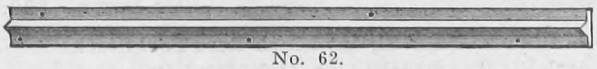


No. 55.

Made of Best Norway Iron, Laid Heavily with Best Tool Steel, Selected Ash Handles.

No. 55—Ice Hooks	Length of Handles, feet	5	6	7	8	10
	Per Dozen.....	$11.50	12.50	13.25	14.00	16.50

RUN IRON



No. 62.

No. 62—Patent V Shape Run Iron, **Not** Drilled, in Lengths of 10, 12, 14 and 16 feet, 100 feet weigh 147 pounds.....Per Foot, $.....

BREAKING BARS

No. 43.

No. 43—With Broad Blunt Blade at one end and Sharp Blade at the other end.....Each, $4.50

FORK BARS

No. 44.

No. 44—With Steel Prongs, for breaking off heavy ice.....Each, $6.75

BAR CHISELS

No. 45.

No. 45—With Broad Blade, Beveled on one side.....Each, $3.50

KNOB CHISELS

No. 51K.

No. 51K—Tempered Blade, Solid Steel Handle.....Each, $3.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

POND ICE SAWS

Pond Ice Saws, **with** Tiller Handles.

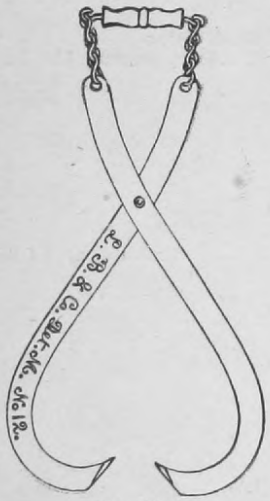
Length in feet	4	4½	5	5½
Complete with Tiller Handle.....Each,	$5.00	5.50	6.00	6.50

Extra Tiller Handles.....Each, $1.00

WAGON ICE SAWS

Set and Sharpened.

Wagon Ice Saws, Length 30 inches, Iron Handles.....Per Dozen, $23.00



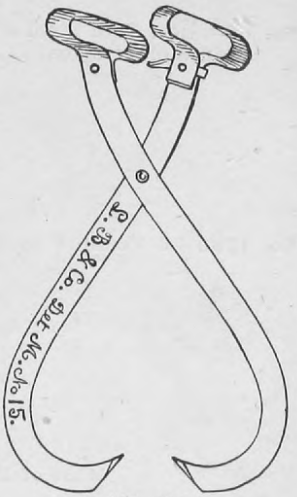
No. 10.

ICE TONGS

FAMILY ICE TONGS

No. 10—¾ inch x No. 12 Gauge Bessemer Steel Japanned, 16 inch Span, Wood Grip.....Per Dozen, $3.50

No. 12—¾ inch x No. 12 Gauge Bessemer Steel Japanned, 16½ inch Span, Plain Double Loop Handles.....Per Dozen, 4.25



No. 12.

PEDDLERS' ICE TONGS

No. 19—Plain, 16 inch Span, ⅛x1 inch Best Tool Steel with Steel Rivet, Hardened Points and Metal Grip. Has bronze outside washers and copper disc between blades which prevents blades from rusting together .....Per Dozen, $30.00

No. 24—Aluminum Painted, ⅛x1 inch Best Tool Steel, with Steel Rivet, 16 inch Span and Metal Grip.....Per Dozen, 13.50

No. 19 Style of No. 24.

HEAVY ICE TONGS

Tool Steel Japanned.

No. 15—Butchers' ¼x¾ inch Steel, 18 inch Span .....Per Dozen, $10.50

No. 37—Wagon, ¼x1 inch Steel, 21 inch Span.....Per Dozen, 13.25

No. 38—Wagon, 5/16x1 3/16 inch Steel, 24 inch Span.....Per Dozen, 15.75

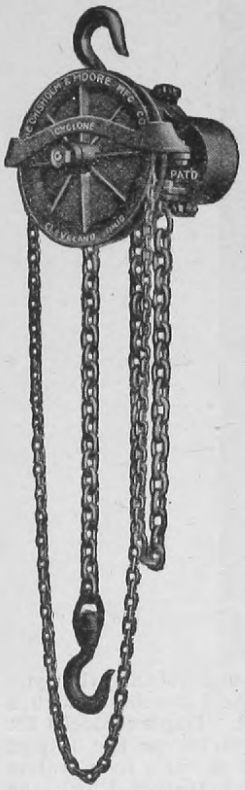
Nos. 15 to 38.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CYCLONE CHAIN HOISTS

HIGH SPEED

With Self-Lubricating Bearings

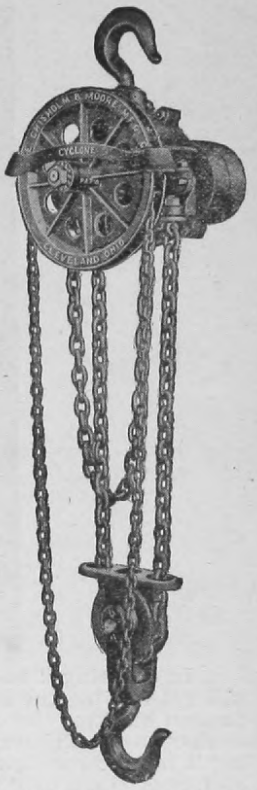


Sizes ½ ton to 3 tons inclusive made with single load chains as shown above.

The peculiar gyrating movement of the Hoist and the perfect balance of all its parts, make possible a very high speed with practically no vibration. All gears are accurately cut. No cast gears are used in these Hoists. No delicate mechanism nor small gears to wear out rapidly. Chains are accurately made to gauge and tested to one and a half times the rated capacity of the Hoist.

Note.—For every additional foot of lift desired, two feet extra of both main and hand chain will be necessary.

Capacity, Tons	Price Complete	Height of Lift, Feet	Extra Chain per Foot of Lift	Net Weight Comp. with Chains, Pounds	Gross Weight Boxed, Pounds	Chain Pull to Lift Full Load, Pounds	Length of Chain Handled to Lift Load One Foot, No. Feet	Shortest Distance Between Hooks, Inches
½	$35.00	8	$0.90	71	89	56	20	15
1	45.00	8	.95	99	107	79	33	17
1½	60.00	8	1.00	118	136	102	39	19
2	70.00	9	1.05	161	184	109	47	21
3	90.00	10	1.30	226	267	115	70	22
4	110.00	10	1.60	260	315	120	91	34
5	140.00	12	2.10	376	443	104	123	38
6	165.00	12	2.10	410	477	109	140	41



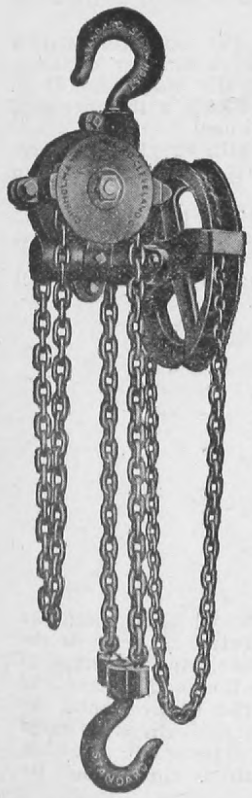
Sizes 4 tons to 12 tons inclusive made with double load chains as shown above.

"STANDARD" SCREW CHAIN HOISTS

This is a powerful and easy-working Block, made on the well-known principle of the worm and gear. All working parts are protected from weather and dust, and it is readily adaptable to horizontal work for pulling heavy loads on skids and rollers. The fronze worm wheel and steel worm which have hardened and ground thrust bearings, run in oil, insuring smooth action and thorough lubrication.

Note.—For every additional foot of lift desired, two feet extra of both main and hand chain will be necessary.

Capacity, Tons	Price Complete with Chain	Extra Main Chain per Foot	Extra Hand Chain per Foot	Extra per Foot of Lift	Height of Lift Feet	Net Weight Complete with Chains, Pounds	Gross Weight Boxed, Pounds	Shortest Distance Between Hooks, Inches	Chain Overhauled to Raise One Foot, Feet
½	$25.00	$0.40	$0.25	$1.00	8	56	70	16	47
1	30.00	.44	.25	1.10	8	71	89	17	58
1½	40.00	.48	.25	1.20	8	81	98	17	73
2	50.00	.52	.25	1.30	9	99	119	20	83
3	75.00	.60	.25	1.50	10	157	191	24	120



Standard. Screw.

"DIRECT" DIFFERENTIAL PULLEY BLOCKS

This Block handles heavy loads readily and on account of its reliability and simplicity is especially adapted for use on farms, in shops and for all ordinary Hoist purposes where the higher power and durability of the Cyclone High Speed and Standard Screw Chain Hoists are not required. The Power is applied by pulling direct on the slack part of the load Chain and is multiplied by the simple device of the differential Sheave.

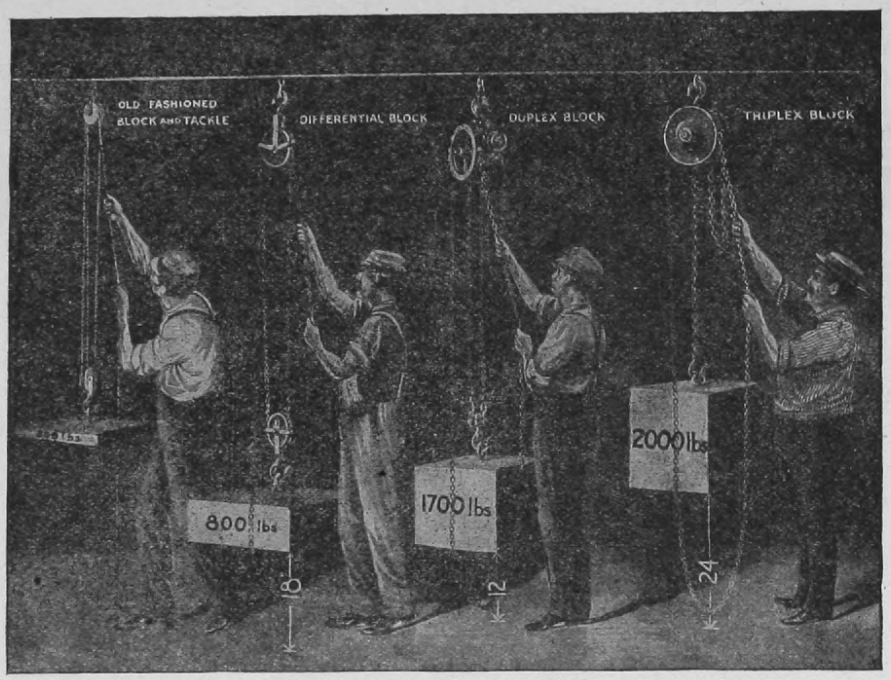
Note.—Allow **four** feet of chain for each additional foot of lift. Always specify "DIRECT" when ordering this style of block.

Capacity, Tons	Will Lift, Feet	Price	Regular Chain, Feet	Extra Chain, per Foot	Net Weight with Chain, Pounds	Gross Weight Boxed, Pounds	Shortest Distance Between Hooks, Inches
¼	6	$18.00	22	$0.70	22	28	17
½	7	21.00	26	.70	30	38	21
¾	8	25.00	30	.75	35	45	25
1	8	28.00	30	.75	50	61	26
1½	8½	36.00	33	.80	81	99	32
2	9	45.00	36	.85	125	145	39
3	10	60.00	38	1.00	180	210	44

"Direct" Differential.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE & TOWNE CHAIN BLOCKS



In choosing a hoist you want value for your money, therefore before buying be sure you understand what you will get for it. The above picture shows the relative weight and height one man can lift in half a minute with a one-ton block of the several designs. Triplex Blocks will lift the quickest with the least effort. **Duplex** Blocks lift as easy as the Triplex but it takes twice as long to lift the load. **Differential** Blocks lift as quickly as the Triplex but it takes three times the pull on the hand chain. With the **Triplex** Block one man pulls 82 pounds, overhauling 31 feet of chain to lift one ton a foot, and can lift 2,000 pounds 4 feet per minute. With the **Duplex** Block one man pulls 87 pounds, overhauling 59 feet of chain to lift one ton a foot, and can lift 1,700 pounds 2 feet per minute. With the **Differential** Block three men pull 216 pounds, overhauling 30 feet of chain to lift one ton a foot, and can lift 800 pounds 3 feet per minute. In comparison, with the old fashioned Four Part Rope Tackle Block one man can lift but 200 pounds.

Each Chain Block automatically sustains its load; the operator only supplying power to hoist or lower. This means perfect safety. The Rope Block runs down unless the operator sustains the load with one hand, while shifting the other hand for fresh hoist. This means constant danger.

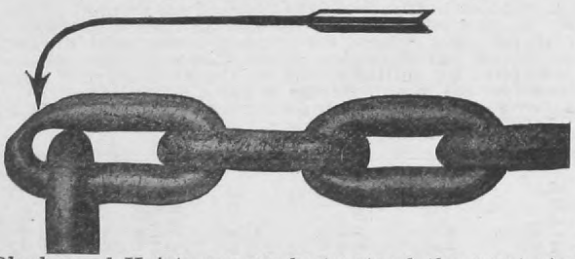
The purpose of a common Rope Tackle Block is to obtain leverage or power whereby the operator with a given pull (by passing many feet of rope or chain through his hands), may lift a heavier load a shorter distance. **Chain Blocks** have a higher power, and also the valuable quality of holding the load automatically suspended at all times, so that it cannot run down, even if the operator lets go, whereas the common Tackle Block will run down, and allow the load to drop, unless the operator maintains a constant pull on the rope at all times.

Each of the three types of Chain Blocks greatly multiplies the power of the operator, but with varying leverage, and the load is always self-sustained, except that the Duplex Block can, if desired, be converted from "Safety" to "Dispatch" lowering.

Each type has its proper use in special fields and investigation will determine the type to be preferred in any given case. Where time and labor cost money the Triplex (shown on the following page) or the Y. & T. Electric (shown on page 585) are the cheapest blocks to buy.

The comparison of power and speed as shown in the picture and as tabulated above will enable any one to select the hoist which will be most suitable for his use.

FACTS REGARDING CHAIN



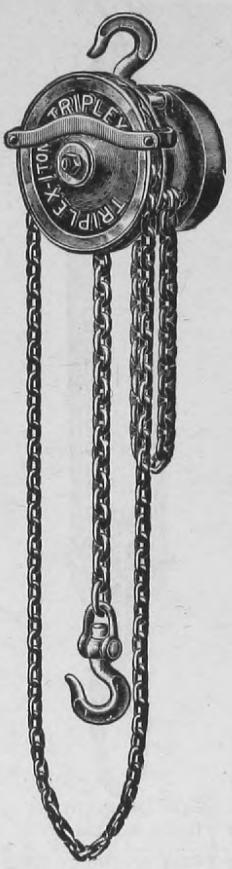
All Chains used on Y. & T. Blocks and Hoists are made to stand the most rigorous tests to which a chain can be put. Not only must the load chain be strong enough to hold a load far in excess of the rated capacity of the block and to resist sudden shocks or strains, but it must meet these requirements without changing the shape of a single link. The moment a link stretches, trouble begins, it no longer fits the pockets in the load sheave and instead of slipping easily through it begins to grind and cut, wearing away both itself and the sheave until the block is ruined. The above picture shows a piece of Triplex Block Chain which held a load of 5¼ times its rated capacity before breaking. Note the elongation and the reduction in area before the break occurred, it stretches rigid before it breaks. (Illustration shown is one-half size.) **The safe test load for this chain is three times its rated capacity without injury to it.**

Note.—Complete Catalogue relating to Yale and Towne Blocks, Hoists, etc., furnished on application.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

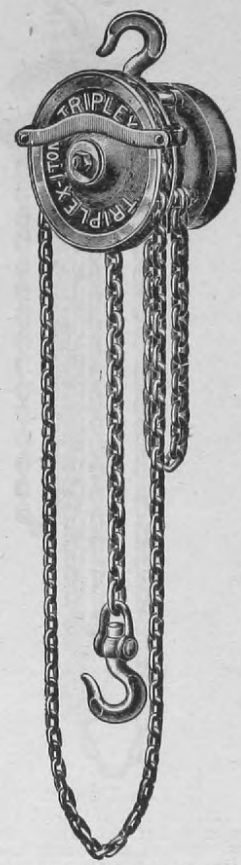
CHAIN BLOCKS

YALE & TOWNE



Yale Triplex.

Cut showing Spur Gearing used in Triplex Blocks.



Yale Triplex High Speed.

Yale Triplex Chain Blocks

Tested to 50% overload beyond rated Capacity.

This Block will outlift and outlast any other block in points of economy, ease and safety of operation. It cannot be equalled as a hoist on hand cranes from ½ to 20 tons capacity, or on jibs and overhead carrier systems. Power is transmitted from the hand chain to the load chain by a train of spur gears, thus giving the highest mechanical efficiency with the lowest frictional resistance and loss. The functions of hoisting and lowering are separated, the latter being effected by an automatic brake mechanism, simple, sensitive and absolutely safe. **Blocks of 3 to 20 ton capacity are supplied with lower blocks.**

Capacity Tons	Price Complete	Regular Hoist Feet*	Extra Hoist Price Per Foot	Min. Distance between Hooks Inches	Reach in feet and inches**	Net Weight Pounds	Gross Weight Pounds	Chain Pull†	
								Pounds	Feet
½	$35.00	8	$0.90	13	9′ 1″	58	76	62	21
1	45.00	8	.95	16	9′ 4″	92	115	82	31
1½	60.00	8	1.00	18	9′ 6″	132	160	110	35
2	70.00	9	1.05	21	10′ 9″	202	248	120	42
3	90.00	10	1.50	32	12′ 8″	209	256	114	70
4	110.00	10	1.60	37	13′ 1″	299	356	124	84
5	140.00	12	2.15	45	15′ 9″	411	482	110	126
6	165.00	12	2.15	46	15′ 10″	411	482	130	126
8	200.00	12	2.70	49	16′ 1″	500	576	135	168
10	240.00	12	3.25	54	16′ 6″	610	700	140	210
12	300.00	12	4.30	54	16′ 6″	855	1100	130‡	126‡
16	360.00	12	5.40	62	17′ 2″	1041	1325	135‡	168‡
20	425.00	12	6.50	70	17′ 10″	1350	1675	140‡	210‡

*Figures denote height in feet which blocks with regular length of chain will hoist above level on which object to be lifted rests. **The Reach is the sum of the Hoist and the Minimum Distance between Hooks. When hung at this height, to lift the full hoist above the floor, the hand chain hangs down to within 18 inches of the floor.

†Figures denote the pull in pounds required to lift the full load, and the number of feet of hand chain which must be handled to lift the load one foot. ‡For each hand chain.

Yale Triplex High Speed Chain Blocks

Tested to 50% overload beyond rated capacity.

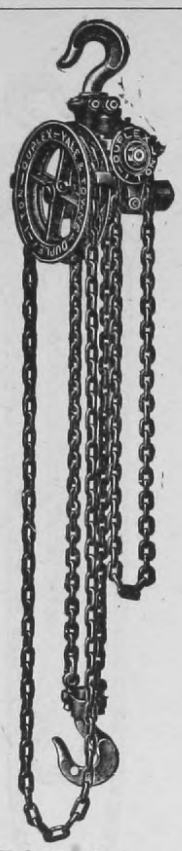
These Blocks have a special gearing and are suitable for rapid work in frequent lifting of loads weighing 500 or 1000 pounds. They handle light loads at double speed, the specifications are the same as the Triplex for the same capacities.

Triplex High Speed Chain Blocks { ¼ Ton Capacity.....Each, $35.00
½ Ton Capacity.....Each, 45.00

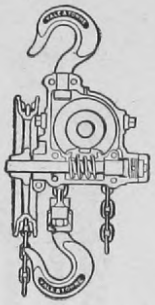
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAIN BLOCKS

YALE & TOWNE



Yale Duplex.



Cut showing Screw Gearing used in Duplex Blocks.

Yale Differential.

Yale Duplex Chain Blocks

Tested to 50% overload beyond rated capacity.

The peculiar advantage of this block is light weight and compactness in headroom, especially adapting it for setting machinery and for portable use. The power is transmitted from the hand chain to the load chain through a worm wheel and screw, which, although necessarily involving higher frictional resistance and therefore lower efficiency than spur gearing, has the advantage of lower first cost and of very smooth action both in hoisting and lowering. **Blocks of 6 to 10 ton capacity are supplied with a lower sheave block.**

Capacity Tons	Price Complete	Regular Hoist Feet*	Extra Hoist Price Per Foot	Min. Distance between Hooks Inches	Reach in feet and inches**	Net Weight Pounds	Gross Weight Pounds	Chain Pull†	
								Pounds	Feet
½	$ 25.00	8	$1.25	13	9′ 1″	46	56	68	40
1	30.00	8	1.30	16	9′ 4″	59	73	87	59
1½	40.00	8	1.35	19	9′ 7″	81	100	94	80
2	50.00	9	1.40	21	10′ 9″	104	130	115	93
3	75.00	10	1.50	25	12′ 1″	187	234	132	126
4	95.00	10	1.90	29	12′ 5″	221	265	142	155
5	140.00	12	2.00	31	14′ 7″	331	406	145	195
6	180.00	12	2.80	33	14′ 9″	310	385	145	252
8	210.00	12	3.00	36	15′ 0″	416	491	160	310
10	275.00	12	3.20	45	15′ 9″	578	653	160	390

*Figures denote height in feet which blocks with regular lengths of chain will hoist above level on which object to be lifted rests. **The Reach is the sum of the Hoist and the Minimum Distance between Hooks. When hung at this height, to lift the full hoist above the floor, the hand chain hangs down to within 18 inches of the floor. †Figures denote the pull in pounds required to lift the full load, and the number of feet of hand chain which must be handled to lift the load one foot.

Yale Differential Chain Blocks

Tested to 50% overload beyond rated capacity.

This Block contains the fewest parts and costs the least of any chain block made. It handles heavy loads readily and on account of its reliability and simplicity is especially adapted for use on farms, in shops, and for all ordinary hoisting purposes where the higher power and durability of the Triplex and Duplex Blocks are not required. The power is applied by pulling directly on the slack part of the load chain and is multiplied by the simple device of the differential sheave. **Each additional foot of chain hoist requires four feet of additional Chain.**

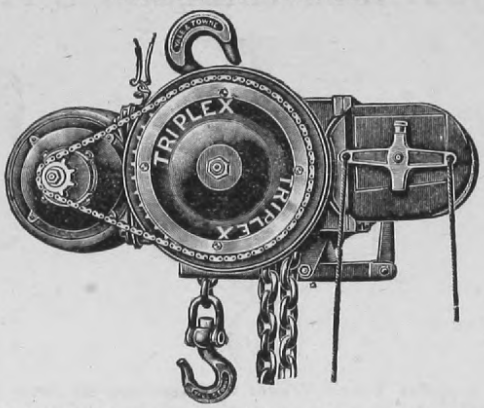
Capacity Tons	Price Complete	Regular Hoist Feet*	Extra Hoist Price Per Foot	Min. Distance between Hooks Inches	Reach in feet and inches**	Net Weight Pounds	Gross Weight Pounds	Chain Pull†	
								Pounds	Feet
⅛	$18.00	5	$2.80	16	6′ 4″	11	14	.....	.....
¼	18.00	6	2.80	17	7′ 5″	23	28	72	18
½	21.00	7	2.80	21	8′ 9″	30	36	122	24
1	28.00	8	3.00	26	10′ 2″	50	60	216	30
1½	36.00	8½	3.20	32	11′ 2″	81	94	246	36
2	45.00	9	3.40	39	12′ 3″	121	146	308	42
3	60.00	9½	4.00	44	13′ 2″	179	204	557	48

*Figures denote height in feet which blocks with regular lengths of chain will hoist above level on which object to be lifted rests. **The Reach is the sum of the Hoist and the Minimum Distance between Hooks. †Figures denote the pull in pounds required to lift the full load, and the number of feet of hand chain which must be handled to lift the load one foot.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE & TOWNE ELECTRIC HOISTS

ELECTRIC TRIPLEX



This hoist takes the place of a chain block at moderate additional cost, and gives from five to ten times the speed. Where any quantity of material from 50 to 2000 pounds has to be repeatedly lifted and lowered, as in serving machine tools, this is the hoist to use. It is well adapted for use on trolley tracks, for attachment to small traveling cranes, or for lashing to shear poles.

It is a compact and simple power hoist made up of the regular Triplex Block with a motor attached. The 1 ton Electric Triplex Hoist is made up of the 2 ton block, and the ½ ton Electric Triplex Hoist is made up of the 1 ton block.

In the case of electric power failing, this hoist may be operated with a hand chain. It enables a lifting speed of 5 to 10 times that obtainable by hand, and is safe with an unskilled operator. A quick-acting brake is supplied as well as an automatic emergency stop to prevent over travel of the hook.

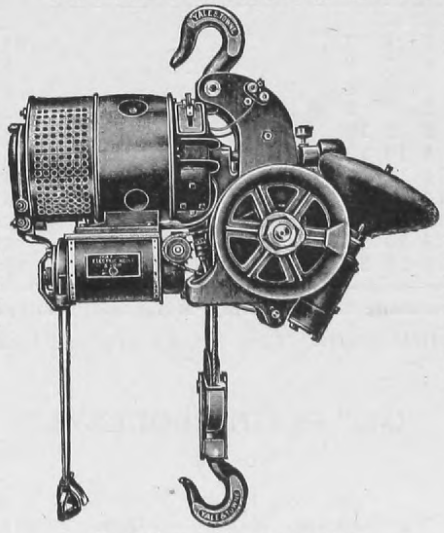
The balanced train of spur gearing insures high operating efficiency and consequent minimum current consumption, and with this type of gearing satisfactory speeds are obtained. A Weston brake with silent pawl is used to sustain the load.

The working parts are tested to double the rated capacity of the hoist, ensuring long life and reliability. They are interchangeable with the working parts of the Triplex Block, making repairs and renewals a simple and inexpensive matter.

The installation involves simply hooking the hoist onto a firm support and attaching two wires for current. It is then ready to do the work of five men. **For Direct or Alternating Currents.**

Capacity Tons	Price Complete		Regular Lift Feet	Extra Lift Per Foot	Min. Distance between Hooks Inches	Width over all Inches	Length over all Inches	Weight Pounds
	Direct Current	Alternating Current						
½	$225.00	$250.00	10	$0.80	20	16½	34	230
1	260.00	290.00	10	.90	25	18	38½	360
2	305.00	340.00	10	1.45	32	18	38½	410

YALE K-Y ELECTRIC HOIST



These hoists give from five to ten times the speed of hand hoists and their cost is only fractional compared to that of electric traveling cranes. For constant lifting they are economical, even when substituted for the cheapest labor, as they can be operated continuously all day on from 14 to 40 cents worth of power. They consist of two winding drums mounted on steel suspension plates and driven by a direct current motor of high power and efficiency.

The controller is of the latest approved type provided with a large number of contacts arranged so as to give gradual speed acceleration. Magnetic blow-out coils are provided, and automatic stops are on hoisting and lowering limits of hook travel. The gear runs in a bath of oil and the journals are equipped with compression grease cups. All parts are enclosed for protection against heat, dust and moisture yet are easily accessible. Can be installed by simply hooking it onto a firm support and connecting two wires for current.

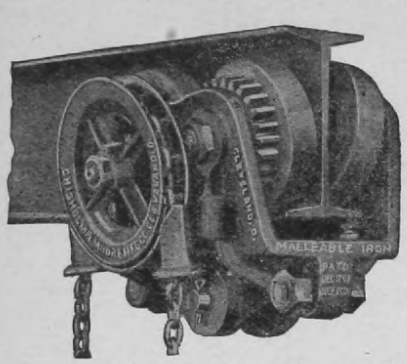
For Direct Current only.

Capacity Tons	Price Complete	Regular Lift Feet	Nominal Horse Power of Motors	Speed in feet per minute		Min. Distance between Hooks Inches	Weight Pounds
				Loaded	Light		
1	$400.00	15	3	20	38	52	640
2	415.00	15	3	15	38	52	640
4	450.00	15	3	8	20	57	800
5	700.00	10	7	16	40	74	1740
6	485.00	10	3	5	13	67	900
10	950.00	10	7	8	20	81	2100

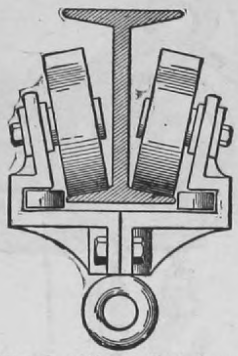
Note.—With 1, 2 and 5 ton Hoists we can furnish Long Drums for lifts up to 45 feet at an advance of $15.00. With 4 and 10 ton Hoists we can furnish Long Drums for lifts up to 22 feet at an advance of $15.00. With 6 ton Hoists we can furnish Long Drums for lifts up to 15 feet maximum at an advance of $15.00.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

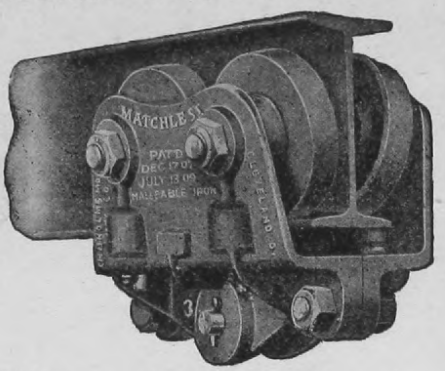
"MATCHLESS" ADJUSTABLE MALLEABLE FRAME TROLLEYS



"Geared" Fig. 122.



Trolley Hoist Track Wheel Construction as used in "Matchless" Trolleys and in Trolley Hoists.



"Plain" Fig. 123.

The use of flangeless track wheels does away with the cramping of the flanges against a curved track and enables these trolleys to pass freely curves of 18 inch radius.

These Trolleys are readily **adjusted** to the different sizes I-beams specified in the price list. They have flangeless track wheels with vertical guide rollers.

The track wheels have hardened steel roller bearings, hardened steel bushings pressed into the wheels, hardened steel axles and hardened steel rollers enclosed in cages.

On the Geared Trolley, the gears are cut. They work very freely and have a large safety factor.

Close Connection—The Hoist is to be hung on the central bolt. The top of the hoist hook reaches to within one and one-half inch of the I-beam, making a very close connection.

The fact that these Trolleys are adjustable admits of their being carried in stock by dealers.

To lubricate Track Wheels, force grease through the holes in exposed ends of the axle studs. This can be done without taking the Trolley down.

List Prices

In Ordering State Size and Weight of I-Beam.

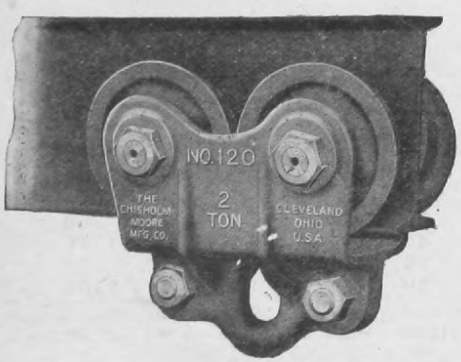
Capacity	Tread Diameter of Wheel	Adjustable for Sizes I-Beams	"Geared" Fig. 122	"Plain" Fig. 123	Weight Fig. 122	Weight Fig. 123
Pounds	Inches	Inches	Each	Each	Pounds	Pounds
1000	4	5 6 7	.....	$16.00	...	35
2000	5	6 7 8	$35.00	20.00	60	47
3000	5	6 7 8	38.00	26.00	70	56
4000	6	7 8 9	40.00	28.00	90	74
6000	6½	8 9 10	47.00	33.00	118	102
8000	7	9 10 12	52.00	37.00	177	155
10000	8	10 12 15	65.00	43.00	218	194
12000	8	10 12 15	80.00	55.00	265	240
16000	9	12 15 18	95.00	70.00	421	378
20000	10	15 18 20 24	115.00	85.00	480	434
24000	10	15 18 20 24	130.00	110.00	600	550

Directions for Adjusting Matchless Trolleys

The vertical guide rollers are on eccentric shafts. Turn these shafts and lock them with the cap screw at the figure denoting the size of the I-beam.

"C-M" PLAIN TROLLEYS

No. 120.



No. 120.

Cast Iron Frame, Four Wheels, and Plain Bearings. Well adapted for garage use. Made for I-beams ranging from 3 to 8 inches.

List Prices

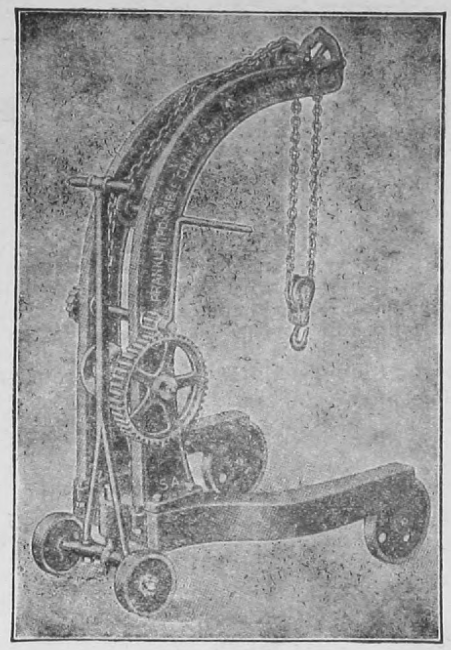
In ordering state size and weight of I-beam.

Capacity	Weight	Tread Diameter of Wheel	For I-beams	List Price
Pounds	Pounds	Inches	Inches	Each
500	13	2	3 and 4	$ 7.00
1000	29	3¾	5 and 6	8.00
2000	33	3¾	5 and 6	10.50
3000	52	4½	6 and 7	13.50
4000	72	5½	7 and 8	17.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

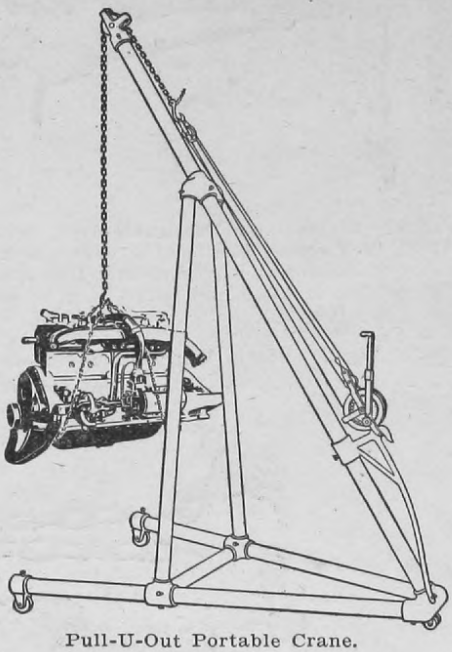
PORTABLE CRANES AND HOISTS

FRANKLIN



Standard Base.

PULL-U-OUT



Pull-U-Out Portable Crane.

FRANKLIN CRANES

Designed for use in shops, factories and all places where it is necessary to lift heavy bodies, or to transfer them from place to place with safety and with the least expenditure of time and labor. The construction is such as to insure the greatest strength and durability. Every part is carefully made and put together with the greatest care and only the very best materials are used. The body of the crane base, wheels and projecting arms are of cast iron, the front axle is of cast steel having a tensile strength of 42000 pounds per square inch. A wide heavy band of wrought iron reinforces the projecting arms and is bolted through the hook plate and extends through the base. All machines are roller bushed.

Nos.	SA	A	2A	3A	B	3B	C	3C	D	E	3E	F
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
Height of Crane	5 4½	6 4½	7 6	7 6	8 4	8 4	9 5	9 5	9 5	11 8	11 8	12 9
Height of Hoist	4 3	5 3	6 3	6 3	7 3	7 3	8 4	8 4	8 4	10 7	10 7	11 8
Width of Bed { Outside	2 5	2 8	2 10	3 3	3 2	3 8	4 2½	4 2	4 2½	4 6½	5 2	4 10½
Width of Bed { Inside	1 9½	2 ½	2 2½	2 4	2 6½	2 9	3 7	3 6	3 7	3 11½	3 11½	4 3½
Length of Bed	2 11	3 2	3 5	3 10	3 10	3 10	3 11	4 1	4 11	4 11	4 11	5 1
Height of Bed	11½	12	12	6⅜	12	6½	12	7	12	12	7	12
Overhang	2 1½	2 4½	2 7½	2 7½	2 8½	2 8½	2 11	2 11	3 11	3 11	3 11	4 1
Capacity	1 Ton.	1½ Tons	2 Tons	2 Tons	2½ Tons	2½ Tons	3 Tons	3 Tons	3 Tons	3 Tons	3 Tons	3 Tons
Weight	480 lbs.	665 lbs.	800 lbs.	785 lbs.	1000 lbs.	1000 lbs.	1240 lbs.	1240 lbs.	1300 lbs.	1500 lbs.	1500 lbs.	1940 lbs.
Standard Base ... Each	$100.00	100.00	112.50	.....	125.00	.....	150.00	.....	175.00	175.00	.....	200.00
Low Down Base . Each	.....	.....	.....	112.50	.....	125.00	.....	150.00	.....	.....	175.00	.....

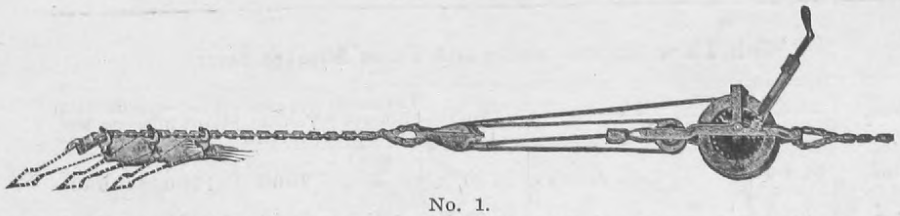
PULL-U-OUT CRANES

The Most Remarkable Portable Crane. Weighs only 250 pounds and has a lift of 9½ feet and a lifting capacity of one ton. Built of 2½ inch extra heavy steel tubing, enameled black. Base is 3 feet 3 inches wide by 6 feet deep. Height 10 feet. Mounted on strong roller wheels, and will do the work of an entire system of overhead tracks because it can go wherever there is floor space to roll it on. The Pull-U-Out can easily be detached from the Crane and used separately for all manner of hoisting or pulling.

Pull-U-Out Portable Crane, equipped with 40 feet of steel cable, two 7 foot chains and three stakes..Complete, $75.00

Pull-U-Out Crane Only, Without Equipment.....Each, 55.00

PULL-U-OUT



No. 1.

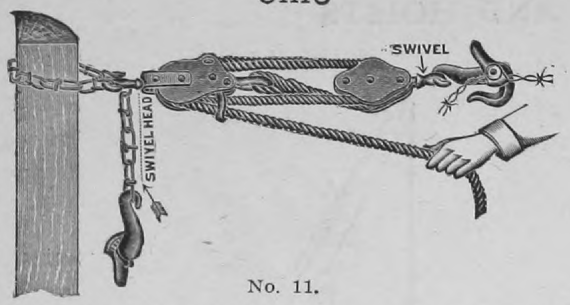
With a Pull-U-Out anyone can easily move the heaviest touring car if turned over or stuck in the mud. Used also for pulling stumps, spotting cars, stretching wire and other similar jobs. Capacity: Will pull (on wheels) 100,000 pounds and has a reach of 17½ feet on the pull.

No. 1—Pull-U-Out consists of a Winding Drum, Lever Crank, 40 feet Steel Cable, two 7 foot Chains and three Stakes. Weighs 28 pounds and goes in a space 4x6x14 inches .....Each, $20.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

TACKLE BLOCK WIRE STRETCHER AND HOIST

OHIO

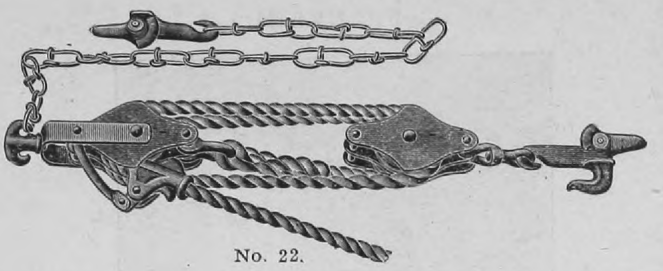


No. 11.

Made entirely of Steel and Malleable Iron, reeved with best quality ⅜ inch rope. The locking device is automatic and direct acting, locking in any position. Has extra heavy bearings and strong full length chain. Can be used as a Hoist, Capacity 600 lbs.

No. 11—Ohio Tackle Block Wire Stretcher and Hoist.....Per Dozen, $15.30

ROYAL BLUE

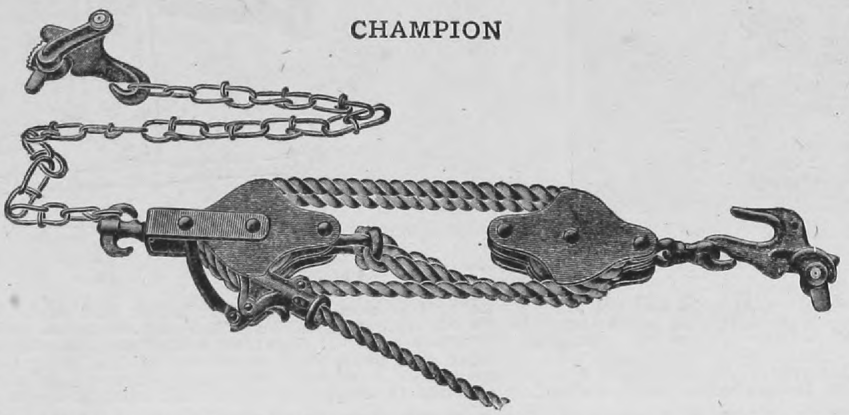


No. 22.

Made entirely of Steel and Malleable Iron, reeved with the best quality ⅜ inch rope. Has **Roller Bearings,** the best ever placed in a tackle block. Wire Grips of extra quality, with hardened eccentrics prevent the wire from slipping. Can also be used as a Hoist, Capacity 600 lbs.

No. 22—Royal Blue Tackle Block Wire Stretcher and Hoist.....Per Dozen, $16.20

CHAMPION



Made entirely of Steel and Malleable Iron, reeved with best quality ½ inch rope. Rope Lock is automatic and absolutely positive. Has new design Double Eccentric Wire Grip and Double Swivel. Can be used as a Hoist, Capacity 1500 lbs.

No. 33—Champion Tackle Block Wire Stretcher and Hoist..... Per Dozen, $27.00

MONARCH ROPE HOISTS

Nos. 40 and 34.

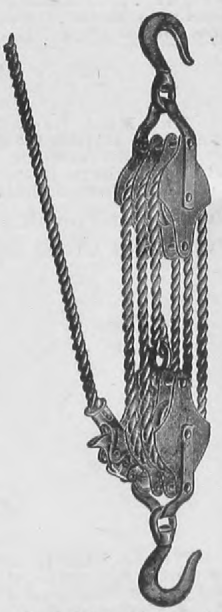
Ney's Monarch Rope Hoists are without an equal in strength, ease of operation, construction, material, positive locking and finish. Can be used in any position or at any angle. All parts are made of best grade Steel and Malleable Iron. Lock is adjustable and can be placed at any angle.

With Two Sheaves above and Two Sheaves below

Nos.	Price Each List	Price Each Net	For Rope Inch	Diam. of Sheave Inches	Approx Tensile Strength	Approx. Working Load	One Man can lift Pounds
40	$4.00	$	⅜ to ⅝	3	3000	1500	400
34	6.00	.....	⅝ to ¾	4	6000	3000	500

With Three Sheaves above and Three Sheaves below

Nos.	Price Each List	Price Each Net	For Rope Inch	Diam. of Sheave Inches	Approx. Tensile Strength	Approx. Working Load	One Man can lift Pounds
38	$5.00	$	⅜ to ⅝	3	3000	1500	600
32	8.00	.....	⅝ to ¾	4	7000	3000	700



Nos. 38 and 32.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WOOD TACKLE BLOCKS

REGULAR INSIDE IRON STRAPPED BLOCKS WITH IRON SHEAVES

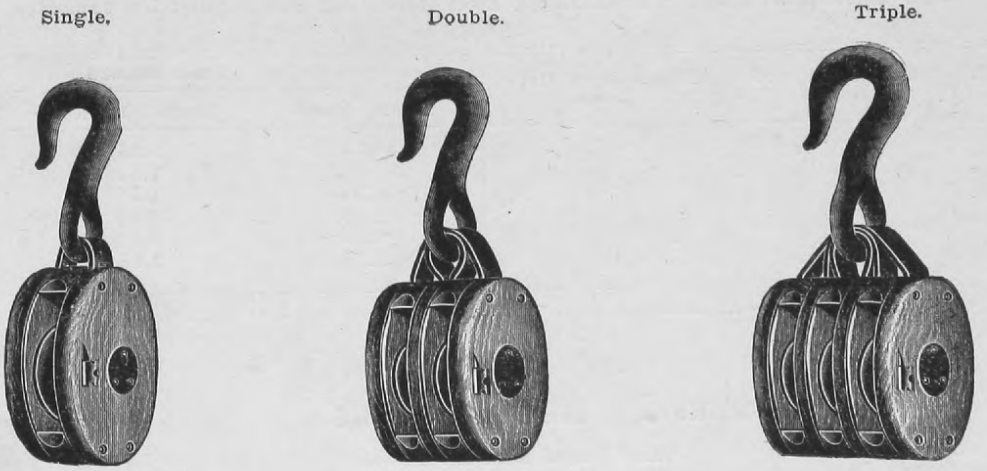
With Loose Side Hooks and Beckets

Single. Double. Triple

No. 490. No. 491. No. 492.

With Loose Side Hooks

Single. Double. Triple.



No. 493. No. 494. No. 495.

Length of Shell, Inches	Size of Sheave, Inches	Diam. of Rope, Inches	Common Iron Bushed			Patent Roller Bushed		
			Single, Each	Double Each	Triple Each	Single, Each	Double, Each	Triple, Each
3	1¾ x ½ x ⅜	⅜	$0.70	$1.30	$1.75	$1.10	$2.00	$2.90
3½	2 x ½ x ⅜	⅜	.75	1.45	2.00	1.15	2.20	3.15
4	2¼ x ⅝ x ⅜	½	.85	1.60	2.15	1.20	2.25	3.25
5	3 x ¾ x ⅜	⅝	.90	1.75	2.25	1.25	2.35	3.50
6	3½ x1 x ½	¾	1.10	2.00	2.90	1.50	2.85	4.40
7	4¼ x1 x ½	⅞	1.30	2.40	3.50	1.70	3.35	5.00
8	4¾ x1 ⅛ x ⅝	1	1.65	2.85	4.25	2.25	4.15	6.00
9	5½ x1 ⅛ x ⅝	1	1.85	3.40	4.75	2.50	4.70	7.25
10	6¼ x1 ¼ x ⅝	1⅛	2.75	4.50	6.25	3.50	6.00	8.50
12	8 x1 ⅜ x ¾	1¼	4.45	7.50	10.65	5.30	9.20	13.20
14	9½ x1 ⅝ x ⅞	1⅜	7.00	10.50	15.00	8.15	12.80	18.45
15	10 x1 ⅝ x ⅞	1½	8.00	13.00	18.00	9.25	15.50	21.75
16	11 x1 ¾ x ⅞	1⅝	10.00	15.00	22.00	11.50	18.00	26.50

BECKETS

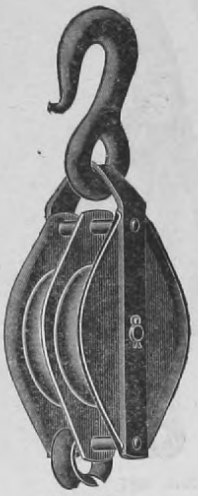
We furnish Beckets in all single, one-half double and one-third of the triple blocks without charge. If a greater proportion are wanted, add for each additional Becket net extra as follows:

For Blocks, inches	3 to 5	6	7	8	9	10	12	14	15	16
Net Extra for each Becket	$.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

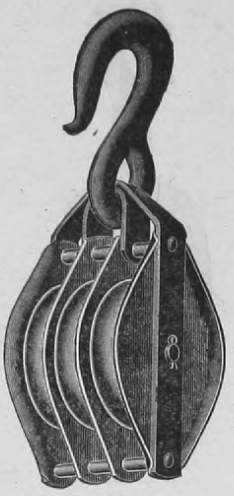
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STEEL TACKLE BLOCKS

No. 601.



No. 602.



No. 603.

Oval. Sheet Steel Shells, Turned Edges, Steel Hooks and Straps, All Parts Japanned.

Length of Shell Inches	Size of Sheave Inches	Diameter of Rope Inches	**Plain Bushed**		
			Single, Each	Double, Each	Triple, Each
3	2 x ½	⅜	$0.70	1.35	$1.75
4	2¼ x 11/16	½	.85	1.60	2.15
5	2¾ x ⅞	⅝	.90	1.75	2.25
6	3¼ x1	¾	1.10	2.00	2.90
7	4¼ x1 ⅛	⅞	1.30	2.40	3.50
8	5 x1 ¼	1	1.65	2.85	4.25

Note.—In ordering state if wanted with or without Becket.

PERFECT METAL BLOCKS

With Loose Side Hooks

Single, No. 583. Double, No. 584. Tripple, No. 585.

Outer edges of middle partitions, as well as sides of shell are rounded to protect the rope.

Both outside and middle straps extend full length of shell. The load strain, as well as the becket strain is therefore borne by the Straps—not by the Shell.

No. 583.

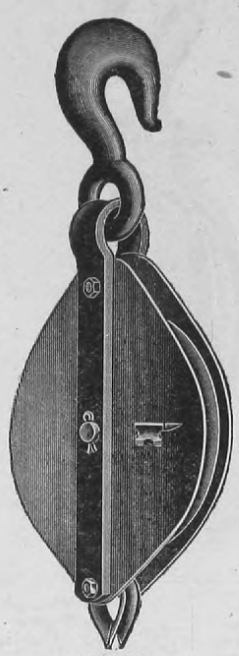
Dimensions			**Iron Bushed**			**Improved Roller Bushed**		
L'gth, Shell, in.	**Size,** Sheave inches	For Dia. Rope, in.	S'gle, each	D'ble, each	T'ple, each	S'gle, each	D'ble, each	T'ple, each
2½	1⅜ x 9/16 x ¼	7/16	$0.45	$ 0.80				
3	1¾ x ½ x ⅜	⅜	.70	1.30	$ 1.75	$1.10	$ 2.00	$ 2.90
3½	2 x ⅝ x ⅜	½	.75	1.45	2.00	1.15	2.20	3.15
4	2¼ x ⅝ x ⅜	½	.85	1.60	2.15	1.20	2.25	3.25
5	3 x ¾ x ⅜	⅝	.90	1.75	2.25	1.25	2.35	3.50
6	3½ x1 x½	¾	1.10	2.00	2.90	1.50	2.85	4.40
7	4¼ x1 x½	⅞	1.30	2.40	3.50	1.70	3.35	5.00
8	4¾ x1 ⅛ x ⅝	1	1.65	2.85	4.25	2.25	4.15	6.00
9	5½ x1 ⅜ x ⅝	1⅛	1.85	3.40	4.75	2.50	4.70	7.25
10	6¼ x1 ½ x ¾	1¼	2.75	4.50	6.25	3.50	6.00	8.50
12	7½ x1 ⅝ x ¾	1⅜	4.45	7.50	10.65	5.30	9.20	13.20
14	8½ x1 ⅞ x ⅞	1½	7.00	10.50	15.00	8.15	12.80	18.45

Note.—In ordering state if wanted with or without Becket.

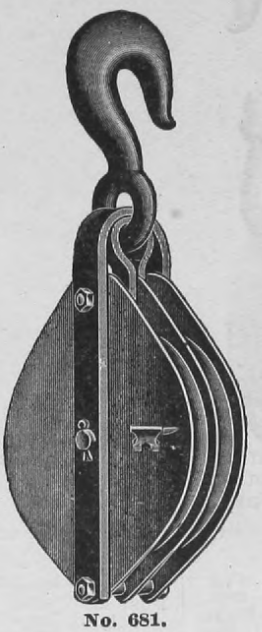
No. 585.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

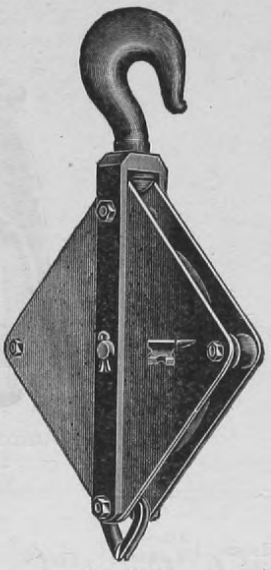
WROUGHT IRON BLOCKS FOR WIRE ROPE



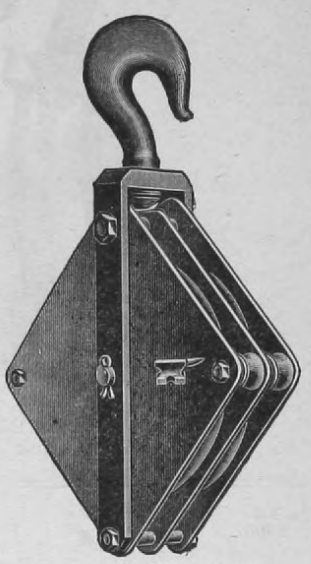
No. 680.



No. 681.



No. 678.

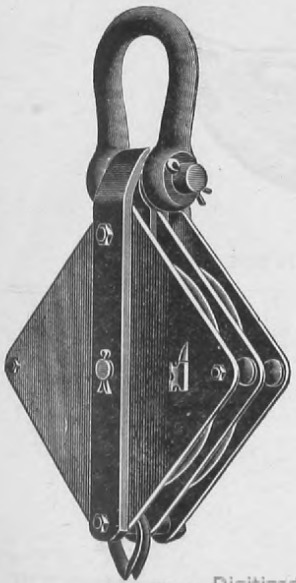


No. 679.

Oval Shell
With Loose Side Hooks

Diamond Shell
With Stiff Swivel Hooks

Dimensions		Iron Bushed		Phosphor Bronze or Metaline Self-Lubricating Bushed		Dimensions		Iron Bushed		Phosphor Bronze or Metaline Self-Lubricating Bushed	
Size Sheave, inches	For Dia. Rope, inches	Single, each	Double, each	Single, each	Double, each	**Size** Sheave, inches	For Dia. Rope, inches	Single, each	Double, each	Single, each	Double, each
6x1 x ¾	⅜	$ 6.00	$11.00	$ 9.00	$17.00	6x1 x ¾	⅜	$ 6.00	$11.00	$ 9.00	$17.00
8x1¼x ¾	½	8.00	13.00	11.00	19.00	8x1¼x ¾	½	8.00	13.00	11.00	19.00
10x1¼x ⅞	⅝	10.00	15.00	13.00	21.00	10x1¼x ⅞	⅝	10.00	15.00	13.00	21.00
12x1½x1	⅝	.....	.....	15.00	23.00	12x1½x1	⅝	12.00	17.00	15.00	23.00
14x1½x1⅛	¾	.....	.....	17.00	25.00	14x1½x1⅛	¾	14.00	19.00	17.00	25.00
16x1¾x1¼	⅞	.....	.....	25.00	38.00	16x1¾x1¼	⅞	21.50	31.00	25.00	38.00

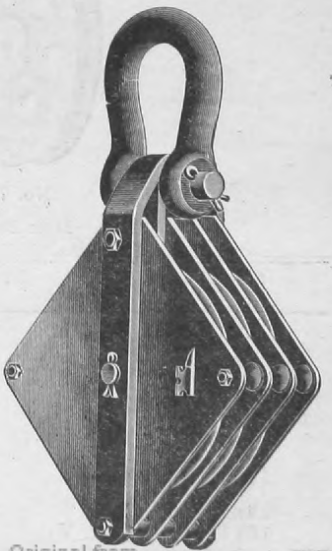


No. 685.

Diamond Shell—"With Shackles"

Dimensions		Phosphor Bronze or Metaline Self-Lubricating Bushed	
Size Sheave, inches	For Dia. Rope, inches	Double, each	Triple, each
10x1¼x ⅞	⅝	$21.00	$28.00
12x1½x1	⅝	23.00	31.00
14x1½x1⅛	¾	25.00	34.00

Note—In ordering, state if wanted with or without Becket.



No. 686.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SNATCH BLOCKS

No. S603.
Wood Snatch Blocks
Drop Link

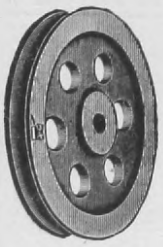
No. 607.
Steel Automatic Snatch Blocks
Drop Link

No. 722.
Wrought Iron Snatch Blocks
for Wire Rope
Drop Link

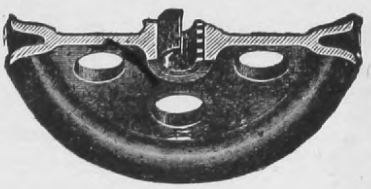
No. S603. Length Shell, Inches	Size Sheave, Inches	For Dia. Rope, Inches	Iron Bushed, Each	No. 607. Length Shell, Inches	Size Sheave, Inches	For Dia. Rope, Inches	Iron Bushed, Each	No. 722. Size Sheave, Inches	For Wire Rope, Inches	Iron Bushed, Each	Phosphor Bronze or Metaline Bushed, Self-Lubricating, Each
6	3 x1 1/8 x 1/2	7/8	$ 4.00	7	3 1/2 x1 1/4 x 1/2	7/8	$ 4.75	6	3/8	$11.00	$12.00
7	3 1/2 x1 1/4 x 1/2	7/8	4.75	8	4 1/2 x1 3/8 x 5/8	1	5.75	8	1/2	14.00	15.00
8	4 1/2 x1 3/8 x 5/8	1	5.75	10	5 3/4 x1 7/8 x 3/4	1 1/4	8.50	10	5/8	16.00	18.00
9	5 x1 3/8 x 5/8	1 1/8	6.75	12	6 3/4 x2 1/8 x 3/4	1 1/2	10.00	12	5/8	18.00	21.00
10	5 3/4 x1 7/8 x 3/4	1 1/4	8.50	14	8 x2 1/4 x 7/8	1 3/4	13.00	14	3/4	20.00	24.00
12	6 3/4 x2 1/8 x 3/4	1 1/2	10.00	16	9 x2 5/8 x1	2	**17.00**	16	7/8	28.00	33.00
14	8 x2 1/4 x 7/8	1 3/4	13.00								
16	9 x2 5/8 x1	2	17.00								
18	10 x3 x1 1/8	2 1/4	25.00								
20	11 x3 1/2 x1 1/4	2 1/2	38.00								
22	11 3/4 x4 1/4 x1 1/2	3	55.00								
24	12 1/2 x4 1/2 x1 1/2	3 1/2	70.00								

IRON SHEAVES FOR WIRE ROPE

Deep Grooves



No. 755.
Iron Bushed.



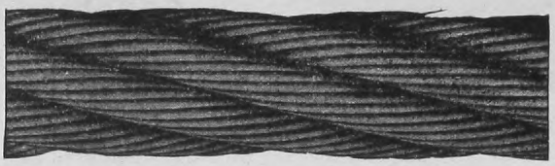
No. 756.
Phosphor Bronze Bushed.

Size Sheave, Inches	Thickness at Hub, Inches	Diameter Wire, Inches	Iron Bushed, Each	Phosphor Bronze or Metaline Bushed, Each
3x 1/2 x 3/8	1/2	1/4	$0.15	$0.85
4x 5/8 x 1/2	11/16	5/16	.28	1.10
4x 3/4 x 1/2	13/16	3/8	.30	1.15
5x 7/8 x 5/8	15/16	3/8	.45	1.45
6x1 x 3/4	1 1/16	3/8	.75	2.00
8x1 1/4 x 3/4	1 3/8	1/2 and 5/8	1.40	2.90
10x1 1/4 x 7/8	1 3/8	5/8	2.50	3.75
12x1 1/2 x1	1 5/8	3/4	3.50	5.50
14x1 1/2 x1 1/8	1 5/8	3/4	4.45	6.90
16x1 3/4 x1 1/4	2	7/8 and 1	7.00	8.75

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LAY OF WIRE ROPE

Note.—Wire rope is usually laid up as follows:



Regular lay, right hand rope.
Wires in the strands laid to the left, strands laid to the right.

Regular lay, left hand rope.
Wires in the strands laid to the right, strands laid to the left.

Lang lay.
Wires in the strands and the strands themselves all laid the same way, either right or left.

Note.—The first two illustrations are of Hoisting Rope construction, while the last is of Haulage Rope construction. Standard Rope is made right hand regular lay, unless otherwise specified.

How to Order Wire Rope

Conditions and requirements must be carefully considered and the rope selected accordingly. Use the exact terms of description given in catalogue for each rope, stating quality, number of strands, wires in the strand, and whether hemp core or wire center; size, in diameter or circumference; and length. In ordering rope fitted with thimbles, sockets, or hooks, state the length from pull or inside bearing of thimble, socket, or hook, to end of rope. If there are fittings in both ends, state length of rope from pull to pull of fittings.

When doubtful as to the material to be used, the conditions under which the rope is to operate should be given, or sample submitted, in order that the proper quality and construction may be furnished. When possible, a rough sketch showing size and position of sheaves, and maximum load in pounds upon the rope, should be sent with inquiry or order. When ordering rope for elevators, state whether Hoisting, Counterweight or Hand Controler Rope is wanted.

Standard Breaking Strengths

The method of measuring breaking strengths of different kinds of wire rope manufactured in the United States, has heretofore been based upon the individual wires in the rope and the public has become used to this method of figuring. With the issue of this catalogue we publish for the first time the figures of breaking strengths based upon the average of the different sizes and kinds of wire rope as obtained by actual tests on a large number of specimens. These figures now represent the standard adopted by all makers of wire rope in the United States. In no case have the intrinsic strengths been reduced, but the new method of figuring is adopted and published to meet the desire for more convenient and direct figures.

Method of Testing American Wire Rope

Both ends of each coil of wire used in our wire rope are carefully tested, and each coil must conform to an exacting standard. The manufacturers have a complete apparatus for testing all sizes and qualities of finished rope listed in this catalogue and frequent tests are made to be sure that the product conforms to the published strengths.

Particular attention is called to the fact that the strengths given are correct only for the standard construction shown, and any different construction will vary from the figures given more or less. We can, however, furnish such strengths on request, when special constructions are necessary.

Suggestions to Users of Wire Rope

Wire Rope is as flexible as new Manila or hemp rope of equal strength. It is more efficient as standing rope, being uninfluenced by weather conditions. For hoisting and haulage service it is more durable.

In designing a wire rope system of any sort, it is always advisable to use drums, sheaves and pulleys of the largest diameter practical. Avoid high velocities and sharp bending, particularly reverse bending, all of which tend toward rapid deterioration of wire rope. Wherever possible, avoid overwinding on drums. The larger the drum or sheaves the longer the rope will last. Use grooved drum if possible.

The working loads for hoisting and haulage ropes should not exceed one-fifth the ultimate or breaking stress of the rope. The working load for standing or guy rope, however, may be somewhat exceeded. For shafts and elevators, where human life is at stake, the working load should be one-seventh or one-tenth of the strength of the rope.

To get more tonnage, increase the load, but not the speed, because wear of the rope increases with the speed.

The grooves of the drums, sheaves or pulleys should be perfectly smooth and uniform and of such shape that the rope cannot wedge. All sheaves or pulleys should be absolutely in line with the rope, so that it will not chafe on the sides of the groove.

Pulleys used for transmitting power should be lined with wood, leather or rubber. This will materially increase the life of wire rope, particularly where high speeds are necessary. Do not subject wire rope to jerks or sudden stresses. When wire rope is exposed to intense heat, a soft iron or wire center or asbestos cord may be substituted for the regular hemp center. For either of these special centers, add 10% to the list price of rope with hemp center.

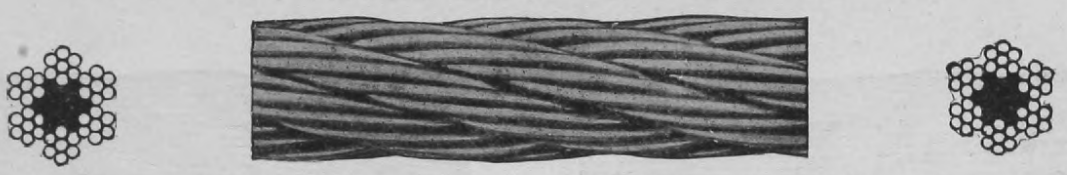
Galvanized ropes are not intended for general hoisting or running purposes. Bending over drums and sheaves will wear off the zinc and rust rapidly follows. Galvanized ropes have about 10% less strength than ungalvanized ropes. Exact strength furnished on request.

To protect ungalvanized hoisting or haulage rope from the weather, cover it thickly with a compound made of Linseed Oil, or with a paint consisting of equal parts of Linseed Oil and Spanish Brown or Lamp Black. When exposed to excessive moisture, a good preservative and lubricant is made up as follows: To one barrel of Swedish or Stockholm Tar add one bushel of fresh slaked Lime. Boil well and apply to rope in a liquid state. Sawdust or Oatmeal is frequently added with good effect. Unlike hemp or manila rope, wire rope should not be coiled or uncoiled, but must be wound or unwound as from a reel. It should be seized with soft iron wire on each side of the portion at which the cut is to be made to prevent the ends from untwisting.

Sizes of rope smaller than those published take same price as smallest size listed. Intermediate sizes of rope take the list of the next larger size.

Digitized by Google Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

TRANSMISSION, HAULAGE OR STANDING ROPE



SIX Strands—One Hemp Core.—SEVEN Wires to the Strand.

Transmission Rope is used for the transmission of power. It is usually made of Swedes Iron and when used over large pulleys it will last longer than rope made with nineteen wires to the strand. Small Pulleys require a nineteen wire rope. **Haulage Rope** is used for Mine Haulage, Conveyors and Inclined Planes. It is made in Crucible Cast Steel, Extra Strong Crucible Cast Steel, Plow Steel and Monitor Plow Steel Grades. The coarse wires in this construction better resist abrasion, and where the drums or sheaves are large, it wears longer than rope made of finer wires. When the drums or sheaves are small a rope with nineteen wires to the strand should be used. Very large haulage ropes are usually made with nineteen wires to the strand. **Long Lay Haulage Rope** is especially adapted for use in mines and on inclines having frequent curves and where surface wear is excessive. The wires and strands in this rope are twisted in the same direction. **Standing or Guy Rope** is used for Guys on Derricks, Standing Rigging and Smoke Stacks. Made in Swedes Iron, Crucible Cast Steel and Plow Steel Grades, wires in the rope extra galvanized by our own patented process, which insures perfect adhesion of the zinc to the metal. It does not crack, chip or flake, the weather proof coating being a part of the wire itself. Galvanized Crucible Cast Steel Guy Ropes are rapidly replacing Galvanized Iron Ropes, because the former grade affords greater strength in a smaller diameter and lighter weight.

Swedes Iron.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
1½	$0.51	4¾	3.55	32	6.4	16
1⅜	.43	4¼	3	28	5.6	15
1¼	.36	4	2.45	23	4.6	13
1⅛	.30	3½	2	19	3.8	12
1	.24	3	1.58	15	3	10.5
⅞	.18½	2¾	1.20	12	2.4	9
¾	.14	2¼	.89	8.8	1.7	7.5
11/16	.12	2⅛	.75	7.3	1.5	7.25
5/8	$0.10	2	.62	6	1.2	7
9/16	.08¼	1¾	.50	4.8	.96	6
½	.06½	1½	.39	3.7	.74	5.5
7/16	.05½	1¼	.30	2.6	.52	4.5
⅜	.04½	1⅛	.22	2.2	.44	4
5/16	.03¾	1	.15	1.7	.34	3.5
9/32	.03¼	⅞	.12½	1.2	.24	3
...	.....	.....	.....	.....	.....	.....

Crucible Cast Steel.

1½	$0.60	4¾	3.55	63	12.6	11
1⅜	.51	4¼	3	53	10.6	10
1¼	.43	4	2.45	46	9.2	9
1⅛	.36	3½	2	37	7.4	8
1	.29	3	1.58	31	6.2	7
⅞	.22½	2¾	1.20	24	4.8	6
¾	.17	2¼	.89	18.6	3.7	5
11/16	.14½	2⅛	.75	15.4	3.1	4¾
5/8	.12	2	.62	13	2.6	4½
9/16	.10	1¾	.50	10	2	4
½	.08	1½	.39	7.7	1.5	3½
7/16	.06½	1¼	.30	5.5	1.1	3
⅜	.05½	1⅛	.22	4.6	.92	2¾
5/16	.04½	1	.15	3.5	.70	2¼
9/32	.04	⅞	.12½	2.5	.50	1¾

Plow Steel.

1½	$0.90	4¾	3.55	82	16.4	11
1⅜	.76	4¼	3	72	14.4	10
1¼	.62	4	2.45	60	12	9
1⅛	.51	3½	2	47	9.4	8
1	.41	3	1.58	38	7.6	7
⅞	.32	2¾	1.20	31	6.2	6
¾	.24½	2¼	.89	23	4.6	5
11/16	.21	2⅛	.75	18	3.6	4¾
5/8	.17½	2	.62	16	3.2	4½
9/16	.14½	1¾	.50	12	2.4	4
½	.11½	1½	.39	10	2	3½
7/16	.09	1¼	.30	7	1.4	3
⅜	.06¾	1⅛	.22	5.9	1.2	2¾
5/16	.06	1	.15	4.4	.88	2¼
9/32	.05½	⅞	.12½	3.4	.68	1¾

Extra Strong Crucible Cast Steel.

1½	$0.75	4¾	3.55	73	14.6	11
1⅜	.64	4¼	3	63	12.6	10
1¼	.53	4	2.45	54	10.8	9
1⅛	.44	3½	2	43	8.6	8
1	.35	3	1.58	35	7	7
⅞	.27	2¾	1.20	28	5.6	6
¾	.20	2¼	.89	21	4.2	5
11/16	.17	2⅛	.75	16.7	3.3	4¾
5/8	.14¼	2	.62	14.5	2.9	4½
9/16	.12	1¾	.50	11	2.2	4
½	.09½	1½	.39	8.85	1.8	3½
7/16	.07½	1¼	.30	6.25	1.25	3
⅜	.06	1⅛	.22	5.25	1.05	2¾
5/16	.05½	1	.15	3.95	.79	2¼
9/32	.05	⅞	.12½	2.95	.59	1¾

Monitor Plow Steel.

1½	$1.05	4¾	3.55	90	18	11
1⅜	.88	4¼	3	79	16	10
1¼	.72	4	2.45	67	13	9
1⅛	.58	3½	2	52	10	8
1	.48	3	1.58	42	8.4	7
⅞	.37	2¾	1.20	33	6.6	6
¾	.28½	2¼	.89	25	5	5
11/16	.24½	2⅛	.75	20	4	4¾
5/8	.20½	2	.62	17½	3.5	4½
9/16	.17	1¾	.50	13	2.6	4
½	.13½	1½	.39	11	2.2	3½
7/16	.11½	1¼	.30	7¾	1.5	3
⅜	.08¾	1⅛	.22	6½	1.3	2½
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD HOISTING ROPE

SIX Strands—One Hemp Core.—NINETEEN Wires to the Strand.

Standard Hoisting Rope is pliable and will pass over reasonably large drums or sheaves. **Swedes** Iron Grade is used for hoisting and counterweight service on elevators. **Crucible** Cast Steel and **Extra** Strong Crucible Cast Steel Grades are for service where a stronger rope is required such as Coal and Ore Hoists, Derricks, Ballast Unloaders, etc. **Plow** Steel and **Monitor** Plow Steel Grades meet the requirements for Mines, Derricks, Dredges, Steam Shovels, Logging, Stump Pullers and Steering Lines on large steamships.

Swedes Iron.

Diameter in Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
2 ¾	$1.70	8 ⅝	11.95	111	22.2	17
2 ½	1.40	7 ⅞	9.85	92	18.4	15
2 ¼	1.17	7 ⅛	8	72	14.4	14
2	.95	6 ¼	6.30	55	11	12
1 ⅞	.88	5 ¾	5.55	50	10	12
1 ¾	.80	5 ½	4.85	44	8.8	11
1 ⅝	.65	5	4.15	38	7.6	10
1 ½	.57	4 ¾	3.55	33	6.6	9
1 ⅜	.49	4 ¼	3	28	5.6	8.5
1 ¼	.40	4	2.45	22.8	4.56	7.5
1 ⅛	.33	3 ½	2	18.6	3.72	7
1	.26	3	1.58	14.5	2.90	6
⅞	.20	2 ¾	1.20	11.8	2.36	5.5
¾	.16	2 ¼	.89	8.5	1.70	4.5
⅝	.12	2	.62	6	1.20	4
9/16	.10	1 ¾	.50	4.7	.94	3.5
½	.08 ½	1 ½	.39	3.9	.78	3
7/16	.07 ½	1 ¼	.30	2.9	.58	2.75
⅜	.07	1 ⅛	.22	2.4	.48	2.25
5/16	.06 ¾	1	.15	1.5	.30	2
¼	.06 ½	¾	.10	1.1	.22	1.50

Crucible Cast Steel.

Diameter in Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
2 ¾	$2.10	8 ⅝	11.95	211	42.2	11
2 ½	1.75	7 ⅞	9.85	170	34	10
2 ¼	1.44	7 ⅛	8	133	26.6	9
2	1.16	6 ¼	6.30	106	21.2	8
1 ⅞	1.02	5 ¾	5.55	96	19	8
1 ¾	.90	5 ½	4.85	85	17	7
1 ⅝	.77	5	4.15	72	14.4	6.5
1 ½	.66	4 ¾	3.55	64	12.8	6
1 ⅜	.56	4 ¼	3	56	11.2	5.5
1 ¼	.46	4	2.45	47	9.4	5
1 ⅛	.38	3 ½	2	38	7.6	4.5
1	.31	3	1.58	30	6	4
⅞	.24	2 ¾	1.20	23	4.6	3.5
¾	.19	2 ¼	.89	17.5	3.5	3
⅝	.14	2	.62	12.5	2.5	2.5
9/16	.12	1 ¾	.50	10	2	2.25
½	.11	1 ½	.39	8.4	1.68	2
7/16	.10	1 ¼	.30	6.5	1.30	1.75
⅜	.09 ½	1 ⅛	.22	4.8	.96	1.50
5/16	.09 ¼	1	.15	3.1	.62	1.25
¼	.09	¾	.10	2.2	.44	1

Extra Strong Crucible Cast Steel.

2 ¾	$2.55	8 ⅝	11.95	243	48.6	11
2 ½	2.10	7 ⅞	9.85	200	40	10
2 ¼	1.70	7 ⅛	8	160	32	9
2	1.34	6 ¼	6.3	123	24.6	8
1 ⅞	1.25	5 ¾	5.55	112	22.4	8
1 ¾	1.10	5 ½	4.85	99	19.8	7
1 ⅝	.94	5	4.15	83	16.6	6.5
1 ½	.80	4 ¾	3.55	73	14.6	6
1 ⅜	.68	4 ¼	3	64	12.8	5.5
1 ¼	.56	4	2.45	53	10.6	5
1 ⅛	.46	3 ½	2	43	8.6	4.5
1	.37	3	1.58	34	6.80	4
⅞	.29	2 ¾	1.20	26	5.20	3.5
¾	.22	2 ¼	.89	20.2	4.04	3
⅝	.16 ½	2	.62	14	2.80	2.5
9/16	.14	1 ¾	.50	11.2	2.24	2.25
½	.12 ½	1 ½	.39	9.2	1.84	2
7/16	.11 ½	1 ¼	.30	7.25	1.45	1.75
⅜	.11	1 ⅛	.22	5.30	1.06	1.50
5/16	.10 ¾	1	.15	3.50	.70	1.25
¼	.10 ½	¾	.10	2.43	.49	1

Plow Steel.

2 ¾	$3.00	8 ⅝	11.95	275	55	11
2 ½	2.50	7 ⅞	9.85	229	46	10
2 ¼	2.00	7 ⅛	8	186	37	9
2	1.58	6 ¼	6.3	140	28	8
1 ⅞	1.46	5 ¾	5.55	127	25	8
1 ¾	1.30	5 ½	4.85	112	22	7
1 ⅝	1.08	5	4.15	94	19	6.5
1 ½	.93	4 ¾	3.55	82	16	6
1 ⅜	.79	4 ¼	3	72	14	5.5
1 ¼	.65	4	2.45	58	12	5
1 ⅛	.54	3 ½	2	47	9.4	4.5
1	.43	3	1.58	38	7.6	4
⅞	.34	2 ¾	1.20	29	5.8	3.5
¾	.26	2 ¼	.89	23	4.6	3
⅝	.19	2	.62	15.5	3.1	2.5
9/16	.16	1 ¾	.50	12.3	2.4	2.25
½	.14	1 ½	.39	10	2	2
7/16	.13	1 ¼	.30	8	1.6	1.75
⅜	.12 ½	1 ⅛	.22	5.75	1.15	1.50
5/16	.12 ¼	1	.15	3.8	.76	1.25
¼	.12	¾	.10	2.65	.53	1

MONITOR PLOW STEEL

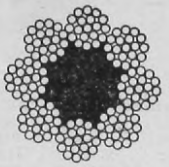
This Rope is recommended for use where the requirements are severe as it is the strongest and most efficient rope produced. Indispensable for Heavy Dredging, Logging, Stump Pulling, Derricks and Coal and Ore Hoisting.

2 ¾	$3.45	8 ⅝	11.95	315	63	11
2 ½	2.80	7 ⅞	9.85	263	53	10
2 ¼	2.50	7 ⅛	8	210	42	9
2	1.85	6 ¼	6.30	166	33	8
1 ⅞	1.75	5 ¾	5.55	150	30	8
1 ¾	1.60	5 ½	4.85	133	27	7
1 ⅝	1.30	5	4.15	110	22	6 ½
1 ½	1.10	4 ¾	3.55	98	20	6
1 ⅜	.90	4 ¼	3	84	17	5 ½
1 ¼	.75	4	2.45	69	14	5
1 ⅛	.62	3 ½	2	56	11	4 ½
1	.50	3	1.58	45	9	4
⅞	.39	2 ¾	1.20	35	7	3 ½
¾	.31	2 ¼	.89	26.3	5.3	3
⅝	.22 ½	2	.62	19	3.8	2 ½
9/16	.19	1 ¾	.50	14.5	2.9	2 ¼
½	.17	1 ½	.39	12.1	2.4	2
7/16	.15 ½	1 ¼	.30	9.4	1.9	1 ¾
⅜	.14 ½	1 ⅛	.22	6.75	1.35	1 ½
5/16	.13 ½	1	.15	4.50	.9	1 ¼
¼	.13	¾	.10	3.15	.63	1

Note.—All ropes not listed above and composed of strands made up of more than 19 and less than 37 wires take 37 wire list. Siemens-Martin Steel Rope, having 25 per cent. greater strength than iron rope, at same price as iron rope. Add 10 per cent. to list price for wire center or galvanized rope.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EXTRA FLEXIBLE STEEL HOISTING ROPE



EIGHT Strands—One Hemp Core.—NINETEEN Wires to the Strand.

Extra Flexible Steel Hoisting Rope is used on Derricks, Coal Handling Machinery, Pile Drivers, Steam Shovels and for Tubing and Casing Lines in Oil Districts. The large hemp center reduces the strength somewhat, but under certain conditions, where great flexibility is required and the load is light, this construction, owing to its ability to withstand severe bending, retains its strength longer than the Standard Six Strand Rope.

Crucible Cast Steel.

Diameter Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
1½	$0.73	4¾	3.19	58	11.6	3.75
1⅜	.62	4¼	2.70	51	10.2	3.5
1¼	.51	4	2.20	42	8.4	3.2
1⅛	.42	3½	1.80	34	6.8	2.83
1	.34	3	1.42	26	5.2	2.5
⅞	.27	2¾	1.08	20	4	2.16
¾	.21	2¼	.80	15.3	3.06	1.83
⅝	.16	2	.56	10.9	2.18	1.75
9/16	.14	1¾	.45	8.7	1.74	1.5
½	.12	1½	.35	7.3	1.46	1.33
7/16	.11	1¼	.27	5.7	1.14	1.16
⅜	.10½	1⅛	.20	4.2	.84	1
5/16	.10¼	1	.13	2.75	.55	.83
¼	.10	¾	.09	1.80	.36	.75

Extra Strong Crucible Cast Steel.

Diameter Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
1½	$0.88	4¾	3.19	66	13	3.75
1⅜	.75	4¼	2.70	57	11	3.5
1¼	.62	4	2.20	47	9.4	3.2
1⅛	.51	3½	1.80	38	7.6	2.83
1	.41	3	1.42	29.7	5.9	2.5
⅞	.32	2¾	1.08	23	4.6	2.16
¾	.25	2¼	.80	17.6	3.5	1.83
⅝	.18½	2	.56	12.4	2.5	1.75
9/16	.16	1¾	.45	10.1	2	1.5
½	.14	1½	.35	8	1.6	1.33
7/16	.13	1¼	.27	6.30	1.26	1.16
⅜	.12¼	1⅛	.20	4.66	.93	1
5/16	.12	1	.13	3.05	.61	.83
¼	.11¾	¾	.09	2.02	.40	.75

Note.—Galvanized Extra Flexible Crucible Cast Steel Hoisting Rope is much more pliable than the Six Strand Rope, and is preferred by the leading yachtsmen to the Galvanized Crucible Cast Steel Running Rope listed on page 547.

Plow Steel.

Diameter Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
1½	$1.03	4¾	3.19	74	14.8	3.75
1⅜	.87	4¼	2.70	64	12.8	3.5
1¼	.72	4	2.20	52	10.4	3.2
1⅛	.60	3½	1.80	43	8.6	2.83
1	.48	3	1.42	33	6.6	2.5
⅞	.38	2¾	1.08	26	5.2	2.16
¾	.29	2¼	.80	20	4	1.83
⅝	$0.21	2	.56	14	2.8	1.75
9/16	.18	1¾	.45	11.6	2.32	1.50
½	.16	1½	.35	8.7	1.74	1.33
7/16	.15	1¼	.27	6.90	1.38	1.16
⅜	.14	1⅛	.20	5.12	1.02	1
5/16	.13½	1	.13	3.35	.67	.83
¼	.13¼	¾	.09	2.25	.45	.75

Monitor Plow Steel.

This Rope is used where the greatest tensile strength in an eight strand rope is necessary for a given size of rope to pass over small drums or sheaves.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. strength in tons of 2000 lbs.	Approx. working loads in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
1½	$1.19	4¾	3.19	80	16	3.75
1⅜	.98	4¼	2.70	68	13	3.5
1¼	.82	4	2.20	56	11	3.2
1⅛	.68	3½	1.80	46	9.2	2.83
1	.55	3	1.42	36	7.2	2.5
⅞	.43	2¾	1.08	28	5.6	2.15
¾	.34	2¼	.80	22	4.4	1.83
⅝	.25	2	.56	15	3	1.75
9/16	.22	1¾	.45	12	2.4	1.5
½	.19	1½	.35	9.5	1.9	1.33

Note.—For Galvanized Wire Rope add 10% to list price.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SPECIAL FLEXIBLE STEEL HOISTING ROPE

SIX Strands—One Hemp Core.—THIRTY-SEVEN Wires to the Strand.

Special Flexible Hoisting Rope is designed for Crane, Dredge and other uses where strength and extreme flexibility are essential. The wires are of a necessity finer than those in a hoisting rope of six strands, 19 wires to the strand, and therefore should not be subjected to as much abrasive wear.

Plow Steel and **Monitor** Plow Steel Grades are most generally employed on dredges.

Crucible Cast Steel.

Diameter Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
2 3/4	$2.30	8 5/8	11.95	200	40	....
2 1/2	1.92	7 7/8	9.85	160	32	.....
2 1/4	1.60	7 1/8	8	125	25	.....
2	1.35	6 1/4	6.30	105	21	.....
1 3/4	1.05	5 1/2	4.85	84	17	.....
1 5/8	.89	5	4.15	71	14	.....
1 1/2	.79	4 3/4	3.55	63	12	3.75
1 3/8	.65	4 1/4	3	55	11	3.5
1 1/4	.55	4	2.45	45	9	3.2
1 1/8	.46	3 1/2	2	34	7	2.83
1	.37	3	1.58	29	6	2.5
7/8	.28	2 3/4	1.20	23	5	2.16
3/4	.23	2 1/4	.89	17.5	3.5	1.83
5/8	.18	2	.62	11.2	2.2	1.75
9/16	.15	1 3/4	.50	9.5	1.9	1.5
1/2	.13	1 1/2	.39	7.25	1.45	1.33
7/16	.12 1/2	1 1/4	.30	5.5	1.1	1.16
3/8	.12	1 1/8	.22	4.2	.84	1

Extra Strong Crucible Cast Steel.

Diameter Inches	Per Foot	Circumference in Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diameter of drum or sheave in ft. advised
2 3/4	$2.80	8 5/8	11.95	233	47	.....
2 1/2	2.35	7 7/8	9.85	187	37	.....
2 1/4	1.90	7 1/8	8	150	30	.....
2	1.55	6 1/4	6.30	117	23	.....
1 3/4	1.28	5 1/2	4.85	95	19	.....
1 5/8	1.07	5	4.15	79	16	.....
1 1/2	.95	4 3/4	3.55	71	14	3.75
1 3/8	.78	4 1/4	3	61	12	3.5
1 1/4	.65	4	2.45	50	10	2.2
1 1/8	.55	3 1/2	2	39	8	2.83
1	.44	3	1.58	32	6.4	2.5
7/8	.34	2 3/4	1.20	25	5	2.16
3/4	.27	2 1/4	.89	19	3.8	1.83
5/8	.21	2	.62	12.6	2.5	1.75
9/16	.17 1/2	1 3/4	.50	10.5	2.1	1.5
1/2	.15	1 1/2	.39	8.25	1.65	1.33
7/16	.14	1 1/4	.30	6.35	1.27	1.16
3/8	.13	1 1/8	.22	4.65	.93	1

Plow Steel.

2 3/4	$3.30	8 5/8	11.95	265	53	.....	1 1/8	$0.64	3 1/2	2	44	9	2.83
2 1/2	2.75	7 7/8	9.85	214	43	.....	1	.51	3	1.58	35	7	2.5
2 1/4	2.20	7 1/8	8	175	35	.....	7/8	.40	2 3/4	1.20	27	5	2.1
2	1.80	6 1/4	6.30	130	26	.....	3/4	.31	2 1/4	.89	21	4	1.83
1 3/4	1.50	5 1/2	4.85	108	22	.....	5/8	.24	2	.62	14	3	1.75
1 5/8	1.25	5	4.15	90	18	.....	9/16	.20	1 3/4	.50	11.5	2.3	1.5
1 1/2	1.10	4 3/4	3.55	80	16	3.75	1/2	.17	1 1/2	.39	9.25	1.85	1.33
1 3/8	.91	4 1/4	3	68	14	3.5	7/16	.16	1 1/4	.30	7.2	1.4	1.16
1 1/4	.75	4	2.45	55	11	3.2	3/8	.15	1 1/8	.22	5.1	1	1

Note.—Special Flexible Crane Ropes, with Thirty-Seven Wires to the Strand, Six Strands and One Hemp Core, are sold from the Plow Steel list, and afford the best service on Electric Cranes.

Monitor Plow Steel.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight Per foot	Approx. Strength in tons of 2000 lbs.	Proper working load in tons of 2000 lbs.	Diam. of drum or sheave in feet advised
2 3/4	$3.75	8 5/8	11.95	278	55	.....
2 1/2	3.15	7 7/8	9.85	225	45	.....
2 1/4	2.50	7 1/8	8	184	37	.....
2	2.10	6 1/4	6.30	137	27	.....
1 3/4	1.75	5 1/2	4.85	113	23	.....
1 5/8	1.45	5	4.15	95	19	.....
1 1/2	1.25	4 3/4	3.55	84	17	3.75
1 3/8	1.05	4 1/4	3	71	14	3.50
1 1/4	.86	4	2.45	58	11	3.20
1 1/8	.75	3 1/2	2	46	9.2	2.83
1	.59	3	1.58	37	7.4	2.50
7/8	.46	2 3/4	1.20	29	5.8	2.16
3/4	.36	2 1/4	.89	23	4.6	1.83
5/8	.27	2	.62	16	3.2	1.75
9/16	.23	1 3/4	.50	12 1/2	2.5	1.50
1/2	.20	1 1/2	.39	9.75	1.9	1.33
7/16	.18 1/2	1 1/4	.30	7.50	1.5	1.15
3/8	.17 1/2	1 1/8	.22	5.30	1.06	1

Note.—For Ropes Composed of strands made up of more than 37 wires, add 10% to above list prices.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TILLER OR ELEVATOR HAND ROPE

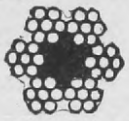
SIX Strands—Seven Hemp Cores—FORTY-TWO Wires to the Strand.

This Rope is used to a limited extent for steering lines on yachts and motor boats. ¾ and ½ inch is used for starting and stopping elevators. The wires in this rope are very fine and care should be taken not to subject it to much abrasive wear.

Diameter Inches	Per Foot		Circumference Inches	Approx. Weight per foot	Diameter Inches	Per Foot		Circumference Inches	Approx. Weight per foot
	Swedes Iron	Crucible Cast Steel				Swedes Iron	Crucible Cast Steel		
1	$0.33	$0.43	3	1.10	½	$0.11½	$0.17	1½	.28
⅞	.27	.36	2¾	.84	7/16	.10	.15	1¼	.21
¾	.22	.30	2¼	.62	⅜	.09	.14	1⅛	.16
5/8	.17	.24	2	.43	5/16	.08	.12½	1	.11
9/16	.14	.20	1¾	.35	¼	.07½	.11	¾	.07

Note.—The above can be furnished in Tinned or Galvanized Iron or Steel at an advance of 10% over above list.

GALVANIZED IRON SHIP'S RIGGING OR GUY ROPE


Seven Wires.

Twelve Wires.

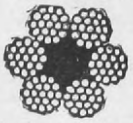
SIX Strands—One Hemp Core—SEVEN or Twelve Wires to the Strand.

This Rope is used for Ships Rigging and as Guys for Derricks, Smokestacks, etc.

Diameter Inches	Per Foot		Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Circumference of equal Manila Rope	Diameter Inches	Per Foot		Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Circumference of equal Manila Rope
	7 Wires per Strand	12 Wires per Strand						7 Wires per Strand	12 Wires per Strand				
1¾	$0.44	$0.46	5½	4.85	42	11	¾	$0.09	$.....	2¼	.89	7.8	4¾
1 1/16	.41	.43	5¼	4.42	38	10½	⅝	.08	.....	2	.62	5.7	4½
1 5/8	.38	.40	5	4.15	35	10	9/16	.07	.....	1¾	.50	4.46	3¾
1½	.35	.37	4¾	3.55	30	9½	½	.06	.....	1½	.39	3.39	3
1 7/16	.31½	.33½	4½	3.24	28	9	7/16	.05	.....	1¼	.30	2.35	2½
1⅜	.28½	.30½	4¼	3	26	8½	⅜	.04½	.....	1⅛	.22	1.95	2¼
1¼	.25	.26½	4	2.45	23	8	5/16	.03½	.....	1	.15	1.42	2
1 3/16	.22½	.24	3¾	2.21	19	7½	**Five**	**Strands**					
1 1/8	.19½	.21	3½	2	18	6½	9/32	.03	.....	⅞	.125	1.20	1¾
1 1/16	.17½	.18½	3¼	1.77	16.1	6	¼	.02½	.....	¾	.09	.99	1½
1	.15	.16	3	1.58	14.1	5¾	7/32	.02¼	.....	5/8	.063	.79	1¼
⅞	.13	.....	2¾	1.20	11.1	5¼	3/16	.02	.....	½	.04	.61	1⅛
13/16	.11	.....	2½	1.03	9.4	5	.....	.....	.....	.....	.....	.....	.....

GALVANIZED CRUCIBLE CAST STEEL YACHT RIGGING OR GUY ROPE

Seven Wires.


Nineteen Wires.

SIX Strands—One Hemp Core—SEVEN or Nineteen Wires to the Strand.

This Rope made with Seven Wires to the strand, because of its light weight, strength and durability, is now most generally used for Yacht or Ship's Standing Rigging and Derrick Guys. When made with Nineteen Wires to the strand it is used for Running Rigging and Mooring Lines on Yachts also as Mooring and Messenger Lines on Steamships and Lake Steamers.

Diameter Inches	Per Foot		Circumference Inches	Approx. Weight Per Foot	Approx. Strength in tons of 2000 lbs.	Circumference of equal Manila Rope	Diameter Inches	Per Foot		Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Circumference of equal Manila Rope
	7 Wires per Strand	19 Wires per Strand						7 Wires per Strand	19 Wires per Strand				
1¼	$0.47	$0.50	4	2.45	42	13	⅝	$0.13	$0.15¼	2	.62	11.7	6
1 3/16	.44	.46	3¾	2.21	38	12	9/16	.11	.13	1¾	.50	9	5¼
1⅛	.39½	.41¾	3½	2	34	11	½	.08¾	.12	1½	.39	7	4¾
1 1/16	.35	.38	3¼	1.77	31	10	15/32	.08	.11½	1⅜	.34	6	4½
1	.31¾	.34	3	1.58	28	9	7/16	.07	.11	1¼	.30	5	4¼
⅞	.24¾	.26¼	2¾	1.20	22	8½	⅜	.06	.10¼	1⅛	.22	4.2	3¾
13/16	.22	.23½	2½	1.03	19	8	5/16	.04¾	.10	1	.15	3.2	3
¾	18½	.20¾	2¼	.89	16.8	7	.....	.....	.....	.....	.....	.....	.....

Note.—Our Galvanized Wire Rope is extra galvanized by a special process, which ensures adhesion of the zinc to the metal. The galvanizing does not crack, chip or flake. This rope can be used where exposure to the weather, constant or periodical moisture, etc., are among the conditions that would tend to corrode a rope not protected in this way.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

GALVANIZED RUNNING ROPE

SIX Strands—Seven Hemp Cores—TWELVE Wires to the Strand.

This Rope is designed for running rigging service where great flexibility is required and exposure to moisture is frequent.

Iron					Crucible Cast Steel				
Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	**Diameter** Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.
1 1/16	$0.22	3 1/4	1.18	10.1	1 1/16	$0.30	3 1/4	1.18	22.5
1	.20	3	1.05	8.7	1	.27	3	1.05	19.5
7/8	.17	2 3/4	.80	6.9	7/8	.23	2 3/4	.80	15.5
13/16	.14 1/2	2 1/2	.68	6	13/16	.20	2 1/2	.68	13.5
3/4	.12	2 1/4	.59	5.1	3/4	.16 1/2	2 1/4	.59	11.5
5/8	.10	2	.42	3.6	5/8	.14	2	.42	8
9/16	.08	1 3/4	.33	2.8	9/16	.11	1 3/4	.33	6.5
1/2	.07	1 1/2	.26	2.2	1/2	.09	1 1/2	.26	5
7/16	.06 1/2	1 1/4	.20	1.7	7/16	.08 1/2	1 1/4	.20	3.9
3/8	.06	1 1/8	.14	1.3	3/8	.07 3/4	1 1/8	.14	2.85
5/16	.05 1/2	1	.10	.82	5/16	.07	1	.10	1.98

GALVANIZED HAWSERS AND MOORING LINES

Twelve Wires.

Twenty-Four Wires.

Crucible Cast Steel

These Ropes with a Hemp Core in each strand as well as in the center of the rope are commonly called "English Hawsers or Mooring Lines" and are used chiefly on Foreign Ships and Steamers.

SIX Strands—Seven Hemp Cores—TWELVE Wires to the Strand.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Size of Manlia Hawsers of equal Strength	**Diameter** Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Size of Manila Hawsers of equal Strength
2 1/16	$0.78	6 1/2	4.43	83	.....	1 1/2	$0.44	4 3/4	2.36	45	12
2	.72	6 1/4	4.20	77	.....	1 7/16	.41	4 1/2	2.16	41	11.5
1 15/16	.67	6	3.89	71	.....	1 3/8	.38	4 1/4	2	38	11
1 13/16	.62	5 3/4	3.42	66	.....	1 1/4	.35	4	1.63	31	10
1 3/4	.57	5 1/2	3.23	61	13.5	1 3/16	.33	3 3/4	1.47	28	9.25
1 11/16	.53	5 1/4	2.94	57	13	1 1/8	.31	3 1/2	1.33	26	8.75
1 5/8	.49	5	2.76	53	12.5	.....	.....	.....	.....	.....	.....

Note.—For smaller sizes see Galvanized Running Rope listed above.

SIX Strands—Seven Hemp Cores—TWENTY-FOUR Wires to the Strand.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	**Diameter** Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.
2 1/16	$1.22	6 1/2	5.81	113	1 3/8	$0.62	4 1/4	2.62	50
2	1.14	6 1/4	5.51	106	1 1/4	.57	4	2.15	42
1 15/16	1.06	6	5.09	98	1 3/16	.51	3 3/4	1.93	38
1 13/16	1.00	5 3/4	4.48	88	1 1/8	.45	3 1/2	1.75	34
1 3/4	.93	5 1/2	4.24	82	1 1/16	.40	3 1/4	1.54	27
1 11/16	.86	5 1/4	3.86	76	1	.35	3	1.38	25
1 5/8	.80	5	3.63	74	7/8	.29	2 3/4	1.05	20
1 1/2	.73	4 3/4	3.10	63	13/16	.25	2 1/2	.90	17
1 7/16	.67	4 1/2	2.92	55	3/4	.22	2 1/4	.78	14

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GALVANIZED STEEL DEEP SEA TOWING HAWSERS

SIX Strands—One Hemp Core—THIRTY-SEVEN Wires to the Strand.

These Hawsers are used in connection with Automatic steam towing machines for sea, river and lake towing, where the greatest strength, flexibility and durability are demanded. More than 50% of the wires in the strands are on the inside, so that the outside layer of wires may be considerably worn before the strength of the inside wires become impaired. Our Towing Hawsers have been tested under the most severe conditions of service. Wire Hawsers should be wound onto deck reels especially designed for the purpose as it is not practicable to coil them same as Manila Hawsers.

Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.	Diameter Inches	Per Foot	Circumference Inches	Approx. Weight per foot	Approx. Strength in tons of 2000 lbs.
2 3/8	$1.60	7 1/2	8.82	188	1 1/2	$0.77	4 3/4	3.55	76
2 5/16	1.52	7 1/4	8.36	182	1 7/16	.71	4 1/2	3.24	72
2 1/4	1.44	7 1/8	8	171	1 3/8	.65	4 1/4	3	66
2 1/8	1.35	6 3/4	7.06	155	1 1/4	.60	4	2.45	54
2 1/16	1.28	6 1/2	6.65	140	1 3/16	.54	3 3/4	2.21	47
2	1.20	6 1/4	6.30	132	1 1/8	.48	3 1/2	2	42
1 15/16	1.12	6	5.84	125	1 1/16	.42	3 1/4	1.77	38
1 13/16	1.05	5 3/4	5.13	112	1	.37	3	1.58	31.5
1 3/4	.98	5 1/2	4.85	104	7/8	.31	2 3/4	1.20	26
1 11/16	.91	5 1/4	4.42	97	13/16	.26	2 1/2	1.03	22
1 5/8	.84	5	4.15	87	3/4	.23	2 1/4	.89	20

Note.—The above Rope is furnished Galvanized Only.

STANDARD STEEL STRAND

Galvanized.

Extra Galvanized.

Seven Wires twisted into a single Strand.

Used chiefly for guying poles and smokestacks, for supporting trolley wire and for operating railroad signals. The last five sizes listed (9/64 to 5/64 inch) are sometimes called Galvanized Seizing Strand and is used for seizing or binding the ends of wire rope and thimble splices and for tying rope into coils.

Galvanized and Extra Galvanized.

Diameter Inches	Per 100 Feet		Approx. Weight per 1000 ft., lbs.	Approx. Strength Pounds	Diameter Inches	Per 100 Feet		Approx. Weight per 1000 ft., lbs.	Approx. Strength Pounds
5/8	$8.50	.....	800	14000	3/16	$1.25	.....	75	1400
9/16	7.00	.....	650	11000	5/32	1.15	.....	55	900
1/2	5.50	.....	510	8500	9/64	1.10	.....	40	700
7/16	4.50	.....	415	6500	1/8	1.00	.....	32	500
3/8	3.50	.....	295	5000	7/64	.90	.....	25	450
5/16	2.50	.....	210	3800	3/32	.80	.....	20	400
1/4	1.75	.....	125	2300	5/64	.70	.....	13	300
7/32	1.50	.....	95	1800	.....	.....	.....	.....	.....

SASH CORD

"SIX" Strands—One Cotton Core—"SEVEN" Wires to the Strand.

Diameter Inches	Per Foot			Weight per foot Pounds		Approximate Breaking Stress Pounds		
	Iron Annealed or Bright	Tinned or Galv. Iron	Copper	Iron	Copper	Bright Iron	Annealed Iron	Bright Copper
1/4	$0.03	$0.04	$0.09	.101	.115	2200	1650	1320
7/32	.02 3/4	.03 1/2	.07 1/2	.077	.087	1800	1411	1080
3/16	.02 1/4	.03	.06	.056	.064	1400	1100	840
1/8	.01 3/4	.02 1/4	.04 1/2	.025	.029	550	425	350
3/32	.01 1/2	.02	.03 1/2	.014	.016	320	250	200
1/16	.01 1/4	.01 3/4	.03	.006	.007	140	110	90

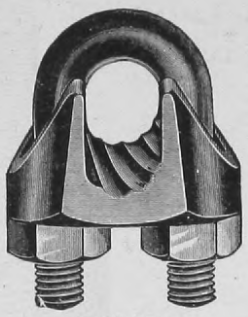
GALVANIZED MAST-ARM OR ARC LIGHT ROPE

Used for arc lights, mast-arms or other purposes where exposed to moisture. This rope is more durable than manila rope and does not shrink.

Diameter Inches	Per Foot	Weight per foot Pounds	Approx. Breaking Stress lbs.	Construction
1/2	$0.07	.335	4700	9x7
7/16	.06	.245	3400	9x7
3/8	.05	.163	2200	9x7
5/16	.03 1/2	.107	1530	9x4
1/4	.02 3/4	.077	1125	9x4

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

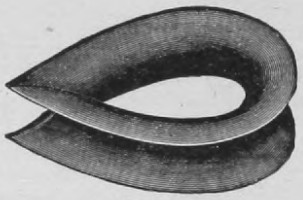
WIRE ROPE CLIPS



Bull Dog.

WIRE ROPE THIMBLES

Loose



Oval.

Bull Dog Wire Rope Clips

For Rope—Inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Weight per 100 pounds	16	17	27	33	46	65	70	105	150	180	300	375	600
Each	$0.06	.07	.08	.09	.11	.13	.15	.20	.28	.30	.50	.64	.98

Oval Galvanized Wire Rope Thimbles, Loose

For Rope—Inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Each	$0.05	.06	.06 1/4	.07 1/4	.08 1/2	.13 1/2	.15	.17	.21	.27	.42	.50	.76

DROP FORGED TURNBUCKLES

Style B. Hook and Eye.

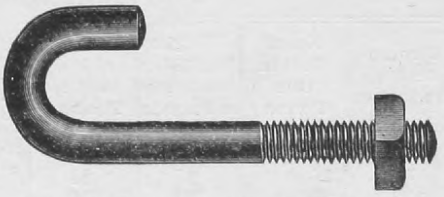
Style C. Two Eyes.

Diameter, inch	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Distance between Heads, inches	4	4 1/2	4 1/2	5	6	6	6
Styles B, C—Galvanized ....Each,	$0.75	.85	1.00	1.20	1.50	215	3.00

NUT EYE BOLTS

Drop Forged from Wrought Iron.

NUT HOOK BOLTS



Drop Forged from Wrought Iron.

Nut Eye Bolts

Diameter, inch	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Length under Eye, ins.	2	2 1/4	2 1/2	2 3/4	3 1/4	3 3/4	4	4 1/2
Inside Diam. of Eye, ins.,	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Plain.....Per Dozen,	$1.20	1.40	1.60	2.10	2.40	2.90	3.20	5.80
Galvanized ....Per Dozen,	1.40	1.60	1.80	2.30	2.60	3.10	3.60	6.20

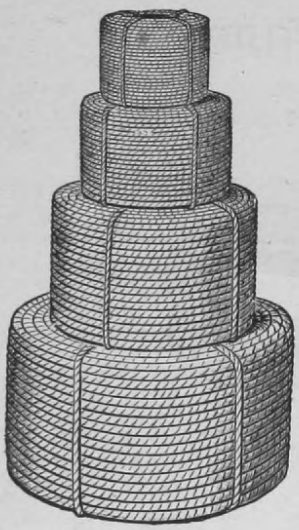
Nut Hook Bolts

Note—Length given represents the shank of bolt from Shoulder or Point of Hook to end of bolt, and does not include the bend of hook.

Diameter, inch	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Length, inches	2	2 1/4	2 1/2	2 3/4	3 1/4	3 3/4	4	4 1/2
Plain.....Per Dozen,	$1.20	1.40	1.60	2.10	2.40	2.90	3.20	5.80
Galvanized ....Per Dozen,	1.40	1.60	1.80	2.30	2.60	3.10	3.60	6.20

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SISAL AND MANILA ROPE



Fitler "Three Strand" Sisal — Per Pound

Diameter

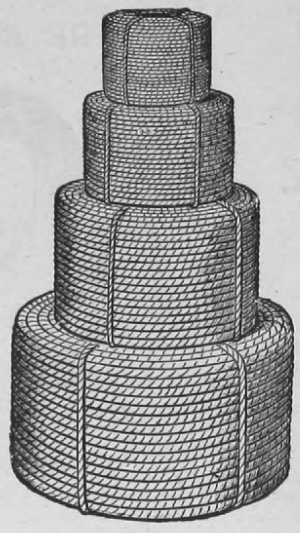
⅝ inch and larger	Base Price, $.....
9/16, ½ and 7/16 inch	Advance, ½ cent
⅜ inch	Advance, 1 cent
5/16 and ¼ inch	Advance, 1½ cents
3/16 inch	Advance, 2 cents

New Zealand

⅝ inch and larger	Base Price, $.....
9/16, ½ and 7/16 inch	Advance, ½ cent
⅜ inch	Advance, 1 cent
5/16 and ¼ inch	Advance, 1½ cents
3/16 inch	Advance, 2 cents

Fitler "Three Strand" Pure Manila

⅝ inch and larger	Base Price, $.....
9/16, ½ and 7/16 inch	Advance, ½ cent
⅜ inch	Advance, 1 cent
5/16 and ¼ inch	Advance, 1½ cents
3/16 inch	Advance, 2 cents



Fitler "Four Strand" Pure Manila Rope

⅝ inch diameter and larger	Base Price, Per Pound $.....
9/16, ½ and 7/16 inch diameter	Advance, Per Pound ½ cent
⅜ inch diameter	Advance, Per Pound 1 cent
5/16 and ¼ inch diameter	Advance, Per Pound 1½ cents
3/16 inch diameter	Advance, Per Pound 2 cents

Size of Stock Coils

"Sisal Rope and New Zealand"	7/16 inch and smaller. In Full Coils only of about 1000 feet
	½ inch and larger. In Half Coils only of about 600 feet
"Three Strand Manila"	7/16 inch and smaller. In Full Coils only of about 1000 feet
	½ inch and larger.... In Both Half Coils and Full Coils
"Four Strand Manila"	⅞ and 1 inch..... In Full Coils only of about 1000 feet

Rope Cut to Length

Fitler Sisal Rope and New Zealand	Not Cut to Length
"Three Strand" Manila Rope	7/16 inch and smaller..... Not Cut to Length
	½ inch and larger Cut to Length at 1c per Pound Extra
"Four Strand" Manila Rope	Not Cut to Length

TRANSMISSION ROPE

Transmission Rope made from selected stock will be furnished on special orders. Submit specifications for prices.

Approximate Weight and Strength of Fitler Manila Rope

Diameter in Inches	Circumference in Inches	No. of Feet in One Pound	Weight of 100 Fathoms in Pounds	Weight of 1000 Feet in Pounds	Strength of Fitler New Manila Rope in Pounds—Gov't Test	Diameter in Inches	Circumference in Inches	No. of Feet in One Pound	Weight of 100 Fathoms in Pounds	Weight of 1000 Feet in Pounds	Strength of Fitler New Manila Rope in Pounds—Gov't Test
¼	¾	53	12	20	700	1⅜	4¼	1 10 in.	320	553	15,000
5/16	15/16	36	17	28	1,100	1½	4½	1 8 "	368	613	17,500
⅜	1⅛	25	23	38	1,300	1⅝	4¾	1 6 "	390	650	18,500
7/16	15 thread	19	32	53	1,700	1 11/16	5	1 4 "	436	727	21,000
7/16 full	18 "	15½	39	65	2,000	1¾	5¼	1 2 "	495	825	23,000
½ scant	21 "	13	45	75	2,100	1⅞	5½	1 "	568	947	25,000
½	1½	12	51	85	2,400	1 15/16	5¾	11½ "	616	1027	27,000
9/16	1¾	11	66	110	3,300	2	6	10½ "	685	1142	29,500
⅝	2	8	74	123	4,000	2 3/16	6½	8¾ "	805	1342	33,500
¾	2¼	6 6 in.	91	152	4,700	2⅓	7	7¾ "	916	1527	38,000
⅞	2½	5 4 "	113	188	6,000	2½	7½	7 "	1028	1713	43,500
15/16	2¾	4 6 "	133	222	7,000	2⅝	8	6¼ "	1125	1875	52,000
1	3	3 10 "	154	257	8,000	3	9	4¾ "	1500	2500	63,500
1 1/16	3¼	3 4 "	180	300	9,000	3⅓	10	4 "	1900	3167	79,000
1 3/16	3½	2 11 "	205	342	10,500	3⅔	11	3½ "	2350	3917	94,800
1¼	3¾	2 6 "	235	392	12,300	4	12	2¾ "	2800	4667	108,000
1 5/16	4	2 2 "	276	460	13,900	.....	.....	.....	.....	.....	.....

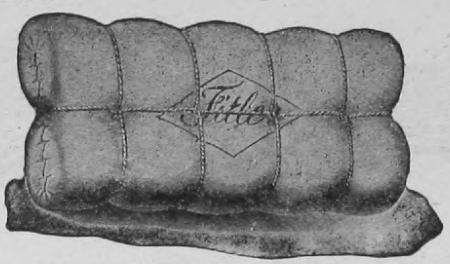
Note.

Sisal Rope same average weight as Manila and as 5 to 7 in strength, Manila being 40% stronger than Sisal.
Tarred Cordage about 25 per cent. heavier than Manila and of same strength.
All our **Rope** overruns the Government requirements for strength.
Working strain about ⅛ of breaking strain.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BINDER TWINE

5 pounds in a ball.



50 pounds in a bale.

Fitler Binder Twine

Sisal, 500 feet in a pound.....Per Pound, $.....
Standard, 500 feet in a pound....Per Pound, ...
Manilla, 600 feet in a pound....Per Pound, $.....
Pure Manilla, 650 feet in a pound.Per Pound, ...

Packed—50 Pounds in a Bale.

Sisal Lath Yarn — Lath Yarn.
130 Thread..Per 100 Pounds, $.....
200 Thread..Per 100 Pounds, ...

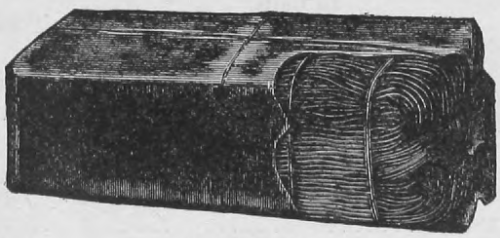
India Tarred Marlin, 3 ply, in One Pound Balls
.....Per Pound, $.....

WOOL TWINE

Wool Twine	Jute, 3 Ply Unfinished	Jute, 3 Ply Finished
Broken Bales .....Per Pound	$.....	$.....
Full Bales .....Per Pound	.....	.....
5 Bales or More.....Per Pound	.....	.....

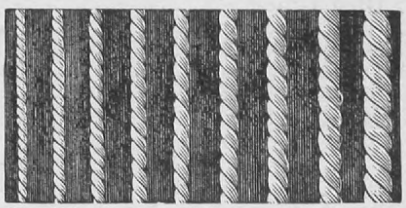
Packed—Approximately 150 Pound in a Bale.

SEINE TWINE



In Skeins.

In Balls.



Nos. 12 15 18 21 24 27 30 36 60

Medium Laid Seine Twine

Nos.	12	15, 18, 21, 24, 27, 30, 36	48 and 60
In Skeins .....Per Pound,	$.....	.....	.....
In ¼ Pound Balls.....Per Pound,	.....	.....	.....
In 1 Pound Balls.....Per Pound,	.....	.....	.....

Note—The numbers given represent the number of threads in each size.
Packed—Skeins, 5 Pounds in a Package. ¼ Pound Balls, 3 Pounds in a Package. 1 Pound Balls in Bulk.

STAGING TWINE

Nos.	9	12	15	18	21	24	27	36
Approx. Weight of Ball, ounces	2	2	2	2	2	2	4	4
Approx. Number of Yards in Ball	45	40	35	30	25	20	38	30

In ¼ Pound Balls, All Sizes.....Per Pound, $.....

Packed—5 Pounds in a Package.

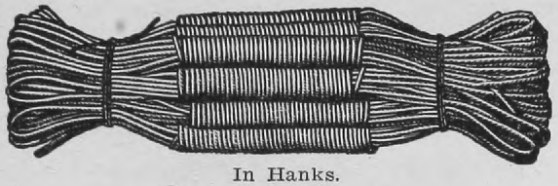
TROT LINE

No. 0—In 1 Pound Balls, 48 Thread, about 70 yards in a ball.....Per Pound, $.....
No. 1—In 1¼ Pound Balls, 66 Thread, about 70 yards in a ball.....Per Pound, ...

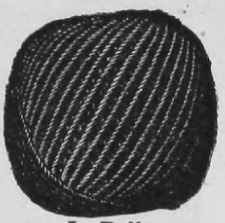
Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHALK LINES



In Hanks.



In Balls.

Braided Chalk Lines

In 20 Foot Hanks, Twelve Connected

No.	**01**
Per Dozen	$0.50

Packed—Half Gross in a Box.

White Twisted Cotton Chalk Lines

In 50 Foot Balls.

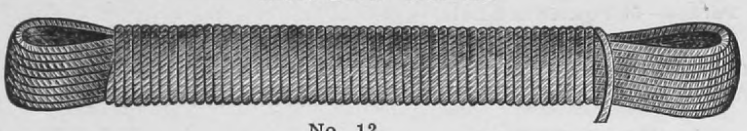
Nos.	**20**	**30**	**40**
Per Dozen	$0.80	.90	1.00

In 100 Foot Balls.

No.	**300**
Per Dozen	$2.20

Packed—One-Twelfth Gross in a Box.

MASONS' LINES



No. 12.

CHALK LINE REELS

No. 12.

Masons' Lines

No. 12—Fine Quality Yellow Masons' Lines in 100 foot Hanks, Twelve Connected.....Per Dozen, $1.60

Packed—One Dozen in a Box.

Nos.	**18**	**21**	**24**	**30**
In ¼ Pound Balls.....Per Pound,	$0.72	.72	.72	.72
In 1 Pound Balls.....Per Pound,	.70	.70	.70	.70

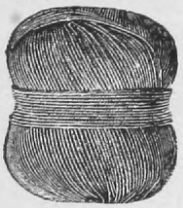
Packed—¼ Pound Balls, 3 Pounds in a Package; 1 Pound Balls in Bulk.

Chalk Line Reels

No. 12—Chalk Line Reels only.....Per Dozen, $0.70

Packed—Three Dozen in a Box.

FLAX TWINE



HEMP TWINE

Flax Twine

In **Quarter** Pound **Balls.**

No. 18DD—Standard Grade,
.....Per Pound, $.....

Packed—Three Pounds in a Package.

In Half Pound Balls.

	Per Pound
No. 36BC High Grade	$.....
No. 18BC High Grade	.....
No. 12BC High Grade	.....
No. 18DD Standard Grade	.....
No. 12DD Standard Grade	.....

Packed—Three Pounds in a Package.

On Reels.

	Per Pound
No. 18BC High Grade	$.....

Packed—Fifty Pounds on a Reel.

In Balls.

	Per Pound
No. 3 —2 Ply in ¼ Pound Balls	$.....
No. 4½—2 Ply in 1 Pound Balls	.....
No. 6 —3 Ply in 1 Pound Balls	.....
No. 7 —3 Ply in 1½ Pound Balls	.....

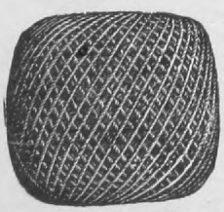
Packed—In Open Stock.

On Reels.

	Per Pound
No. 4½—2 Ply	$.....

Packed—Fifty Pounds on a Reel.

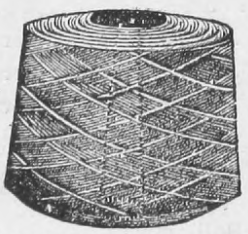
WRAPPING TWINE



Jute in ½ Pound Balls.

Nos.	**0**	**00**	**000**	**0000**
Ply	2	3	4	5
Per Pound, All Sizes	$.....			

Packed—In Open Stock.



Cotton in 2½ Pound "Cones."

No.		**2C**
Ply		4
Per Pound		$.....

Packed—In Open Stock.

Cotton in ¼ Pound "Balls."

Nos.	**1**	**2**
Ply	3	4
Per Pound	$.....	.....

Packed—No. 1, Five Pounds in a Package; No. 2 Five Pounds in a Cotton Bag.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

KORFF TAPE SEALERS

Used in place of Twine in Wrapping and Sealing all kinds of merchandise. Makes a neat, smooth package. Does not get the fingers sticky. Can use any width tape under 2 inches.

Korff Sealers.....Each, $.....

Kraft Tape—In 800 Foot Rolls.

Inch	¾	1	1½	2
Each ..... $.....	.....	.....	.....	.....

ALARM TILLS

No. 503.

Size over all, 4¾x16½x18¼ inches wide, weight 12 lbs. Drawer gained together.

Specie tray bowls, 3⅝ inches, Bill spaces, 3½x8 inches, woodwork stained cherry, improved Lock, thirty-two changes.

No. 503—Tucker's Alarm Tills or Money Drawers, Oak Front, Varnished.....Each, $4.00

Packed—Six in a Crate.

TWINE BOXES

No. 3

Quarter Size Cut.

Small Size, Cast Iron, Coppered.

No. 3—Hanging Twine Boxes.....Per Dozen, $3.70

Packed—Half Dozen in a Box.

TWINE BOXES

No. 43.

Quarter Size Cut.

Cast Iron, Copper Bronzed.

No. 43—Twine Boxes.....Per Dozen, $8.50

Packed—Half Dozen in a Box.

PAPER FILES

No. 39. Reduced Size Cut.

Cast Iron, Tuscan Bronzed, with Wire Pins.

No. 39—Stand Paper Files.....Per Dozen, $1.90

Packed—One Dozen in a Box.

HOOK PAPER FILES

No. 34. Reduced Size Cut.

Cast Iron, Tuscan Bronzed, with Wire Hooks.

No. 34—Hook Paper Files.....Per Dozen, $1.80

Packed—One Dozen in a Box.

PAPER CLIPS

No. 40. Reduced Size Cut.

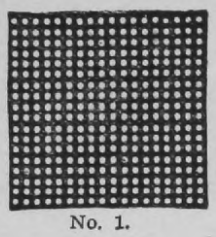
Cast Iron, Berlin Bronzed.

No. 40—Paper Clips.....Per Dozen, $1.60

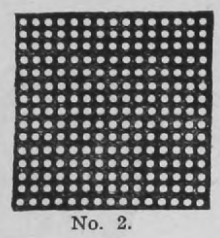
Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

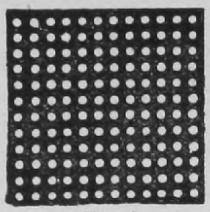
PERFORATED TIN



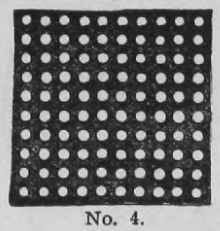
No. 1.



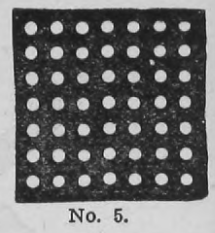
No. 2.



No. 3.



No. 4.



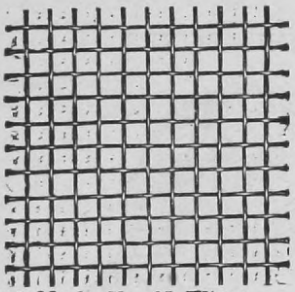
No. 5.

I. C.—In Sheets 14x20 Inches.

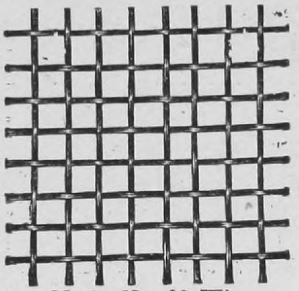
Nos.	0	1	2	3	4	5
Holes Per Square inch	400	324	225	144	100	49
Diameter of Holes	27/1000	33/1000	42/1900	50/1000	66/1000	72/1000
Per Box—112 Sheets	$.....	.....	.....	.....	.....	.....
Per Dozen Sheets	$.....	.....	.....	.....	.....	.....

Note.—Heavier grades and other sizes perforated to order only.

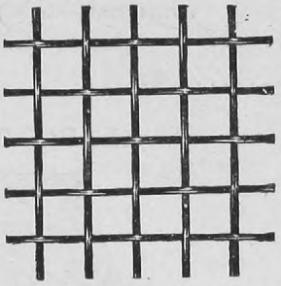
HARDWARE GRADE WIRE CLOTH



8x8 Mesh, No. 25 Wire.



6x6 Mesh, No. 23 Wire.



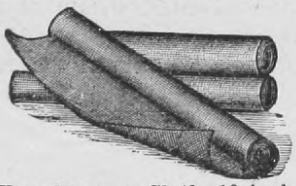
4x4 Mesh, No. 21 Wire.

Stock Width, 24, 30 and 36 inches.

Galvanized .....Mesh,	2x2	3x3	4x4	5x5	6x6	8x8
No. of Wire	19	21	23	24	25	26
Full Rolls, Per Square Foot,	$.....	.....	.....	.....	.....	.....
Half Rolls, Per Square Foot,	$.....	.....	.....	.....	.....	.....

Note.—The Mesh in Wire Cloth is the distance from center to center of Wires.

BRASS STRAINER CLOTH



Brass Wire Strainer Cloth, 12 inches wide.

Meshes, Per Inch	40	50	60	80	100
Per Square Foot	$.....	.....	.....	.....	.....

Packed—In Rolls 5 Feet Long.

"YORK" SCREEN WIRE CLOTH

Stock Widths, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46 and 48 inches. **Best Made.**

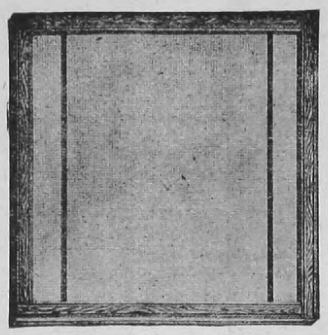
Black, 12 Mesh .....Per 100 Square Feet, $.....
Black, 14 Mesh .....Per 100 Square Feet, ...
Opal Galvanized, 12 Mesh .....Per 100 Square Feet, ...
Opal Galvanized, 14 Mesh .....Per 100 Square Feet, ...
Golden Bronze, 14 Mesh .....Per 100 Square Feet, ...

Packed—Put up in Rolls of 100 Lineal Feet.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

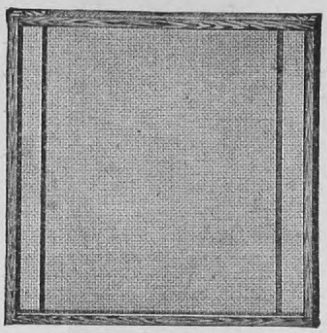
EXTENSION WINDOW SCREENS

LEADER



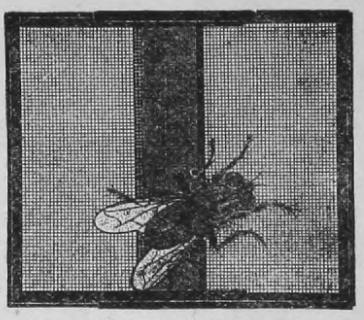
Nos. 933 to 3637.

COMPETITOR



Nos. 1 to 3.

SHERWOOD



Nos. 18 to 30.

Leader Continental Extension Window Screens, Hardwood Frame, finished in oil, Black Steel Wire Cloth securely fastened to frame and covered with moulding.

Nos.	933	1233	1533	1833	2433	2437	3033	3037	3637
Height, inches	9	12	15	18	24	24	30	30	36
Closed, inches	21	21	21	21	21	23	21	23	23
Open, inches	33	33	33	33	33	37	33	37	37
Per Dozen	$....	....	....	....	....	....	....	....	....

Competitor Extension Window Screens, Hardwood Frame, Walnut Stained, Black Steel Wire Cloth.

Nos.	1	2	3
Height, inches	15	18	24
Closed, inches	21	21	21
Open, inches	33	33	33
Per Dozen	$.....	.....	.....

Sherwood Extension Window Screens, Pressed Steel Frame, Black Japanned, Black Steel Wire Cloth drawn tightly and securely locked in frame. Operates easily in any weather, will not stick, warp or bind.

Nos.	18	24	24A	30
Height, inches	18	24	24	30
Closed, inches	18	18	20	21
Open, inches	33	33	37	37
Per Dozen	$.....	.....	.....	.....

Packed—All above Screens, One Dozen in a Crate.

CUSTOM SCREENS

Custom.

Frame made heavy and substantial from selected White Pine or Basswood. Side pieces are grooved in the outer edges. Slide sticks for fastening to the window casings, flush mouldings for covering the edge of the wire cloth, Cement coated Nails for the corners, Wire Brads for the Moulding and a lift are furnished complete with each set.

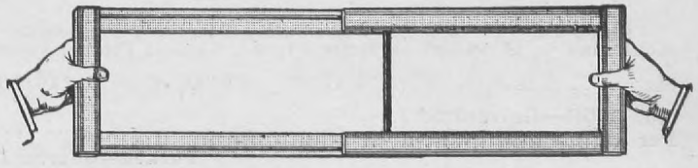
No.	Size, In.	Per Doz.	No.	Size, In.	Per Doz.
M3636	36x36	$.....	M4242	42x42	$.....
M3642	36x42	.....	M4848	48x48	.....
M3648	36x48	.....	M3684	36x84	.....

Packed—Two Dozen in a Crate, except 36x84, which are One Dozen in a Crate.

Note.—No. M3684 is furnished with a Cross Bar to strengthen the center of the frame, but without slide sticks. It is also used largely for making porch screens.

VENTILATOR SCREENS

Closed.



Open.

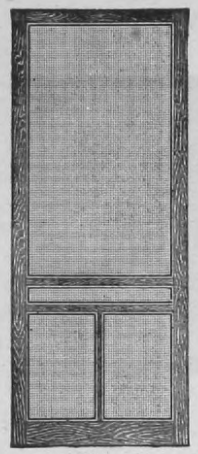
Ventilator Screens permit circulation of air, prevent drafts, exclude dust and dirt, keep out rain and snow. Frames are made adjustable of selected hardwood, finished in Mission Oak. Fitted with Buff-Colored Fine Mesh Cotton Cloth.

Nos.	93	94	96	150	154
Height, inches	9	9	9	15	15
Closed, inches	23	31	34	23	31
Open, inches	37	49	60	37	49
Per Dozen	$....	....	....	....	....

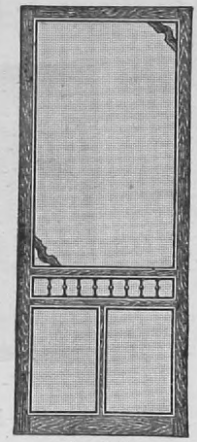
Packed—One Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

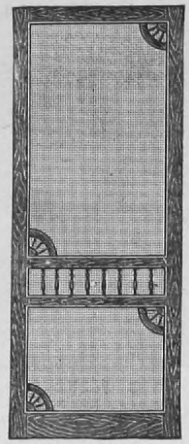
SCREEN DOORS



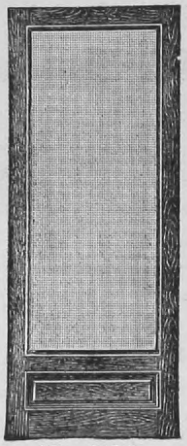
No. 281.



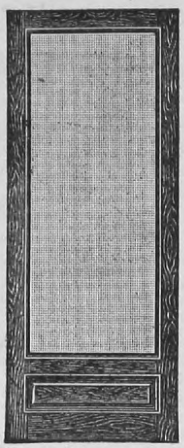
No. 314.



No. 384.



No. 515G.



Nos. 518B and 518G. Oak.

Mortised and Tenoned Doors. Furnished with Best Grade Steel Wire Cloth

Stiles 4x⅞". 12 Mesh Wire Cloth, Plain Pine, Stained Walnut Color.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 281—Black Cloth Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Crate.

Stiles 4x⅞". 12 Mesh Wire Cloth, Medium Fancy, Medium Quality Pine Lumber. Natural Finish, Varnished.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 314—Black Cloth Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Crate.

Stiles 4x⅞". 12 Mesh Wire Cloth, Selected Pine Lumber, Natural Finish, Varnished.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 384—Black Cloth Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Half Dozen in a Crate.

Stiles 4x1⅛". 14 Mesh Wire Cloth, Selected Pine Lumber, Natural Finish, Varnished.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 315G—Galvanized Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Quarter Dozen in a Crate.

Stiles 4x1⅛". 14 Mesh Wire Cloth, Selected Pine Lumber, Sanded and Smoothed after assembling, Raised Mitered Mouldings, O. G. Finish on inner edges. Natural Finish, Varnished.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 515G—Galvanized Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Quarter Dozen in a Crate.

Oak Doors

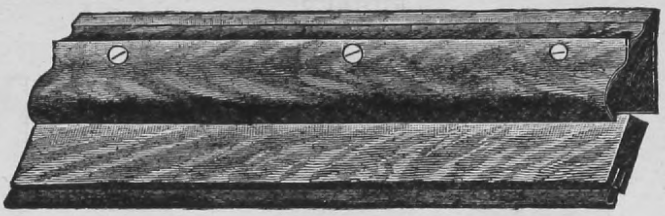
Stiles 4x1⅛". 14 Mesh Wire Cloth, Strictly Clear Oak, Sanded and Smoothed after assembling, Mitered Mouldings. Dark Golden Oak Finish, Filled and Varnished.

Size	2'6"x6'6"	2'8"x6'8"	2'8"x6'10"	2'8"x7'	2'10"x6'10"	2'10"x7'	3'x7'
No. 518B—Bronze Cloth Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....
No. 518G—Galvanized Per Dozen ..... $	.....	.....	.....	.....	.....	.....	.....

Packed—Quarter Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPRING DOOR BOTTOMS



Bosley's Spring Door Bottoms.

Imitation Walnut.

No. 1—2 feet 8 inches.....Per Dozen, $6.00
No. 2—3 feet.....Per Dozen, 6.60
No. 3—3 feet 6 inches.....Per Dozen, 7.20
Packed—Two Dozen in a Bundle.

Oak.

No. 01—2 feet 8 inches.....Per Dozen, $7.80
No. 02—3 feet .....Per Dozen, 8.40
No. 03—3 feet 6 inches.....Per Dozen, 9.00
Packed—Two Dozen in a Bundle.

FLEXIBLE WEATHER STRIP

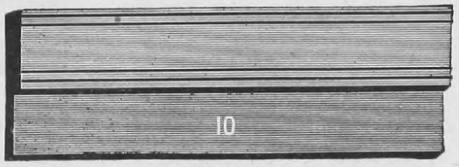
Solid Rubber

No. 8.

No. 8—⅜ inch, for the Upper Sash of Windows .....Per 100 Feet, $5.00
Packed—50 Feet in a Package.

No. 9.

No. 9—½ inch, for the Lower Sash of Windows .....Per 100 Feet, $6.00
Packed—50 Feet in a Package.



No. 10.

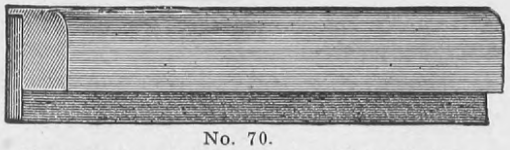
No 10—¾ inch, for the Sides and Tops of Doors .....Per 100 Feet, $8.00
Packed—50 Feet in a Package.

No. 11.

No. 11—1 inch, for the Bottom of Doors..... .....Per 100 Feet, $10.00
Packed—50 Feet in a Package.

CLINCHER DOUBLE-CONTACT WEATHER STRIPS

Felt

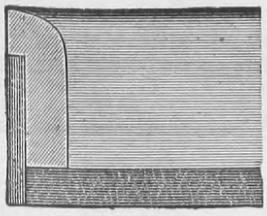


No. 70.

No. 70—⅜ inch, for the Upper Sash of Windows .....Per 100 Feet, $5.00
Packed—500 and 1,000 Foot Bundles.

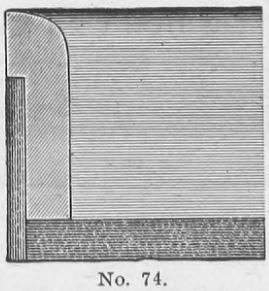
No. 71.

No. 71—⅝ inch, for the Lower Sash of Windows .....Per 100 Feet, $5.00
Packed—500 and 1,000 Foot Bundles.



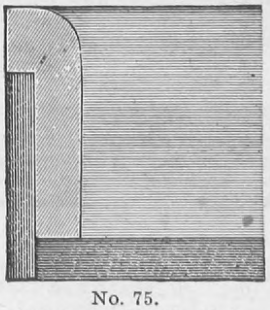
No. 71½.

No. 71½—¾ inch, for the Sides and Tops of Doors... .....Per 100 Feet, $7.00
Packed—500 Feet in a Bundle.



No. 74.

No. 74—1 inch, for the Bottom of Light Doors..... .....Per 100 Feet, $10.00
Packed—250 and 500 Foot Bundles.



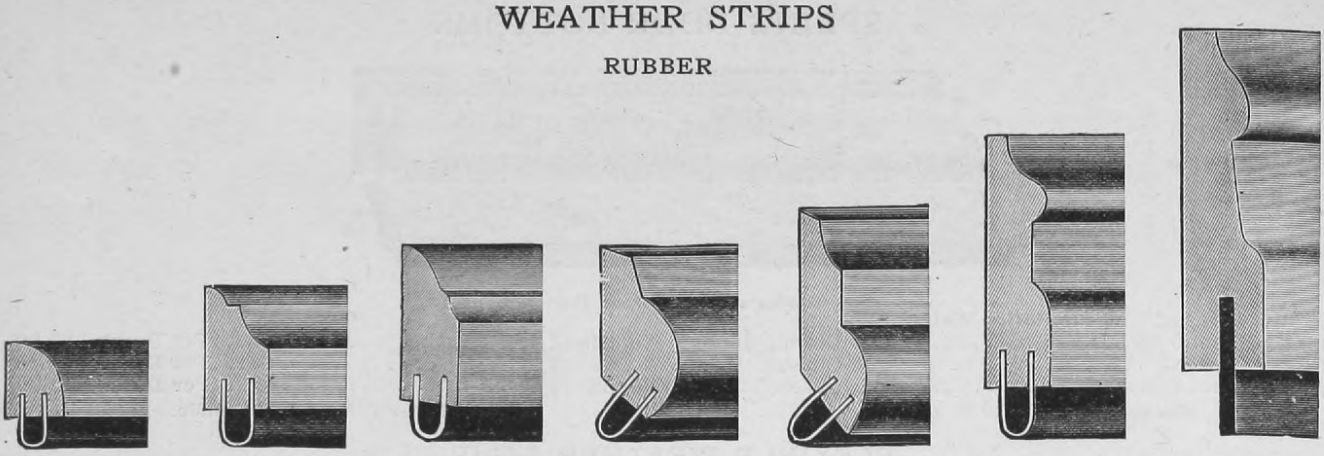
No. 75.

No. 75—1¼ inch, for the Bottom of Heavy Doors..... .....Per 100 Feet, $12.00
Packed—250 Feet in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WEATHER STRIPS

RUBBER



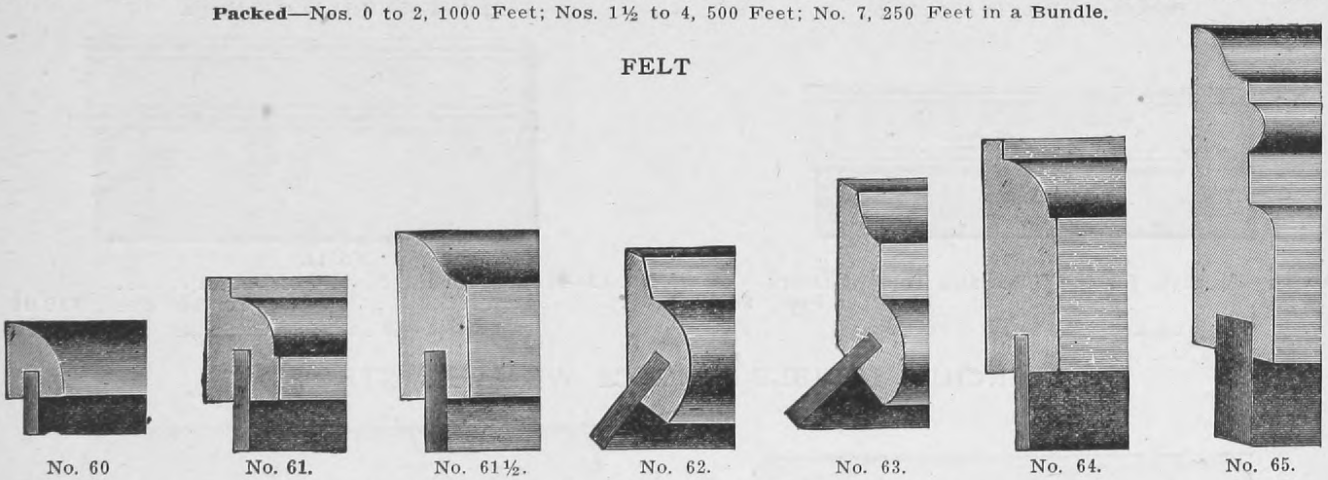
No. 0. No. 1. No. 1½. No. 2. No. 3. No. 4. No. 7.

Excelsior Double Rubber Weather Strips, Wood and Rubber Combined.

No. 0	—For the Upper Sash of Windows, Width of Moulding ⅜ inch	Per 100 Feet,	$ 5.00
No. 1	—For the Lower Sash of Windows, Width of Moulding ⅝ inch	Per 100 Feet,	5.00
No. 1½	—For the Sides and Tops of Doors, Width of Moulding ⅞ inch	Per 100 Feet,	7.00
No. 2	—For the Center of Windows, Width of Moulding ¾ inch	Per 100 Feet,	8.00
No. 3	—For the Center of Double Doors, Width of Moulding 1⅛ inches	Per 100 Feet,	9.00
No. 4	—For the Bottom of Light Doors, Width of Moulding 1¼ inches	Per 100 Feet,	10.00
No. 7	—For the Bottom of Heavy Doors, Width of Moulding 1¾ inches	Per 100 Feet,	12.00

Packed—Nos. 0 to 2, 1000 Feet; Nos. 1½ to 4, 500 Feet; No. 7, 250 Feet in a Bundle.

FELT



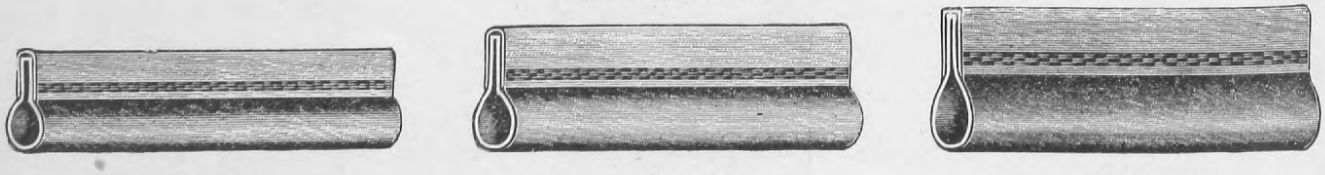
No. 60 No. 61. No. 61½. No. 62. No. 63. No. 64. No. 65.

Bosley's Felt Weather Strips, Wood and Felt Combined.

No. 60	—For the Upper Sash of Windows, Width of Moulding ⅜ inch	Per 100 Feet,	$ 5.00
No. 61	—For the Lower Sash of Windows, Width of Moulding ⅝ inch	Per 100 Feet,	5.00
No. 61½	—For the Sides and Tops of Doors, Width of Moulding ⅞ inch	Per 100 Feet,	7.00
No. 62	—For the Center of Windows, Width of Moulding ¾ inch	Per 100 Feet,	8.00
No. 63	—For the Center of Double Doors, Width of Moulding 1¼ inches	Per 100 Feet,	9.00
No. 64	—For the Bottom of Light Doors, Width of Moulding 1¼ inches	Per 100 Feet,	10.00
No. 65	—For the Bottom of Heavy Doors, Width of Moulding 1¾ inches	Per 100 Feet,	12.00

Packed—Nos. 60 and 61, 500 or 1000 Feet; Nos. 61½, 62 and 64, 500 Feet; Nos. 63 and 65, 250 Feet in a Bundle.

CUSHION FELT



No. 18. No. 19. No. 20.

Bosley's Cushion All Felt Weather Strips, stitched for blind nailing. Can be pulled out for any desired length, leaving balance in box in shape and free from dust and dirt.

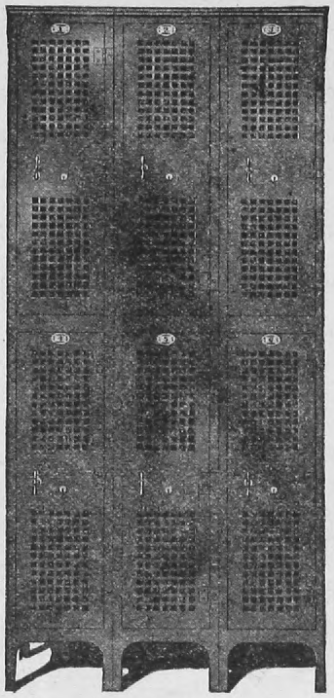
No. 18—For the Sides of Windows, Size ½ inch		Per 100 Feet,	$3.00
No. 19—For the Sides and Tops of Doors, Size ⅝ inch		Per 100 Feet,	3.50
No. 20—For the Bottom of Doors, Size ¾ inch		Per 100 Feet,	4.00

Packed—Fifty Feet in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

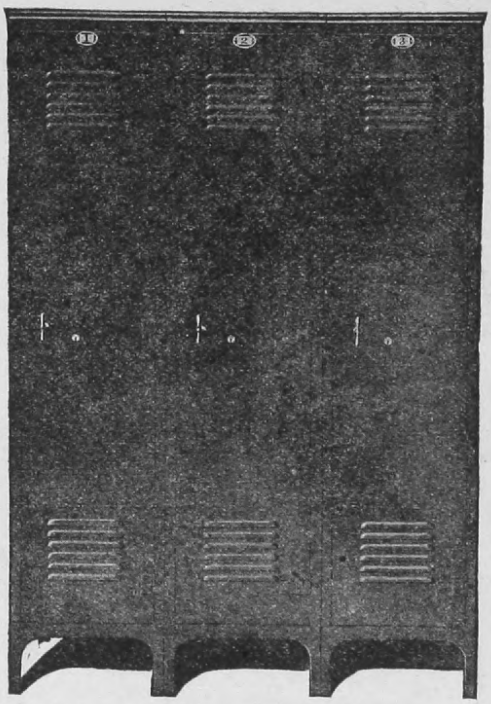
HART & HUTCHINSON CO. STANDARD LOCKERS

These are the leading quality products for the convenient, sanitary and safe storage of wearing apparel and goods. In use everywhere in factories, schools, gymnasiums, garages and for general equipment. Perfect in mechanical construction, finish and durability, their pre-eminence in this field is established.



"AC" Type.

Recommended for use in factories, schools, Y. M. C. A. buildings, bathing pavilions and similar institutions, where complete ventilation and easy inspection of contents is desirable. This type of locker has door fully perforated with 5/8 inch square holes upon 1 inch centers enclosed within simple border design. Above illustration shows a section of 3 units in length. Lockers can be arranged as simple units or combined in sections of any number that may be desired.



"BC" Type.

To provide privacy of contents we offer lockers with louvered doors. These have six ventilating openings at the top and bottom of the doors which are ample for proper air circulation. The whole door area may be cut with louvers if so desired. The fine design and beautiful finish of this type of locker adds to the attractiveness of coat rooms and locker spaces, as well as providing spacious, sanitary and safe storage accommodations.

PRICE LIST

Flat Top, Olive Green or Black Enamel Finish, without Locks, Knocked Down and Crated F. O. B. New Britain.

Dimensions	Length of Sections—"AC" or "BC" Type—Single Tier. 3 Long or more (each)	2 Long (each)	Singly (each)	Shpg. Wght Each
12 x 12 x 60 inches	$5.80	$6.40	$7.25	65 lbs.
12 x 15 x 60 inches	6.20	6.80	7.75	70 lbs.
15 x 15 x 60 inches	7.20	7.90	9.00	75 lbs.
15 x 18 x 60 inches	7.60	8.35	9.50	80 lbs.
12 x 12 x 72 inches	6.50	7.15	8.10	75 lbs.
12 x 15 x 72 inches	6.90	7.60	8.60	80 lbs.
15 x 15 x 72 inches	8.00	8.80	10.00	90 lbs.
15 x 18 x 72 inches	8.40	9.25	10.50	95 lbs.
18 x 18 x 72 inches	9.30	10.25	11.60	100 lbs.
	Length of Sections—"AC" or "BC" Type—Double Tier.			
12 x 12 x 36 inches	$3.90	$4.30	$4.85	35 lbs.
12 x 15 x 36 inches	4.10	4.50	5.10	40 lbs.
12 x 12 x 42 inches	4.30	4.75	5.35	40 lbs.
12 x 15 x 42 inches	4.50	4.95	5.60	45 lbs.
15 x 15 x 42 inches	5.20	5.70	6.50	55 lbs.

Locks

Flat key, Master keyed	$ .50
Padlocks	.50
Padlock attachment	No charge
Miller or Eagle Time Combination	$1.00
Miller Keyless Combination	.50

Extras

Slant Top, per locker.....25c Single Tier
Slant top, per locker.....15c Double Tier

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WARREN STANDARD "B" HARDWARE STORE FIXTURES

The Warren Standard B Store Fixtures, like all Warren productions, are made on the Sectional Interchangeable Unit System.

The bases are 8 feet 4⅝ inches long, 2 feet 7½ inches high and 2 feet 6 inches deep. All cabinets are 8 feet 4⅝ inches long, 4 feet 6 inches high and 1 foot 3⅜ inches deep.

All outside exposures made of White Oak. All interior construction of soft wood, usually poplar.

All Standard B Fixtures have a matched and beaded back of Soft Wood lumber, protecting stock from damp walls or possible loss of goods by being misplaced or falling down back of fixtures. All fixtures are built amply strong to sustain the weight of all Hardware Goods and every detail of trimming is complete, including all Brackets, Supports, Shelves, Racks, Pulls, Card Frames, Cards, etc.

Finish—The finish of Warren Standard B Fixtures is "Mission Tavern Oak" and this finish will always be sent unless otherwise ordered.

How to Order—It will only be necessary to use the catalog numbers of the different units desired in the order they are to be placed in the store.

Send us a pencil sketch, with the numbers of the different units, (Cabinets and Bases) inserted, showing relative location of each as they will be placed in the store.

State on which side, RIGHT or LEFT, of store as you enter the front, fixtures are to be placed.

COMBINATION NO. 10—This Combination of fixtures arranged for LEFT hand side of store as you enter the front, is 25 feet 4⅜ inches long, 7 feet 1½ inches high and is composed of three Cabinet Units three Base Units and finished end panels as follows:

CABINET No. 200—This Cabinet has two Sliding Glass Doors, with Ball Bearing Sheaves, Sliding on an inlaid steel track. Interior lined with rich Colored felt and fitted with Tool Racks, Brackets, Display Stands, etc., as shown in illustration.

BASE No. 100—This base contains two 10x24, four 10x36, one 2¾x24 and two 2¾x36 inch Oak front drawers.

CABINET No. 242—This Cabinet has four Swing Panels, arranged with removable Sample boards covered with rich colored felt. Six adjustable Shelves back of each swing panel, for goods in original packages.

BASE No. 112—This Base contains sixteen 5⅜x24 inch Oak Front Drawers, 28 inches deep, with partitions.

CABINET No. 270—This Cabinet contains Sixty-four 5⅝x12 Oak Front Drawers, with loose partitions.

BASE No. 118—This Base has four Oak Paneled Sliding Doors, with one shelf back of each opening. Sliding Doors are fitted with Ball Bearing Sheaves and slide on an inlaid steel track.

END PANELS NOS. 370 AND 372

Two Finished Cabinet End Panels and two Finished Base End Panels to finish exposed ends of Combination.

Approximate weight, packed, 2685 pounds.

This Combination of fixtures can be arranged for RIGHT side of store if desired, or additional units added for greater length or height as desired.

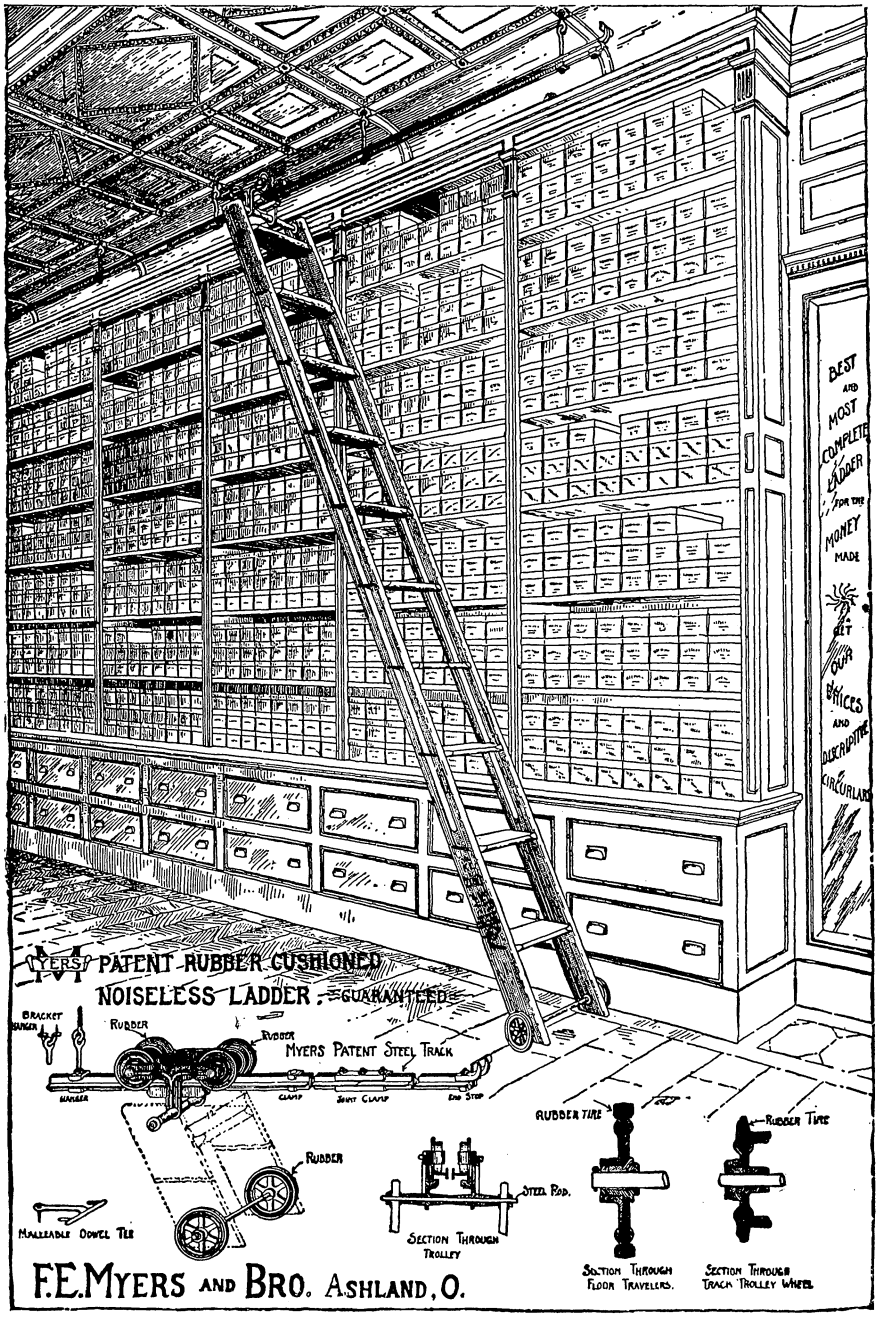
Not carried in stock. Can only be furnished by shipping direct from factory.

Complete Catalog sent on application describing fully the different units forming this combination and many others.

Note—Write us for Catalog and Prices.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MYERS' STORE LADDERS



Myers' Cushion Tired Ladder.

Track: Double Angle Steel Track, Suspended by Lag Screws or by Flanged Plates and Wood Screws, as desired.

The Ladder is constructed of best Clear Georgia Pine, nicely finished, filled and varnished; each step supported by a Malleable Dowell Tee; width of Ladder 12 inches.

The Trolley is self adjusting, has Turned Steel Bearings and the three-inch Wheels are fitted with Special **Rubber Tires.**

The Floor Travelers are 5 inches in diameter, fitted with **Rubber Tires.**

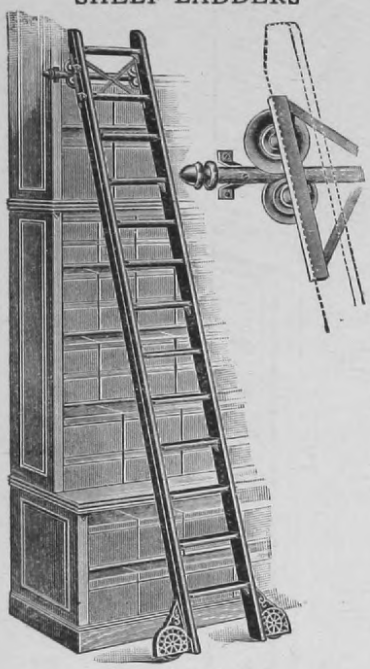
Measurement—To find the required length of Ladder, subtract from height of room 11 inches (this being the amount of space required for Hangers, Track, and Trolley); multiply the remainder by one and one-tenth; the result will be the length of Ladder from hole at top to bottom of Ladder.

Ladder and Trolley—Complete as shown above.....Each, $20.00
Track with Hangers—Complete as shown above.....Per Foot, .30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN STORE LADDERS

SHELF LADDERS

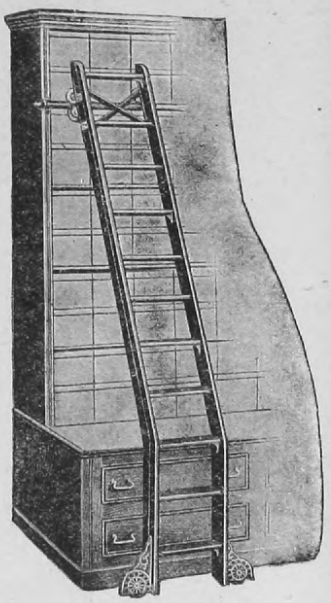


Nos. 1 and 1P.

Coburn Shelf Store Ladders

These Ladders are invaluable for use in shoe stores and establishments of a like character. The Nos. 1 and 3 Series are 16 inches wide outside, with 3 inch sides and 4½ inch treads. Iron work is finished in Aluminum Bronze.

Note.—Carriage to allow ladder to operate around curved track can be furnished at an additional list price of $10.00. Prices for other kinds of wood or finish of fixtures than above quoted on application.



Nos. 3 and 3P.

Straight Ladders

No. 1 —Quartered Oak, Complete	Each,	$22.00
No. 1P—Hard Pine, Complete	Each,	18.00
Wood Pole Track, including Brackets	Each,	.30

Bent Ladders

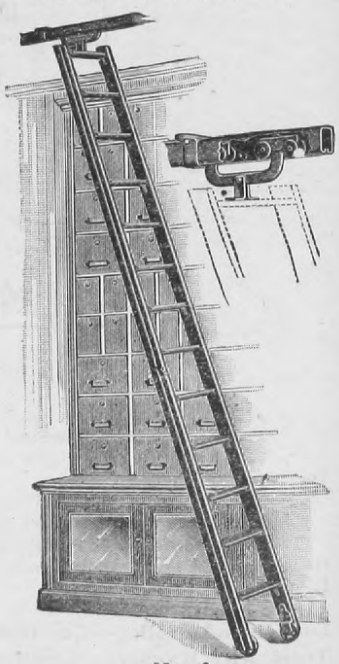
No. 3 —Quartered Oak, Complete	Each,	$24.00
No. 3P—Hard Pine, Complete	Each,	20.00
Wood Pole Track, including Brackets	Each,	.30

CEILING LADDERS

Coburn Ceiling Store Ladders

This Ladder is recommended for use in hardware and other stores where heavy merchandise is to be handled. Width over all 13⅝ inches, Iron Work is finished in Aluminum Bronze. No. 1 Trolley Track and brackets are used with this ladder. The track is regularly furnished in 4, 5 and 6 foot lengths, but can be furnished in any length up to 10 feet. Brackets should be spaced not over 6 feet apart. For plastered ceilings, ceiling strips should be used.

No. 9 —Quartered Oak, Complete	Each,	$24.00
No. 9P—Hard Pine, Complete	Each,	20.00
No. 1 —Trolley Track, including Brackets	Per Foot,	.30
No. 1C—Curved Track, including Brackets	Per Foot,	1.00

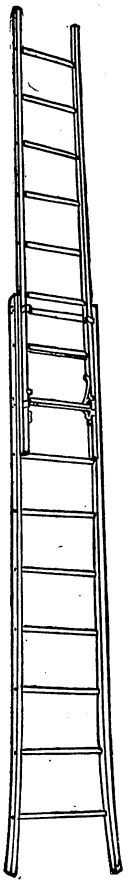


No. 9.

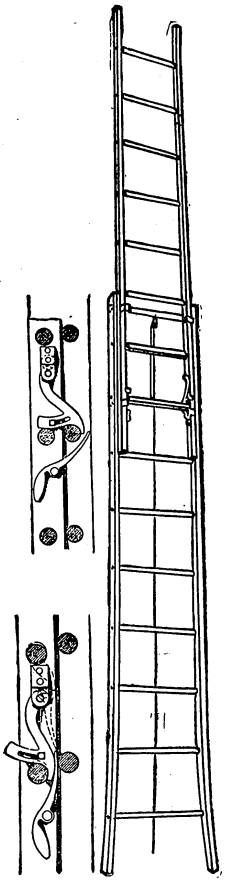
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LADDERS

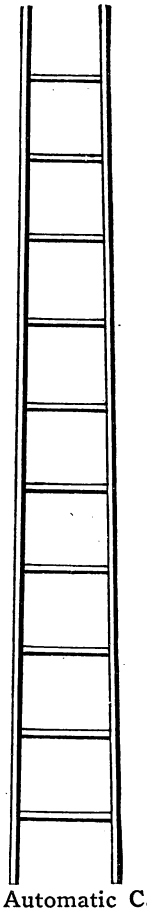
COMMON EXTENSION



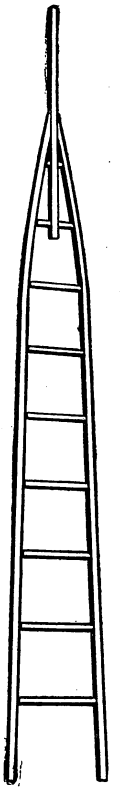
AUTOMATIC EXTENSION



COMMON STRAIGHT



POINTED FRUIT



Nos. 124 to 140. "Common" Extension Ladders with Automatic Catch Nos. 08 to 022.

This Ladder is made from good stock, with 1⅛ inch Straight Hickory Rounds. 3 to 4 Spreader Rounds in base of lower section makes full spread at base 5 to 6 inches more than the regular width, according to length of ladder. Provided with Malleable Iron Drop Catch of extreme simplicity. Top Irons are of pressed steel.

Nos.	124	128	132	136	140
Feet of Ladder	24	28	32	36	40
Feet in each section	12	14	16	18	20
Feet, Extended	20	24	28	32	36
Each	$				

"Automatic" Extension Ladders

Selected Norway or Southern Pine side rails, with 1⅛ inch Straight Kiln Dried First Class Hickory Rounds. 3 to 4 Spreader Rounds in base of lower section make full spread at base 5 to 6 inches more than the regular width, according to the length of ladder. Has **Automatic Catch** constructed of the best Malleable Iron and works perfectly, the ladder is easily operated with or without a rope, the Catch is simply a gravity catch which works Automatically and requires no spring or extra rope to operate it. It consists of only two working parts and is bolted to side rail. No screws to work loose and no rivets to break off.

Nos.	224	228	232	236	240
Feet of Ladder	24	28	32	36	40
Feet in each section	12	14	16	18	20
Feet, Extended	20	24	28	32	36
Each	$				

Common Straight or Long Ladders

Made of first class material throughout, with 1⅛ inch Straight Kiln Dried First Class Hickory Rounds.

Nos.	10	12	14	16	18	20	22	24
Length, Feet	10	12	14	16	18	20	22	24
Each	$							

Pointed Fruit Ladders

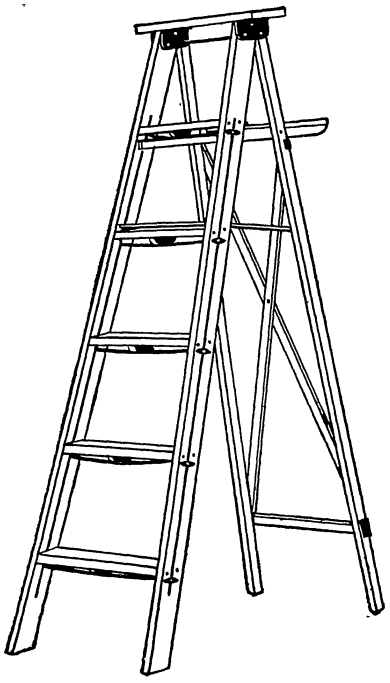
Selected Norway or Southern Pine Sides, 1⅛ inch Hickory Rungs. The top is narrowed to a point and has a center piece to force into limbs or rest in the crotch of a tree. The two top rungs run through the center piece, side rails and center piece are bolted together at the extreme end of the side rails. The length is figured from the bottom to the top of the center piece.

Nos.	08	010	012	014	016	018	020	022
Length, Feet	8	10	12	14	16	18	20	22
Each	$							

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

STEP LADDERS

BUHL EXTRA

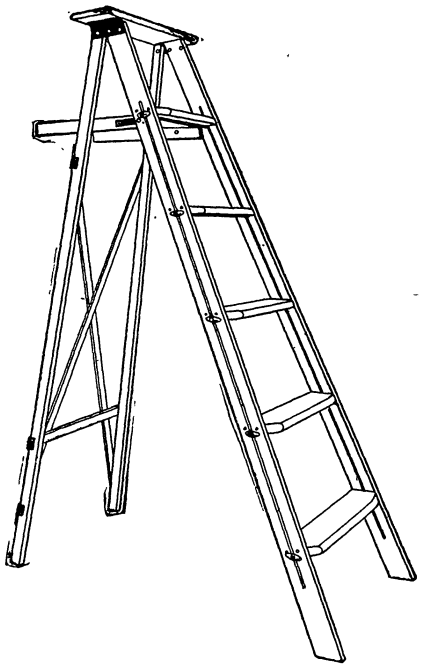


Full Rodded and Trussed.

Buhl Extra, with Shelf and all Steel Lock. Made of strictly clear seasoned Southern or Norway Pine. Steps 4¼ inches wide, 6½ inch Top. Has a very strong, full looped Japanned Steel Hinge or Ear, with right angle flange to which top is riveted. Each step is rounded, **rodded** and **trussed** and all braces are steel bound.

Feet,	4	5	6	7	8	10	12
Each, $	....	.....	.....	.....	.....	.....	.....

BUHL DETROIT

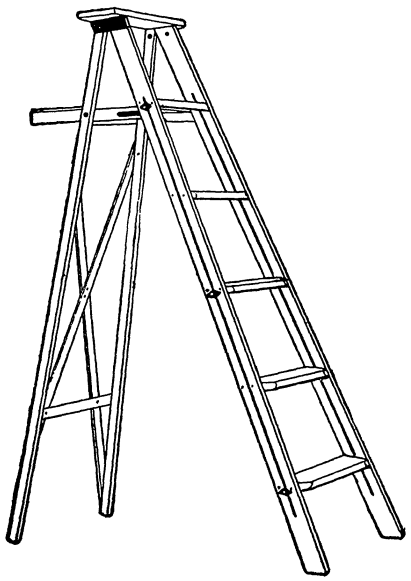


Full Rodded But Not Trussed.

Buhl Detroit, with Shelf. Made of strictly seasoned Southern or Norway Pine. Steps 3¾ inches wide, 5½ inch Top. The braces are steel bound, steps are rounded and rodded and top is securely riveted on.

Feet,	4	5	6	7	8	10	12
Each, $	....	.....	.....	.....	.....	.....	.....

BUHL SPECIAL

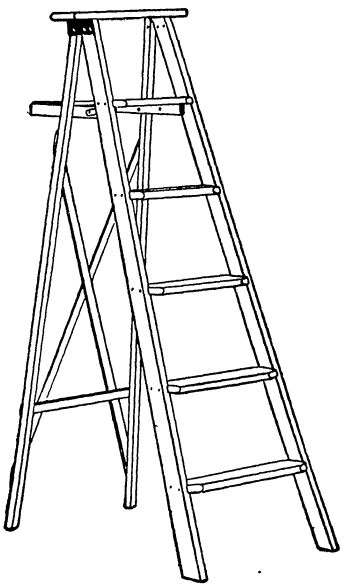


Rodded Every Other Step.

Buhl Special, with Shelf and Wooden Spreader Lock. Made of strictly clear seasoned Southern or Norway Pine. Steps 3¾ inches wide, 5½ inch Top. The braces are all steel bound, every other step is rodded and the top is securely riveted on, making it an excellent medium priced ladder.

Feet,	4	5	6	7	8	10	12
Each, $	....	.....	.....	.....	.....	.....	.....

PENINSULAR



Not Rodded or Trussed.

Peninsular, with Shelf. Made of Southern or Norway Pine. Steps 3¾ inches wide, 5½ inch Top. The best medium priced step ladder ever offered to the trade. Very light and absolutely safe.

Feet,	3	4	5	6	7	8	10	12
Each, $	....	....	....	....	....	....	....	....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PAINTERS' BRUSHES

Trade Mark.

Trade Mark.

John L. Whiting—J. J. Adams Co. We are distributors of this well known line of Brushes, which product has no rival. Their goods are so well known that any elaborate description of their merits would be superfluous. It will be sufficient for our purpose to state that every artist appreciates their worth and durability, and every mechanic who wants a first-class, high grade brush will ask for them in preference to any other brand, and the satisfaction which they give the trade in general is the best testimony we can offer in their favor.

Three reasons why we sell John L. Whiting—J. J. Adams Co. Brushes at lower prices and supply better value than can be had from any other manufacturer in the world:

First. Their facilities for buying raw materials are perfect. They are the only brush manufacturers in the world having personal representatives permanently located in all bristle producing countries, buying bristles direct from producers. Purchases are made from first hands, in large blocks, and quality must stand test of personal inspection. This insures for the Whiting-Adams Brushes highest quality stock at the lowest prices.

Second. The Whiting-Adams factory is equipped with the best facilities for manufacturing brushes perfectly and cheaply, much superior to any other factory anywhere. Combining the savings in purchase of raw materials, with economical methods of manufacture results in reducing the cost of the Whiting-Adams Brushes so that better brushes are furnished at lower prices than any other manufacturers can possibly offer.

Third. Permanence of quality. The quality of the Whiting-Adams Brushes is always the same. Market prices of raw materials may change, but the quality of their brushes is always kept up to the same high standard.

Trade Mark

VULCAN-SET
IN RUBBER

These Brushes stand for perfection in the art of brush making, they are made under ordinary temperature and atmospheric conditions; they are not baked, roasted or scorched and not in any way injured by chemicals or other substances in the process of making. These Brushes will stand anything and everything, can be used in alcohol, asphaltum, benzine, creosote, fusel oil, hot glue, hot tar, lacquers, naphtha, oils, turpentine, any kind of paint, varnish, shellac or other substances. Will stand any climate, wet, dry, hot or cold and will never shrink or swell. The setting will last forever, it will not crumble, split, crack, rot or yield in any way under any conditions. You may shrivel, scorch and burn bristles with extreme heat, acids, alkalis and chemicals, but you cannot destroy the setting o fthese brushes and they will never shed or come apart. Warranted in every respect.

FLAT PAINT OR WALL BRUSHES

C. HINO.

Black China Bristles, Metal Bound, Fine and Elastic, a good brush for consumers' general use.

Width, inches	2½	3	3½	4
Hair, inches	2	2⅛	2¼	2½
Per Dozen	$3.44	4.10	4.50	5.60

Packed—Half Dozen in a Box.

JUNO.

Black China Bristles, Metal Bound, very Fine and Elastic, Rosewood Stained Handles.

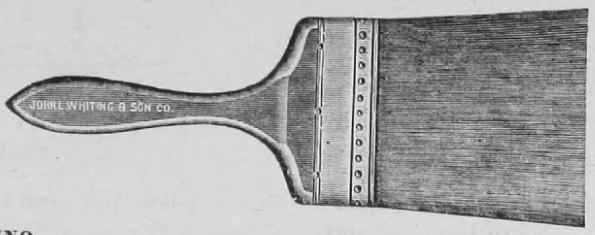
Width, inches	2½	3	3½	4	4½
Hair, inches	2⅛	2⅜	2⅝	2⅞	3⅛
Per Dozen	$4.50	5.56	6.30	7.90	9.20

Packed—Half Dozen in a Box.

Note.—The Length of Hair given is measured clear of Band.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLAT PAINT OR WALL BRUSHES



EXTRA HINO.

Superior Quality **Black** Chinese Bristles, very full and elastic, with Soft Ends, Nickel Bound. Extensively used by manufacturers for Wood Filling.

Width, inches....	2½	3	3½	4	4½
Hair, inches	2½	2¾	3	3¼	3½
Per Dozen	$6.40	8.76	11.20	13.90	16.90

Packed—Half Dozen in a Box.

MODEL.

Long Elastic **Black** Chinese Bristles, Nickel Bound. Prepared with extra care. Very elastic, durable and smooth working.

Size Nos.	66	77	88	99
Width, inches...	3	3½	4	4½
Hair, inches	3½	3¾	4	4¼
Per Dozen.....	$12.50	13.90	18.20	20.70

Packed—Half Dozen in a Box.

EXTRA EXTRA HINO.

Extra Quality **Black** Chinese Hong Kong Bristles, long, elastic and durable, Nickel Bound. Handsome and altogether practical and desirable.

Size Nos.	60	70	80	90
Width, inches...	3	3½	4	4½
Hair, inches.....	3¾	4	4¼	4½
Per Dozen.....	$15.50	20.30	24.60	31.70

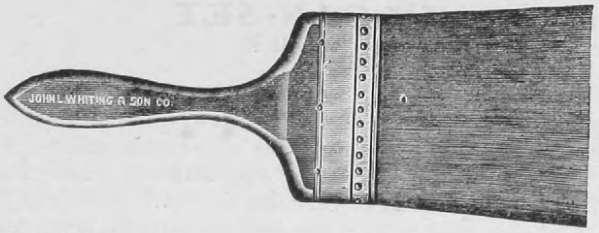
Packed—Half Dozen in a Box.

ARCTIC.

White Russian Bristles, full and good, Nickel Bound, Cemented and Nailed. Excellent in style and quality.

Width, inches....	2½	3	3½	4	4½
Hair, inches.....	2⅜	2⅝	2⅞	3⅛	3¼
Per Dozen.....	$5.00	7.50	10.20	12.90	18.20

Packed—Half Dozen in a Box.



EXTRA EXTRA PRIME.

Best **White** Russian Bristles, Long, Elastic and most Durable, Nickel Bound.

Width, inches....	3½	4	4½
Hair, inches.....	4¼	4½	4¾
Per Dozen	$29.70	39.30	42.80

Packed—Half Dozen in a Box.

SPECIAL AZTEC.

Superior quality long **Black** Chinese Hong Kong Bristles, Nickel Bound, Handsome Rosewood Stained Handles.

Width, inches.....	3½	4	4½
Hair, inches.....	4¼	4½	4¾
Per Dozen.....	$31.00	35.90	42.80

Packed—Half Dozen in a Box.

TOKIO STUCCO.

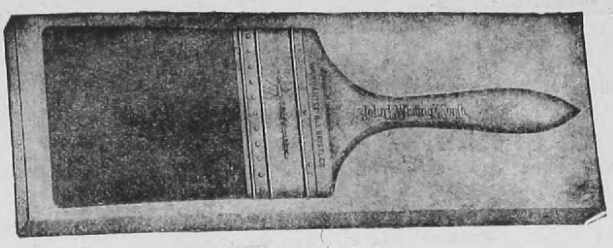
Superior quality long **Black** Chinese Bristles, Leather Bound, Durable and Elastic.

Size Nos.	30	35
Width, inches	3½	4
Hair, inches	4⅛	4⅜
Per Dozen	$26.80	31.40

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLAT PAINT OR WALL BRUSHES

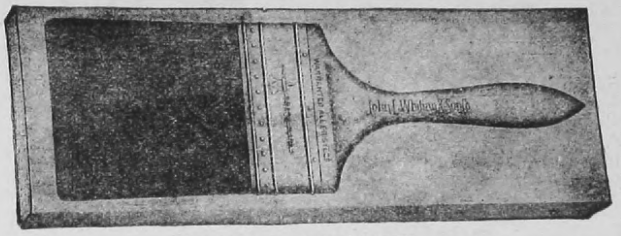


BUHL FLYER.

Black Chinese Bristles, Nickeled Ferrules, fine and elastic.

No. 50—Width 4 inches, Hair 3¼ inches..... Per Dozen, $9.00

Packed—One-Twelfth Dozen in a Box, Marked 50 Cents.

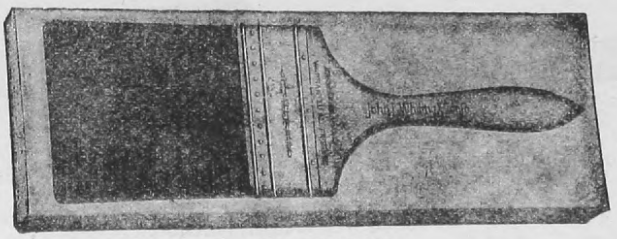


BUHL WOLVERINE.

Black Chinese Bristles, Nickeled Ferrules, very fine and elastic.

No. 75—Width 4 inches, Hair 3⅞ inches..... Per Dozen, $13.90

Packed—One-Twelfth Dozen in a Box, Marked 75 Cents.



BUHL SPECIAL.

Black Chinese Bristles, Nickeled Ferrules, very fine and elastic.

No. 100—Width 4 inches, Hair 4⅛ inches..... Per Dozen, $20.30

Packed—One-Twelfth Dozen in a Box, Marked $1.00.

"VULCAN-SET" BRUSHES

FLAT PAINT OR WALL

NO. 587 SERIES.

Vulcan-Set in Rubber, Best Quality Long **Black** Chinese Bristles, Bridled, Nickeled Ferrules.

Nos.	587H	587J	587L	587N
Width, inches	3	3½	4	4½
Hair, inches	3¼	3½	4	4
Per Dozen	$14.50	18.20	23.00	27.80

Packed—Half Dozen in a Box.

NO. 886 SERIES.

Vulcan-Set in Rubber, Best Quality Long **Black** Chinese Bristles, Bridled, Nickeled Ferrules.

Nos.	886H	886J	886L	886N
Width, inches	3	3½	4	4½
Hair, inches	4	4¼	4⅜	4½
Per Dozen	$20.00	24.60	30.00	36.00

Packed—Half Dozen in a Box.

NO. 561 SERIES.

Vulcan-Set in Rubber, Best Quality Long **White** Russian Bristles, Bridled, Nickeled Ferrules.

Nos.	561H	561J	561L	561N
Width, inches	3	3½	4	4½
Hair, inches	4	4¼	4⅜	4½
Per Dozen	$25.00	31.70	40.30	52.00

Packed—Half Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

OVAL VARNISH BRUSHES

TOKYO

Specially Selected Brand of **Black** Chinese Bristles, Chiseled, very Fine and Silky, Nickel Plated Ferrules, Oval shape.

Size Nos.	4-0	6-0	8-0	10-0
Hair, inches	3	3 1/4	3 1/2	3 3/4
Per Dozen	$14.50	18.90	22.50	29.20

Note.—Nos. 8-0 and 10-0 are Bridled.
Packed—Half Dozen in a Box.

CONQUEROR

Selected Fine and Elastic **White** Bristles, Chiseled, Nickel Plated Seamless Ferrules, slightly open center.

Size Nos.	3-0	4-0	6-0	8-0	10-0
Hair, inches	3	3 1/4	3 1/2	3 3/4	4 1/4
Per Dozen	$18.90	22.50	29.20	37.70	45.70

Note.—Nos. 6-0, 8-0 and 10-0 are Bridled.
Packed—Half Dozen in a Box.

NUBIAN.

Selected **Black** Chinese Bristles, Chiseled, Nickel Plated Seamless Ferrules, Bridled.

Size Nos.	4–0	6–0	8–0	10–0
Hair, inches	3 1/4	3 1/2	3 3/4	4 1/4
Per Dozen	$12.90	16.30	21.70	30.50

Note.—Nos. 6-0, 8-0 and 10-0 are Bridled.
Packed—Half Dozen in a Box.

UTOPIA.

Special Gear Brush, Selected **Black** Chinese Bristles, Chiseled, Nickel Plated Swelled Seamless Ferrules, not Bridled.

Size, Nos.	1	2	3	4
Hair, inches	2 1/2	2 3/4	2 7/8	3
Per Dozen	$6.40	7.70	9.40	10.70

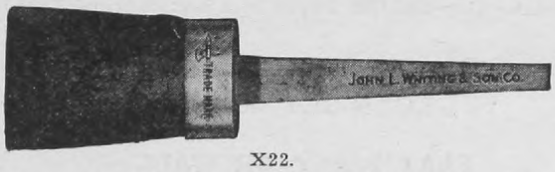
Packed—Half Dozen in a Box.

BUHL SONS CO., EXTRA FEZ.

Selected **Black** Chinese Bristles, Chiseled, Nickel Plated Swelled Seamless Ferrules.

Width, inches	1 3/4
Hair, inches	2 3/8
No. 25—Per Dozen	$5.10

Packed—One-Twelfth Dozen in a Display Box, Marked 25 Cents.



X22.

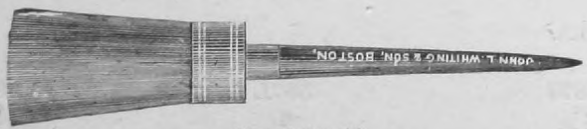
X22—Owl Oval Varnish Brushes. Nickel Plated Ferrules, **Black** Chinese Bristles. Carefully Chiseled.

Size Nos.	4	6	8	10
Hair, inches	3	3 7/16	3 5/8	3 7/8
Per Dozen	$9.20	12.90	15.90	19.30

Packed—Half Dozen in a Box.

GLUE BRUSHES

ROUND



Nos. 2 to 10.

Round Glue Brushes

Iron Handles, **White** Bristles, Steel Ferrules.

Nos.	2	4	6	8
Hair, inches	1 3/4	2 1/8	2 3/8	2 1/2
Diameter, inches	3/4	1	1 1/4	1 1/2
Per Dozen	$6.40	9.90	12.90	15.00

Packed—One Dozen in a Box.

Wood Handles, All Bristles, White Outside, Gray Middle.

Nos.	08	10
Hair, inches	2 1/2	3
Width, inches	1 1/2	1 3/4
Per Dozen	$9.60	19.30

Packed—One Dozen in a Box.

FLAT

Sterling.

Sterling Flat Glue Brushes

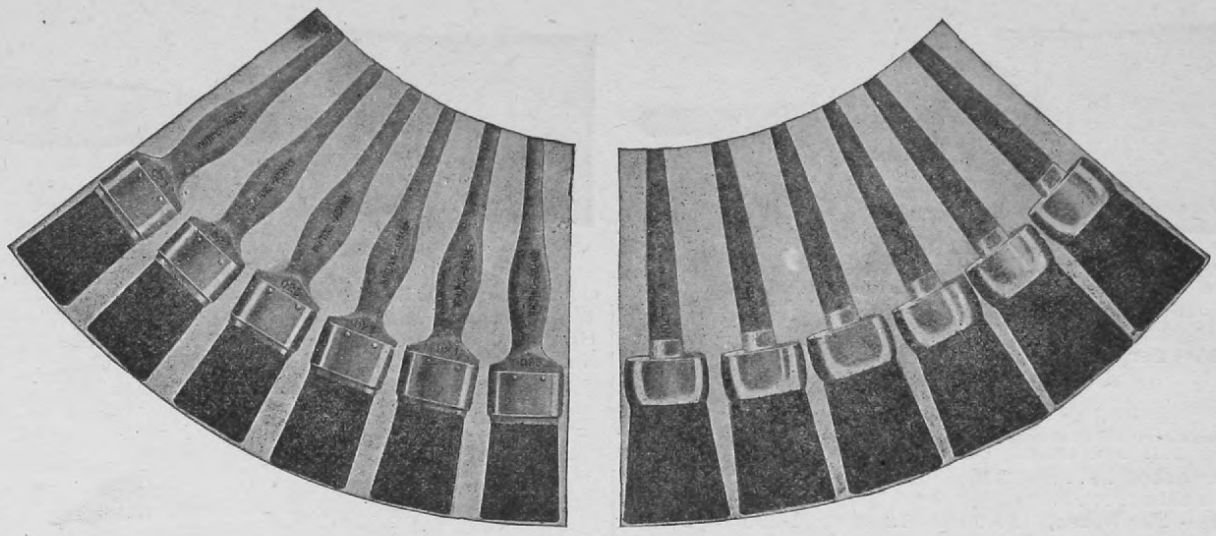
Wood Handles, Stiff Gray Bristles, Steel Ferrules. Very strong, for manufacturers' use.

Width, inches	1 1/2	2	3	4
Hair, inches	2 1/8	2 1/4	2 3/8	2 3/8
Per Dozen	$6.10	8.56	15.00	20.60

Packed—One Dozen in a Box.

Digitized by
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

BRUSH ASSORTMENTS

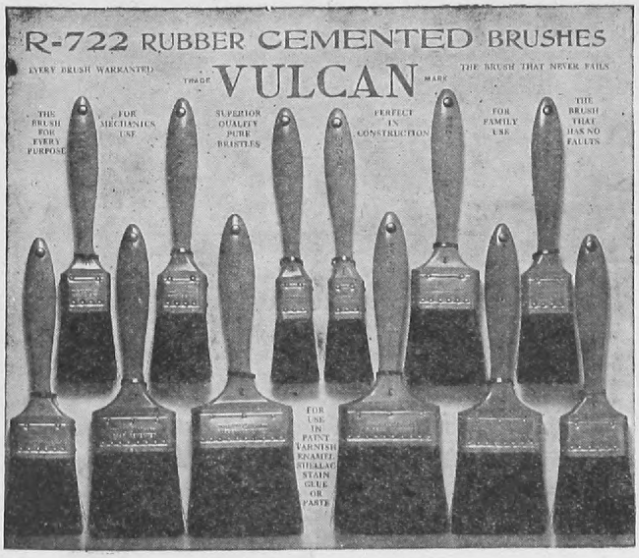


No. 3010C.

WACO Brushes. Best quality Bristles which can be used in anything. Bristles cannot come out. An exceptional Brush for Family or Mechanics' use, Painting or Varnishing. Assortment consists of One Dozen Brushes, (6 Oval Brushes and 6 Vulcan Set 1½ inch Flowing Brushes).

No. 3010C—WACO Assortment.....Per Assortment, $4.80

Packed—One Assortment (One Dozen) on Display Card.



No. R722.

Rubber Cemented Brushes, Triple thick. All Selected **Black** Chinese Bristles. Natural Polished Handles, Nickel Ferrules. Assortment consists of Two each 1, 2½ and 3 inch; Three each 1½ and 2 inch Brushes.

No. R722—Vulcan Brush Assortment.....
.....Per Assortment, $6.40

Packed—One Assortment (One Dozen) in a Box.

No. X-49.

Flat Paint or Wall Brushes. **Black** Bristles, Nickeled Ferrules, Polished Handles. Assortment consists of Three each 2½, 3, 3½ and 4 inch Brushes. Four of which are on Display Card as illustrated and Eight are loose in a Box.

No. X-49—Owl Wall Brush Assortment.....
..... Per Assortment, $6.00

Packed—One Assortment (One Dozen) in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLOWING VARNISH BRUSHES

NO. 025 SERIES.

Vulcan-Set in Rubber, Ex. Ex. Thickness, **Black** Chinese Bristles, soft and elastic, Chiseled, Nickel Plated Ferrules.

Width, inches	1½	2	2½	3
Hair, inches	1 11/16	2	2	2 1/16
No. 025—Per Dozen...	$5.00	6.40	8.00	9.30

Packed—Half Dozen in a Box.

NO. 708 SERIES.

Vulcan-Set in Rubber, Ex. Ex. Thickness, **White French** Bristles, soft and elastic, Chiseled, Nickel Plated Ferrules.

Width, inches	1½	2	2½	3
Hair, inches	2¼	2½	2¾	2⅞
No. 708—Per Dozen,	$9.90	12.84	16.50	20.30

Packed—Half Dozen in a Box.

NO. R052 SERIES.

Vulcan Rubber Cemented, Triple thick, **Black** Chinese Bristles, soft and elastic, Nickel Plated Ferrules.

Width, inches	1	1½	2	2½	3
Hair, inches	2 1/16	2 5/16	2½	2¾	2⅞
Per Dozen	$3.20	4.80	6.40	9.50	13.60

Packed—One Dozen in a Box.

NO. R039 SERIES.

Vulcan Rubber Cemented, Single Thick, **Black** Chinese Bristles, soft and elastic, Nickel Plated Ferrules.

Width, inches..	1	1½	2	2½	3
Hair, inches...	1⅝	1⅞	1⅞	1⅞	2¼
Per Dozen ...	$1.90	2.50	3.10	4.00	4.80

Packed—One Dozen in a Box.

H. P. MATSU.

Selected **Black** Chinese Bristles, Chiseled, Silky and Elastic, Nickel Plated Ferrules.

Width, inches,	1	1½	2	2½	3
Hair, inches..	1¾	2	2¼	2½	2⅝
Per Dozen ...	$3.00	4.30	5.70	8.90	11.80

Packed—One Dozen in a Box.

XXX AZTEC.

Selected **Black** Chinese Bristles, Chiseled, very thick, Polished Cherry Handles, Nickel Plated Bands.

Width, inches,	1	1½	2	2½	3
Hair, inches..	1¾	2	2¼	2⅝	2¾
Per Dozen ..	$3.50	5.60	7.50	11.20	15.40

Packed—One Dozen in a Box.

AA TOKYO.

Specially Selected **Black** Chinese Bristles, Chiseled Quadruple Thick, Cherry Handles, Nickel Plated Bands.

Width, inches,	1	1½	2	2½	3
Hair, inches..	2	2¼	2½	2⅞	3
Per Dozen ..	$3.80	5.50	7.20	10.50	14.90

Packed—One Dozen in a Box.

XXX KRAKO.

Purest **White** Bristles, Chiseled, Soft and Elastic, Very Thick, Varnished Handles, Brass Bound.

Width, inches	1½	2	2½
Hair, inches	2¼	2½	2¾
Per Dozen	$10.50	16.00	22.80

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLAT VARNISH BRUSHES

"A" HINO.

Black Chinese Bristles, Chiseled, Round Polished Cherry Handles, Nickel Bound.

Width, inches..	1	1½	2	2½	3
Hair, inches...	1¾	1 15/16	2 1/16	2⅛	2¼
Per Dozen ...	$2.50	3.40	4.30	5.70	6.40

Packed—One Dozen in a Box.

"E" MATSU.

Best **Black** Chinese Bristles, Chiseled, Yellow Handles, Polished Tin Ferrules.

Width, inches..	1	1½	2	2½	3
Hair, inches...	1¾	1 15/16	2	2 1/16	2⅛
Per Dozen ...	$1.50	2.20	3.00	4.10	4.80

Packed—One Dozen in a Box.

TOKYO.

Best **Black** Chinese Bristles, Chiseled, Black Enameled Handle, cement set, single thick.

Width, inches..	1	1½	2	2½	3
Hair, inches...	1⅝	1¾	1⅞	2	2⅛
Per Dozen ...	$0.96	1.50	1.84	2.30	2.90

Packed—One Dozen in a Box.

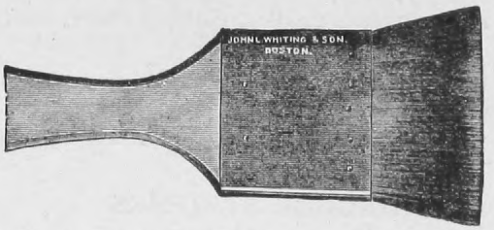
AA EXTRA.

White French Bristles, Chiseled, Double Thick, Yellow Handles, Brass Plated Tin Ferrules.

Width, inches..	1	1½	2	2½	3
Hair, inches...	1⅝	1¾	2	2¼	2⅜
Per Dozen ...	$2.56	3.96	5.36	7.70	9.64

Packed—One Dozen in a Box.

CAMEL HAIR BRUSHES



Superior Camel Hair Coach Painters' Color or Mottling Brushes, Chiseled.

Single Thick—Mottling.

Width, inches,	1	1½	2	2½	3
Per Dozen	$9.00	14.60	22.20	32.00	45.00

Double Thick—Color.

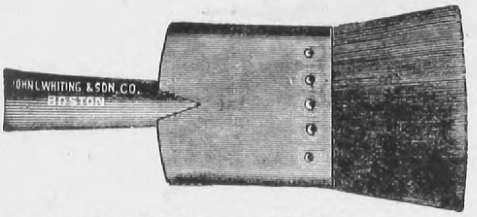
Width, inches,	1	1½	2	2½	3
Per Dozen ..	$12.00	22.50	37.70	57.50	86.00

Triple Thick—Color.

Width, inches	2	2½	3
Per Dozen	$38.50	60.00	91.00

Packed—One Dozen in a Box.

FLOWING VARNISH BRUSHES



Fitch Hair Flowing Brushes, Nickel Plated Ferrules.

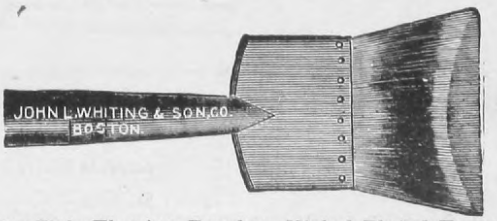
Single Thick, Chiseled.

Width, inches..	1	1½	2	2½	3
Hair, inches..	1⅛	1⅛	1¼	1½	1⅞
Per Dozen	$4.80	6.70	9.10	11.20	13.60

Double Thick, Chiseled.

Width, inches..	1	1½	2	2½	3
Hair, inches..	1⅛	1¼	1⅝	1¾	2
Per Dozen	$5.70	8.60	11.20	13.90	16.80

Packed—Half Dozen in a Box.



Badger Hair Flowing Brushes, Nickel Plated Ferrules.

Single Thick, Chiseled.

Width, inches..	1	1½	2	2½	3
Hair, inches..	1¼	1½	1⅝	1¾	1¾
Per Dozen	$12.00	16.00	20.00	31.50	42.50

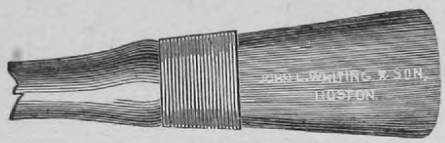
Double Thick, Chiseled.

Width, inches..	1	1½	2	2½	3
Hair, inches..	1¼	1½	1⅝	1¾	2
Per Dozen	$15.00	22.50	30.00	40.70	53.60

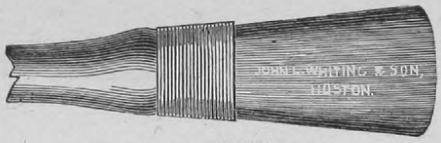
Packed—Half Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SASH TOOLS



X.



HINO.

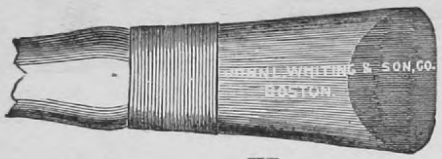
X Sash Tools, Common Bristles, Wire Bound, Short Ferrules.

Size Nos.	1	2	3	4	5	6	7	8
Per Dozen	$1.16	1.40	1.80	2.16	2.36	2.56	2.96	3.30

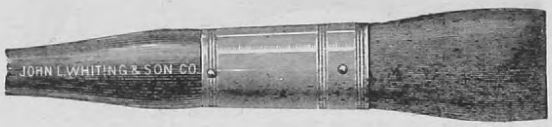
HINO Sash Tools, **Black** Chinese Bristles, Wire Ferrules, Red Handles.

Size Nos.	1	2	3	4	5	6	7	8
Per Dozen	$1.50	1.70	2.00	2.36	2.56	2.90	3.20	4.20

Packed—One Dozen in a Box.



HP.



XXX AZTEC.

HP Sash Tools, **White** Bristles, Chiseled, Full Centers, Wire Ferrules.

Size Nos.	3	5	7	9
Hair, inches	1 5/8	1 13/16	2	2 3/8
Per Dozen	$2.66	3.60	4.60	7.30

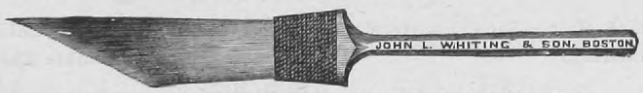
Packed—One Dozen in a Box.

XXX AZTEC Sash Tools, Best **Black** Chinese Bristles, Polished Cherry Handles, Nickel Plated Ferrules.

Size Nos.	1	2	3	4	5	6	7	8	9	10
Width, inches	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8
Hair, inches	1 3/8	1 1/2	1 5/8	1 3/4	1 13/16	1 7/8	1 15/16	2 1/8	1 1/4	2 5/16
Per Dozen	$1.28	1.60	2.04	2.36	2.70	3.10	3.80	4.30	5.00	5.90

Packed—One Dozen in a Box.

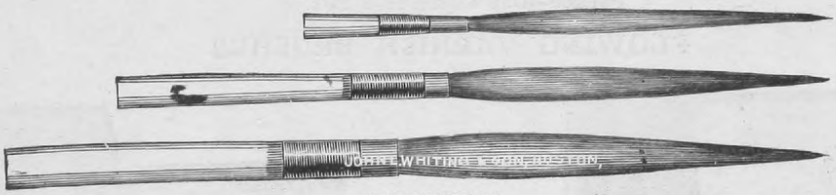
DAGGER STRIPERS



Camels Hair, Copper Wire Bound, Cedar Handles.

Assorted Sizes 1 to 4, 1 ½ to 2 ½ inches long ..... Per Dozen, $4.20

STRIPING BRUSHES



SUPERFINE.

Camels Hair, in Quills, Silk and Silver Bound.

Assorted Sizes, 1 to 8					
Hair, inches	1 ½	2	2 ¼	2 ½
Per Dozen	$1.90	2.00	2.16	2.24

Ox Hair, in Quills, Silk and Gold Bound.

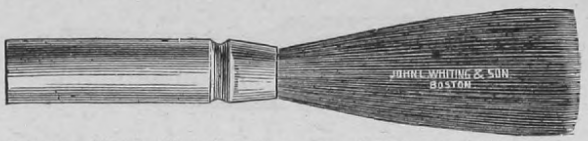
Assorted Sizes, 1 to 8				
Hair, inches	1 ¾	2	2 ¼	2 ½
Per Dozen	$2.16	2.16	2.16	2.16

Black Sable Hair, in Quills, Silk and Gold Bound.

Assorted Sizes, 1 to 8				
Hair, inches	1 ¾	2	2 ¼	2 ½
Per Dozen	$10.20	10.20	10.20	10.20

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

STRIPING BRUSHES



Camels Hair, Metal Tube, for large striping such as wagon work, etc.

Hair, inches..	1½	1¾	2	2¼
Per Dozen...	$5.90	7.00	7.70	8.60

Packed—One Dozen in a Box.

SIGN WRITERS' BRUSHES

Fine Selected Ox Hair, Polished Handles, Nickel Plated Ferrules.

Width, inches.....	½	¾	1
Per Dozen	$6.70	9.40	11.20

Packed—One Dozen in a Box.

MARKING BRUSHES

Common.

Extra.

Common Grade Round Marking Brushes, French Bristles, Yellow Handles { Assorted Sizes ..... 1 to 6 / Per Dozen $0.76

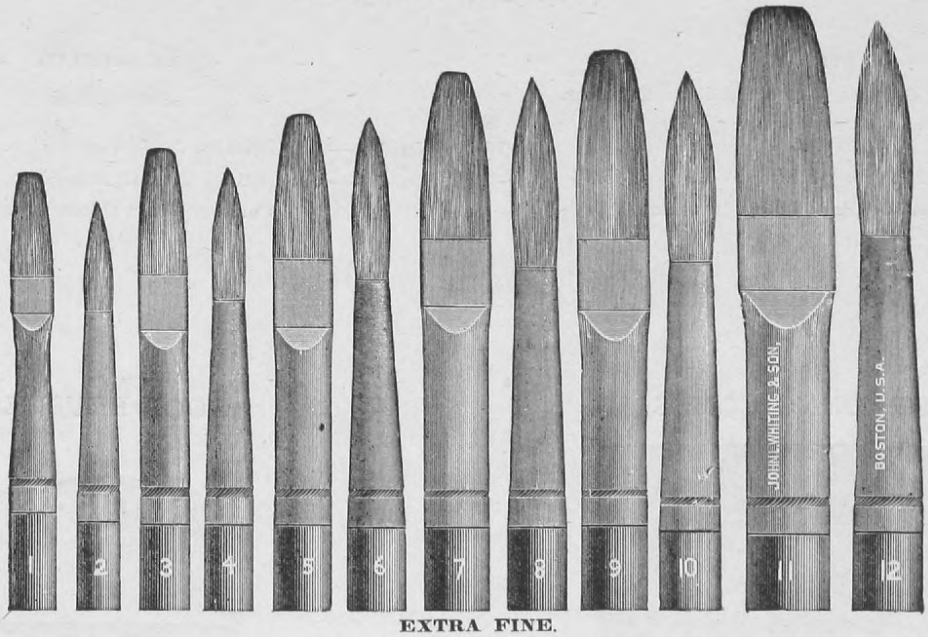
Extra Grade Round Marking Brushes, French Bristles, Cedar Handles.

Size Nos.	1	2	3	4	5	6	Assorted 1 to 6
Per Dozen	$0.74	.84	.96	1.06	1.16	.70	1.08

Camel's Hair Marking Brushes, Tin Ferrules, Cedar Handles { Assorted Sizes ..... 1 to 4 / Per Dozen $1.70

Packed—One Dozen in a Package.

ARTISTS' BRUSHES



EXTRA FINE.

French Bristles, Extra Quality, Polished Handles and Tin Ferrules.

Price Per Dozen.

Size Nos.	1	2	3	4	5	6	7	8	9	10	11	12
Round ..	$1.70	1.70	1.80	1.80	1.92	1.92	2.16	2.36	2.56	2.90	3.20	3.20
Flat	1.70	1.70	1.80	1.80	1.92	1.92	2.16	2.36	2.56	2.90	3.20	3.20

Packed—One Dozen in a Package.

SUPERFINE.

French Bristles, Finest Quality, Polished Cedar Handles and Tin Ferrules.

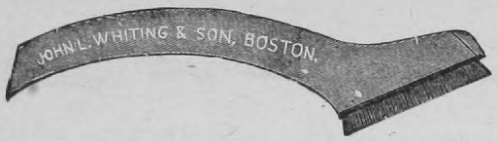
Price Per Dozen.

Size Nos.	1	2	3	4	5	6	7	8	9	10	11	12
Round ..	$1.80	2.00	2.24	2.50	2.80	3.00	3.10	3.20	3.44	3.64	3.96	4.50
Flat	1.80	2.00	2.24	2.50	2.80	3.00	3.10	3.20	3.44	3.64	3.96	4.50

Packed—One Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRICK LINERS



BEST.

Extra Black Bristle.

Inches	2	2½	3
Per Dozen	$2.00	2.24	2.56

Packed—One Dozen in a Box.

SEAMING BRUSHES

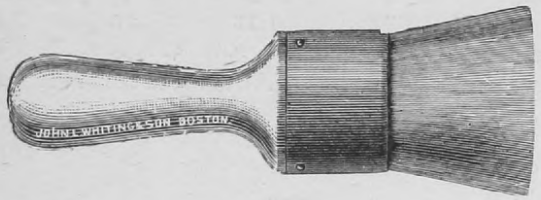
STAR.

Good White Bristles, Wire Drawn or Knotted.

Inches	4	5	6
Per Dozen	$5.00	5.40	6.00

Packed—One Dozen in a Box.

STENCIL BRUSHES



STENCIL.

All Gray Bristles, Seamless Zinc Ferrules.

Nos.	2	4	6	8
Diameter, inches	⅝	¾	1	1¼
Per Dozen	$2.90	4.30	5.36	7.00

Packed—Half Dozen in a Box.

FURNITURE RUBBING BRUSHES

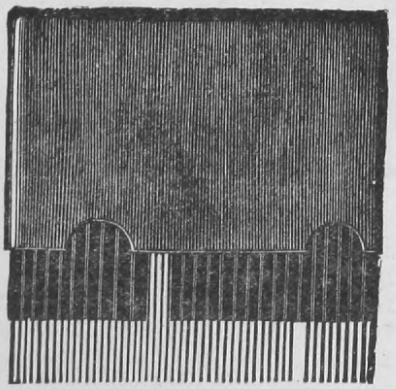
XX SPECIAL.

Four Rows.

No. 23—All Bristle.....Per Dozen, $4.30
No. 25—Very Stiff Black Bristles.....Per Dozen, 7.80

Packed—Half Dozen in a Box.

GRAINING COMBS

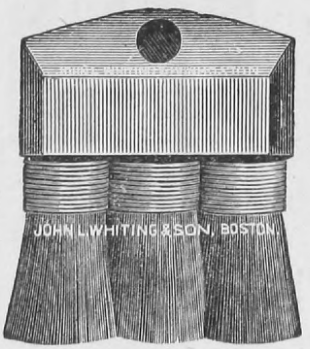


TAYLOR'S.

Taylor's English Blue Steel Graining Combs, in Tin Cases.....Per Set, $2.70

Packed—One Set in a Case.

ROOF BRUSHES



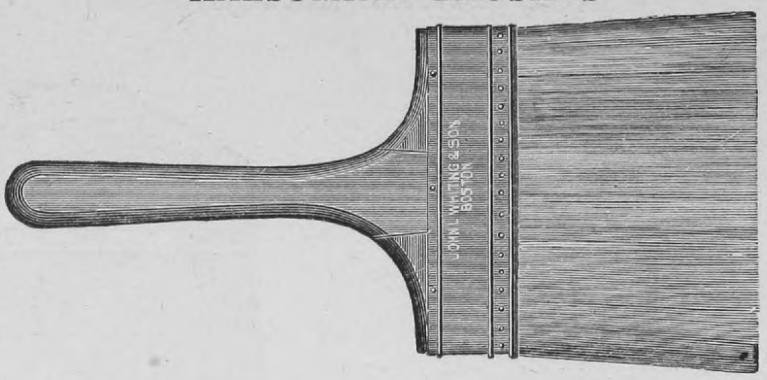
AA.

Good Gray Mixed Stock, Oval Ferrules. Stock 3½ in. long.
Three Ferrules.....Per Dozen, $19.30
Four Ferrules.....Per Dozen, 25.20

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KALSOMINE BRUSHES



A. W.

White Bristle Casing, White Imitation Bristle Center, Metal Bound.

Width, inches	6	7	8
Hair, inches	4 1/8	4 3/8	4 5/8
Per Dozen	$12.90	16.00	19.80

Packed—Half Dozen in a Box.

Y. C. PACIFIC.

All White Bristles, Medium Long Stock, Metal Bound.

Width, inches	6	7	8
Hair, inches	3 7/8	4 1/8	4 3/8
Per Dozen	$31.50	40.50	52.00

Packed—Half Dozen in a Box.

PIONEER.

Yellow Okatka Bristles, Long Stock, Brass Bound.

Width, inches	7	8
Hair, inches	5 1/4	5 1/2
Per Dozen	$93.00	112.70

Packed—Half Dozen in a Box.

PEARL.

Yellow Okatka Bristles, Long Stock, Extra Heavy, Brass Bound.

Width, inches	7	8
Hair, inches	5 1/2	5 3/4
Per Dozen	$122.00	145.50

Packed—Half Dozen in a Box.

PAPER HANGERS' SMOOTHING BRUSHES

No. 1.

Stiff Gray Tampico, Mixed, Drawn with Copper Wire.

Width, inches	10
Hair, inches	2 3/8
Per Dozen	$3.40

CHINA.

Pitched, Fine Quality, Black Bristles, Drawn with Copper Wire.

Width, inches	10	12
Hair, inches	1 3/4	1 7/8
Per Dozen	$10.70	14.00

CRESCENT.

Stiff Gray Russian Bristles, Mixed, Drawn with Copper Wire.

Width, inches	10	12
Hair, inches	1 3/4	1 7/8
Per Dozen	$15.00	20.00

POPULAR.

Stiff Yellow Russian Bristles, Drawn with Copper Wire.

Width, inches	10	12
Hair, inches	2	2
Per Dozen	$20.00	26.00

Packed—Half Dozen in a Box.

PAINTERS' DUSTER BRUSHES

BED ROCK.

Imitation Bristles, Gray and Black, Yellow Handles.

Size Nos.	0	24
Hair, inches	3 1/2	4
Per Dozen	$6.40	8.50

JEWEL.

Gray Russia Bristles, Black outside, Yellow Handles.

Size No.	6
Hair, inches	4 1/4
Per Dozen	$15.50

FRENCH COACH DUSTERS

No. 06—White Fine French Bristles, Length of Hair 4 inches.....Per Dozen, $20.50

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WHITEWASH BRUSHES

QUEEN.

All White Bristles, Nickel Bound, Imitation Rosewood Blocks. Good Grade.

Nos.	15	22	1	3	40 (Leather Bound)
Width, in.	7	8	7	8	9
Hair, in..	2 5/8	2 7/8	3 3/8	3 5/8	3 3/4
Per Doz..	$16.30	18.20	19.60	27.30	41.50

Packed—Half Dozen in a Box.

TULIP.

Three Rows Light Gray Mixed Bristles, Tin lacquered band. Red finished block.

No.	8
Width, inches	8
Hair, inches	3 1/2
Per Dozen	$8.00

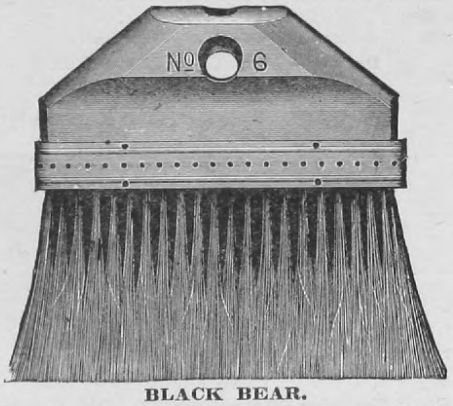
Packed—Half Dozen in a Box.

MEXICAN.

Selected Bleached Tampico Center, Extra Stiff Chalky-White Horse Hair Casing, Metal Bound, Bright Gold Bronzed Wood Blocks.

Width, inches,	7	8	9
Hair, inches..	2 3/4	2 7/8	3
Per Dozen....	$5.30	5.90	6.50

Packed—Half Dozen in a Box.

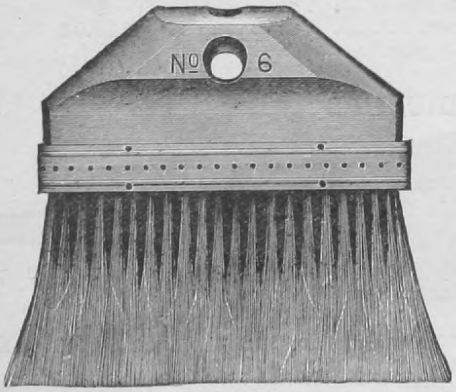


BLACK BEAR.

Selected Black Double-Dyed Tampico Center, Extra Stiff Natural Black Horse Hair Casing, Metal Bound, Bright Red Wood Blocks.

Width, inches,	6	7	8	9
Hair, inches..	2 3/4	2 3/4	2 7/8	2 7/8
Per Dozen....	$3.80	4.30	4.80	5.40

Packed—Half Dozen in a Box.

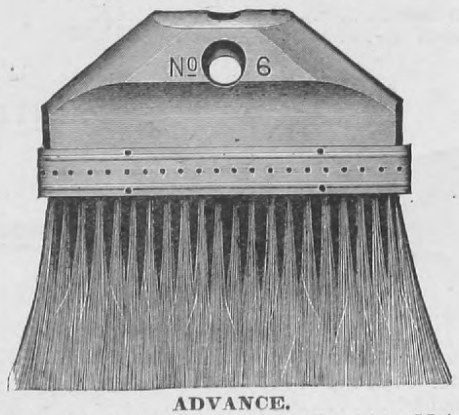


ANCHOR.

Light Gray Tampico Center, Silver Gray Horse Hair Casing, Metal Bound, Aluminum Bronzed Wood Blocks.

Width, inches,	6	7	8
Hair, inches..	2 3/4	2 3/4	2 7/8
Per Dozen	$1.90	2.16	2.50

Packed—Half Dozen in a Box.



ADVANCE.

All White Selected and Bleached Tampico, Metal Bound Bright Yellow Wood Blocks.

Width, inches,	6	7	8	9
Hair, inches..	2 3/4	2 7/8	3	3 1/8
Per Dozen	$2.00	2.24	3.00	3.20

Packed—Half Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PAINTERS' DUSTERS

SOLID BACK STEEL WIRE BRUSHES

BENCH DUSTERS

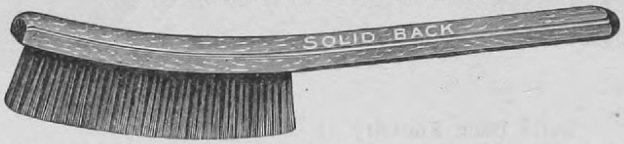
PAINTERS' SCRUB BRUSHES

Designed for use on sides of buildings, doors, windows and finished hardwood work,leaves a smooth clean painting surface. 1¾ inch Round Wires.

No. 11—Block 7x2¼ inches, 6x19 Rows.....Per Dozen, $5.50

No. 103.

PAINTERS' SCRATCH BRUSHES



Removes rust, old paint, stains and discolorations from iron, stone, brick or wood surfaces; especially adapted for light work. 1⅜ inch Round Wires.

No. 10—Block 6½x8x1⅛ inches, with Long Bent Handle, 4x19 Rows... .....Per Dozen, $5.50

No. 5.

For cleaning around cornices and in places that cannot be reached with other styles of wire scratch brushes. 4x9 Rows, 2½ inch Wires.

No. 103—Block 2½x1¼ inches, 5 inch Handle.. .....Per Dozen, $5.00

A fine bench tool for use on drill presses, milling machines, planers and lathes. Also used as a butcher's block cleaner. 3x12 Rows, 2½ inch Wires.

No. 5—Block 4¼x1 inches, 5 inch Handle..... .....Per Dozen, $5.50

RADIATOR SCRATCH BRUSHES

For cleaning radiators before bronzing or painting. Length over all 14 inches.

No. 1—Block 6¼x⅜ inches, with Long Handle, 1x21 Rows of 1¼ inch Wires.....Per Dozen, $3.00

PAINTERS' CURVED BACK SCRUB BRUSHES

Nos. 3 and 77.

Removes rust or old paint from wood, iron, stone or brick, adapted for hard work. 1¼ inch Round Wires.

No. 3—Block 7x2¼ inches, 6x20 Rows, Stiff, equivalent to No. 1 Sand Paper..... .....Per Dozen, $6.00

No. 77—Block 7x2¾ inches, 8x20 Rows, Fine and flexible, equivalent to No. 0 Sand Paper..... .....Per Dozen, $7.50

WISCO ASSORTMENT WIRE BRUSHES

No. 1601.

"Wisco" Steel Wire Brush Assortment

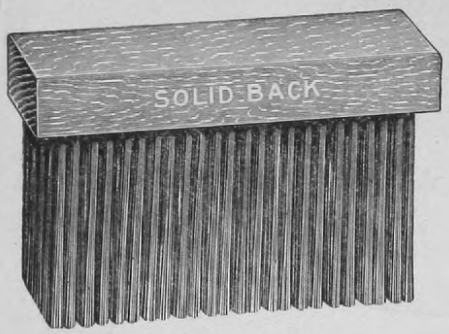
An assortment of staple and profitable sellers for use in shops, stores, homes and for many industrial purposes. Contains 1½ dozen Brushes put up in a Display Box 14x16 inches.

No. 1601—Wisco Assortment.....Each, $8.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

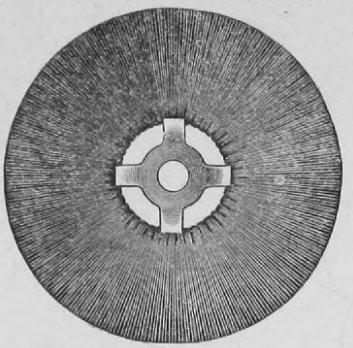
MISCELLANEOUS STEEL BRUSHES

FOUNDRY OR CASTING BRUSHES



Nos. 44 and 54.

WIRE WHEEL BRUSHES



Nos. 120 to 125.

Solid Back Foundry or Casting Brushes

Especially adapted for scouring and scrubbing stone and metallic surfaces such as boilers, engines, etc., particularly useful in removing paint blisters from structural steel work which has been in use for a long time.

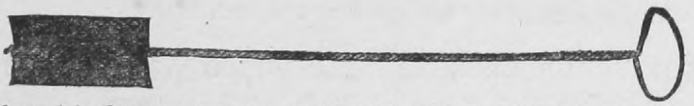
No. 44—Block 7½x2⅝ inches, **4x12** Rows, 4 inch Flat Tempered Steel Wires.....Per Dozen, $5.00
No. 54—Block 7½x2⅝ inches, **5x12** Rows, 4 inch Flat Tempered Steel Wires.....Per Dozen, 5.50

Simplex Metal Center Wire Wheel Brushes

Each section is a complete unit in itself. Ready to mount directly on spindle, thus providing a simple, convenient and economical method of building up a brush. Made to fit any size spindle.

Nos.	120	121	122	123	124	125
Diameter, inches	15	12	10	8	7	6
Width, Face, inches	7/16	3/8	3/8	3/8	5/16	5/16
Gauge Wire, W. & M.	No. 33	No. 34	No. 35	No. 36	No. 36	No. 36
Per 100 Sections	$150.00	140.00	135.00	130.00	110.00	85.00

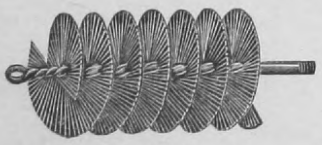
FURNACE CLEANING BRUSHES



No. 9—Round Palmetto Fibre, 4 inches in diameter and 8 inches long, with 4 foot Wire Handles. Per Dozen, $ 6.00
No. 19—Steel Wire, 4 inches in diameter and 8 inches long, with 4 foot Wire Handles.....Per Dozen, 10.00

Packed—One Dozen in a Bundle.

FLUE CLEANERS



No. 192.

FLUE SCRAPERS

No. 2.

No. 192

Flat Steel Wire, Single Spiral.

Inches	2	2¼	2½	2¾	3	3¼	3½	4
Each	$2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00

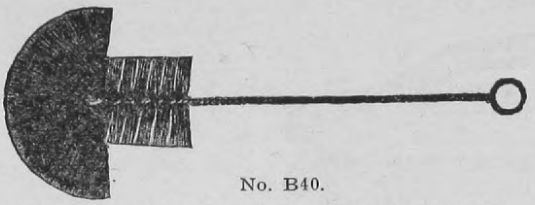
No. 2

Engineers' Favorite Flue Scrapers or Cleaners.

Inches	1¾	2	2¼	2½	2¾	3	3¼	3½	3¾	4	4¼	4½
Each	$1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50

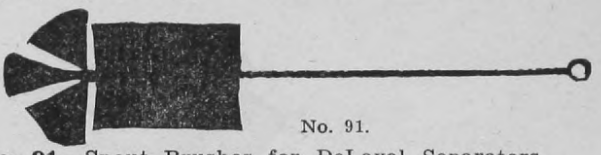
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DAIRY BRUSHES, ETC.



No. B40.

No. B40—Bottle Brushes, Black Hair, Brush part 3 inches in diameter and 5½ inches long including tuft. Length over all 15½ inches.....Per Dozen, $2.20



No. 91.

No. 91—Spout Brushes for DeLaval Separators. White Bristles, Brush part 1⅛ inches in diameter and 4¾ inches long. Length over all, 14¾ inches with end tuft.....Per Dozen, $1.20

No. 1

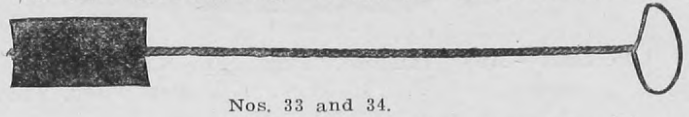
Nos. 106, 93 and 96.

No. 1—For Babcock 10 per cent Bottles. White Bristles, Brush part 3¼ inches long. Length over all 7½ inches.....Per Dozen, $0.70

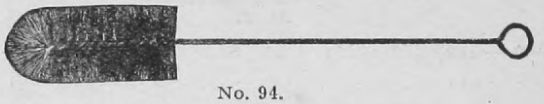
No. 106—For U. S. Separators, Black China Bristles, Brush part ¼ inch in diameter and 2 inches long. Length over all 6¼ inches.....Per Dozen, .70

No. 93—Spout Brushes for Iowa, Economy, DeLaval, Sharples and Empire Separators. Gray India Bristles. Brush part 1 inch in diameter and 4 inches long. Length over all 11¼ inches.....Per Dozen, 1.20

No. 96—Spout Brushes for Blue Bell and U. S. Separators. White Bristles, Brush part 1¾ inches in diameter and 2¾ inches long. Length over all 15 inches.....Per Dozen, 1.40



Nos. 33 and 34.



No. 94.

Spout Brushes, Palmetto Fibre, Heavy Wire Stem, Large Ring Handle.

No. 33—For Nos 1, 2 and 3 Sharples Separators. Brush 2 inches in diameter and 3 inches long. Length 18 inches.....Per Dozen, $1.00

No. 34—For Nos. 4, 6 and 9 Sharples Separators. Brush 2⅛ inches in diameter and 4 inches long. Length over all 24 inches.....Per Dozen, 1.50

No. 94—For DeLaval and International Separators. Black Horse Hair, Brush 2½ inches in diameter, 5¾ inches long. Length 15¼ inches.....Per Dozen 2.30

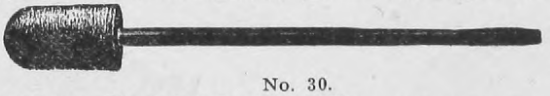
No. 67.

Nos. 72 and 73.

No. 67—Bottle or Jar Brushes, Gray Hair, Brush part 3 inches in diameter, ½x10 inch Hickory Handle.....Per Dozen, $5.30

No. 72—Bottle or Jar Brushes, Small Size, Pure Bristles, ½x10 inch Maple Handle.....Per Dozen, 5.30

No. 73—Bottle or Jar Brushes, Large Size, Pure Bristles, ½x10 inch Maple Handle.....Per Dozen 6.50

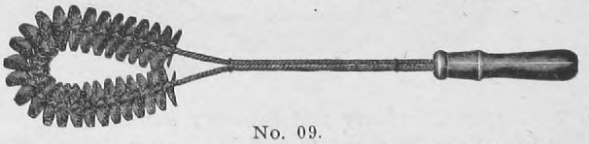


No. 30.

No. 30—Sanitary Brushes, Pure Bristles, Straight Wood Handles.....Per Dozen, $11.00

No. 40.

No. 40—Milk or Cream Can Brushes, Palmetto Fibre, Brush part 3 inches in diameter and 4½ inches long. Length over all 14 inches.....Per Dozen, $3.70



No. 09.

No. 09—"Radiator" Brushes, Good Quality Mixed Hair and Bristle, Galvanized Wire Stem, Mahogany Finished Handle, Brush part 6 inches long. Length over all 22 inches...Per Dozen, $5.70

No. 52W.

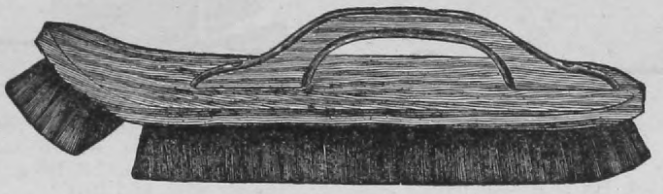
No. 52W—Sanitary Toilet Bowl Brushes, White Tampico Fibre, twisted in four strands of galvanized wire and fitted with black enamel handle. Length over all 19 inches, Brush part 5x4½x2½ inches.....Per Dozen, $6.00

No. 42BH.

No. 42BH—Radiator Brushes, Black Horse Hair, twisted in galvanized wire and fitted with black enamel handle. Length over all 24 inches, Brush part 3inches in diameter by 7 inches long. Will fit the opening of any radiator.....Per Dozen, $6.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STOVE BRUSHES

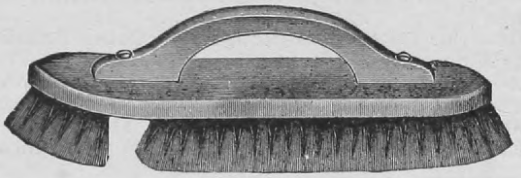


Nos. 52 and 53.

No. 52—Black Tampico, 4 Rows, Curved Block, stained Red and Varnished.....Per Dozen, $2.30
No. 53—Black Tampico Outside, White Center, 5 Rows, Curved Block, stained Red and Varnished..Per Dozen, 3.50
Packed—Half Dozen in a Package.

Acorn.

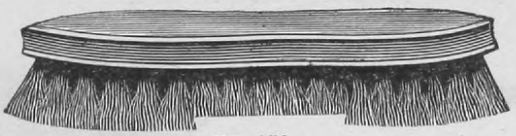
Acorn—Gray Tampico, Face Size 9½x2¼ inches .....Per Dozen, $3.30
Packed—One Dozen in a Box.



Peerless.

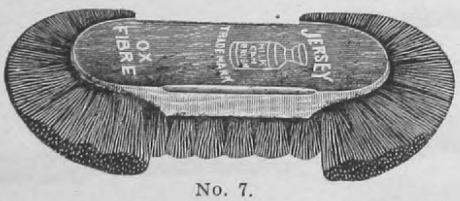
Peerless—Gray Tampico, Face Size 11½x2¼ inches.....Per Dozen, $3.50
Packed—One Dozen in a Box.

SCRUB BRUSHES



No. 356.

No. 356—Double End Scrubbing Brushes, White Tampico, Face Size 10x2½ inches.....Per Dozen, $1.90
Packed—One Dozen in a Box.



No. 7.

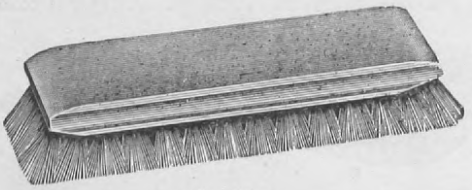
No. 7—Jersey Creamery and Brewery Brushes, Ox Fibre, Face Size 9x5 inches.....Per Dozen, $5.00
Packed—One Dozen in a Box.

No. 4.

No. 4—Hub Scrubbing Brushes, Ox Fibre, Face Size 10x2¾ inches.....Per Dozen, $3.50
Packed—One Dozen in a Box.

No. 2.

No. 2—Goose Scrubbing Brushes, Ox Fibre, Face Size 10x2¾ inches.....Per Dozen, $3.50
Packed—One Dozen in a Box.

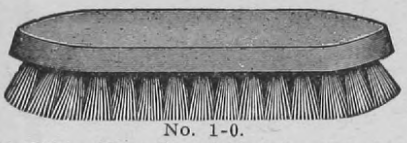


No. 2X.

No. 2X—Shark Scrubbing Brushes, White Tampico, Face Size 10x2¾ inches....Per Dozen, $2.00
Packed—One Dozen in a Box.

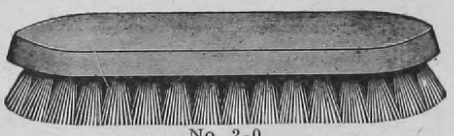
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SCRUB BRUSHES



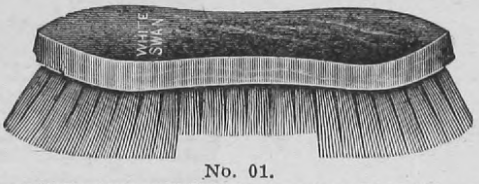
No. 1-0.

No. 1-0—Ox Fibre, Face Size 8½x2 in..Per Dozen, $1.10
Packed—Two Dozen in a Box.



No. 2-0.

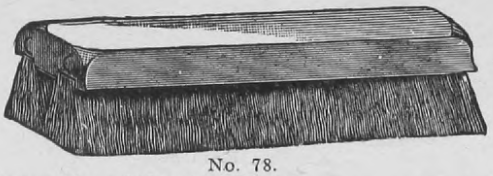
No. 2-0—Ox Fibre, Face Size 10x2 in..Per Dozen, $2.30
Packed—Two Dozen in a Box.



No. 01.

Nos. 02 and 03.

No. 01—White Swan, White Tampico, Face Size 9x2½ inches .....Per Dozen, $2.00
No. 02—Fawn, Rice Root, Face Size 9¾x2½ inches.....Per Dozen, ...
No. 03—Fawn, White Tampico, Face Size 9¾x2½ inches.....Per Dozen, ...
Packed—One Dozen in a Box.



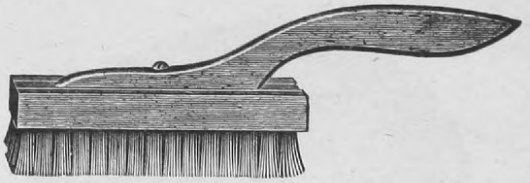
No. 78.

No. 78—3 Rows, Rice Root, Staple Ends, Size of Block 9 inches .....Per Dozen, $3.00
Packed—One Dozen in a Box.

KITCHEN BRUSHES

No. 88.

No. 88—Daisy Small Scrub or Nail Brushes, White Tampico, Face Size 4½x1¼ inches.....
.....Per Dozen, $0.60
Packed—Six Dozen in a Box.



No. 88H.

No. 88H—Daisy Handy House Brush, White Tampico, Face Size 4½x1¼ inches...Per Dozen, $0.90
Packed—Three Dozen in a Box.

No. 21.

Designed especially for cleaning gas stoves, sinks, wash basins, bath tubs, closets, etc.
No. 21—Kitchen Brush, 14 inches long.....Per Dozen, $2.20
Packed—One Dozen in a Package.

CREAMERY BRUSHES

No. 07.

No. 07—Gong Creamery Brushes, Ox Fibre, Face Size 3¾x4¾ inches.....Per Dozen, $3.50
Packed—One Dozen in a Box.

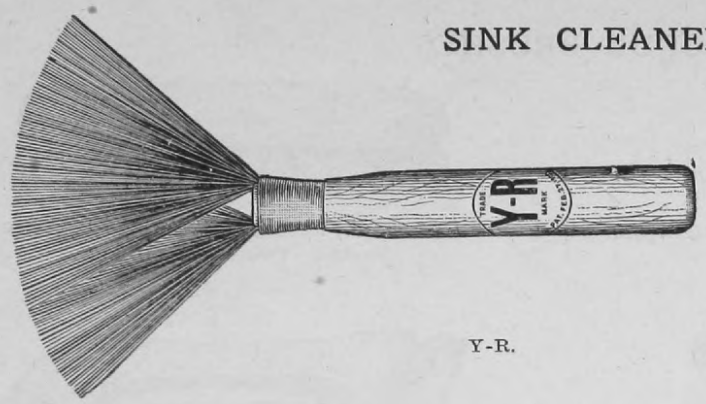
SINK BRUSHES

No. 6.

No. 6—Bell Sink Brushes, Ox Fibre, Face Size 3½x2½ inches.....Per Dozen, $1.90
Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SINK CLEANERS



Y-R.

Y-R Sink Brush, Pot Cleaner and Dish Washer, Spring Tempered Steel Wire, Enameled Handles .....Per Dozen, $1.60

Packed—One Dozen in a Box.

No. 721.

No. 721—Sink Cleaners, Stamped Sheet Steel, Black Enameled, Stiff Rubber Edge.....Per Dozen, $0.70

Packed—In Open Stock.

PLATE SCRAPERS

Kitchen Kumfort.

Made of especially prepared Rubber, with Black Enameled Handle. Adapted for cleaning plates and dishes, will not scratch the finest china; also makes a most effective sink cleaner.

Kitchen Kumfort Plate, Pan, Kettle and Sink Scrapers.....Per Dozen, $1.70

Packed—One Dozen on a Display Card.

SHOE POLISH

Nos. 2½ and 3.

Contains no Turpentine, does the work of Combination Liquid and Paste Polishes.

No. 2½—Tan Polish .....Per Dozen, $.....

No. 3 —Black Polish .....Per Dozen, ...

Packed—One Dozen in a Carton.

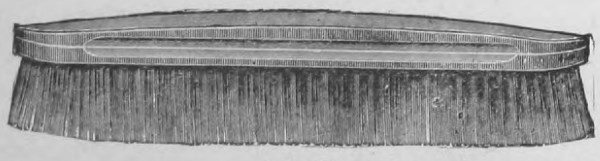
SHOE BRUSH ASSORTMENTS

Winner.

Winner Assortment Handled Shoe Brushes, Fine Quality Bristles, Varnished Blocks.....
.....Per Assortment, $4.00

Packed—Each Assortment (One Dozen) in a Hinged Cover Wooden Box.

SHOE POLISHERS



No. 38.

No. 38—7 Rows All Black Bristles, 7¾ inch Solid Natural Mahogany Blocks.....Per Dozen, $4.50

Packed—Half Dozen in a Box.

SHOE DAUBERS

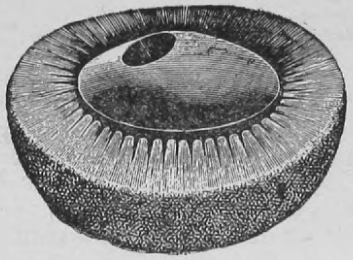
No. 40.

No. 40—All Pure Black Bristles, Tinned Metal Handles.....Per Dozen, $2.50

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

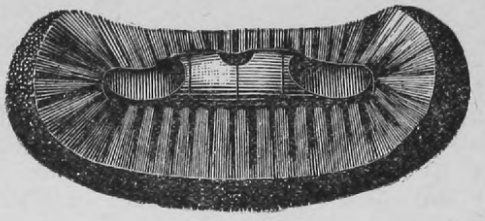
WINDOW BRUSHES



No. 2.

No. 2—Pope's Eye Window Brushes, 2½ inch Black Chinese Bristles, Polished Red Block. Diameter over all 8½ in. .....Per Dozen, $8.50

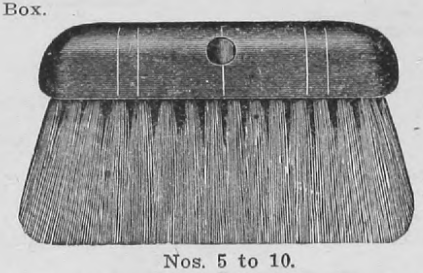
Packed—Half Dozen in a Box.



No. 2S.

No. 2S—Spider Window Brushes, 2½ inch Black Chinese Bristles, 7 inch Block. Length over all 11 in. .....Per Dozen, $10.00

Packed—Half Dozen in a Box.



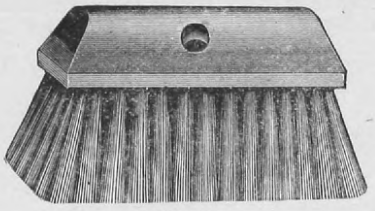
Nos. 5 to 10.

No. 5—Oblong Window Brushes, made of White Tampico 2½ inches out of block, 2½x6½ inch Plain White Blocks .....Per Dozen, $3.70

No. 21—Oblong Window Brushes, made of All Gray Tampico 2¾ inches out of block, 2½x8½ inch Polished Red Blocks.....Per Dozen, 4.50

No. 10—Oblong Window Brushes, made of Pure Black Horse Hair 2⅝ inches out of block, 2½x8½ inch Polished Red Blocks.....Per Dozen, 7.00

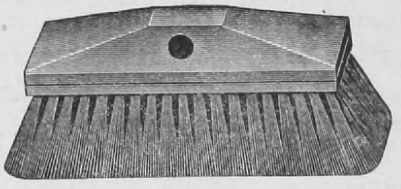
Packed—Half Dozen in a Box.



Palace.

Palace—Oblong Window Brushes, Pure Black Horse Hair 2¼ in. out of block, Heavy Set, Brass Wire Drawn, 2½x7¼ inch Polished Red Blocks.....Per Dozen, $9.30

Packed—Half Dozen in a Box.



No. 480.

No. 480—Oblong Window Brushes, Extra Quality Pure Black Horse Hair, 2⅜ in. out of block, Heavy Set, Brass Wire Drawn, 2⅝x8½ in. Polished Red Blocks .....Per Dozen, $15.00

Packed—Half Dozen in a Box.

WINDOW BRUSH POLES

Basswood Window Brush Poles, 8 feet long .....Per Dozen, $3.00

Packed—One Dozen in a Bundle.

No. 93.

No. 93—Round Window Brushes, Pure Black Horse Hair 2½ inches out of block, Wire Set, Diameter of Brush 7½ inches, Polished Red Blocks.....Per Dozen, $8.70

Packed—Half Dozen in a Box.

No. 30.

No. 30—Car Washers Window Brushes, 4½ inch Gray Russia Bristles, Wire Drawn, Natural Polished Blocks with Rubber Protectors.....Per Dozen, $37.50

Packed—Each in a Separate Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COUNTER BRUSHES

No. 508—8 inch, 2¼ inch Horse Hair, Black Body, White Casing, Wire Set, Polished Red Blocks. Per Dozen, $5.50
No. 2—9 inch, 2½ inch Pure China Bristles, Black Body, White Casing, Polished Red Blocks.... Per Dozen, 7.20
No. 3—10 inch, otherwise same as No. 2..... Per Dozen, 7.80
No. 4—10 inch, 3¼ inch Gray Bristles, Heavy Set, Polished Red Blocks..... Per Dozen, 11.30
No. 9 Extra Extra—9 inch, 3¼ inch Pure Bristles, Black Body, White Casing, Heavy Set, Polished Red Blocks ..... Per Dozen, 10.70
No. 10 Extra Extra—10 inch, otherwise same as No. 9 Extra Extra..... Per Dozen, 13.30

Packed—Half Dozen in a Box.

BENCH BRUSHES

No. 22.

Buhl Special, 2¼ inch All Black Fiber Body, Black Horse Hair Casing. Heavy Wire Set, Polished Blocks. Recommended for dusting around lathes and where heavy sweepings accumulate, has considerable body and strength.
No. 22—9 inch..... Per Dozen, $4.70

Packed—Half Dozen in a Box.

No. 8.

Capital, 2½ inch Tampico, Plain Polished Blocks. Cheap and durable, designed for heavy work, shavings, sawdust, iron filings and shop litter. Tampico is the most durable fibre known and is better than bristle for heavy work.
No. 8—8 inch..... Per Dozen, $5.00

Packed—Three Dozen in a Box.

FLOOR BRUSHES

Nos. 734 to 838.

Nos. 934 to 944.

No. 734—14 inch, Gray Fiber Body, Black Horse Hair Casing, 2⅞ inches out of Block, Square End Polished Red Blocks, with 54 inch Handles to match. Recommended for heavy sweeping..... Per Dozen, $13.20

No. 736—16 inch, otherwise same as No. 734..... Per Dozen, 15.70

Packed—One-Twelfth Dozen in a Box.

Ideal Floor Brushes, All Black Horse Hair, 2¾ inches out of block, Square End Polished Natural Color Blocks, with 54 inch Handles to match.

Nos.	834	836	838
Length, inches	14	16	18
Per Dozen	$18.00	21.00	24.00

Packed—One-Twelfth Dozen in a Box.

O. K. Floor Brushes, 4 inch All Gray Russian Bristles, Cement Set, Polished Yellow Blocks, with 54 inch Handles to match. This Brush must **not** be used with oil.

Nos.	934	936	938	944
Length, inches	14	16	18	24
Per Dozen	$43.00	48.00	52.50	90.00

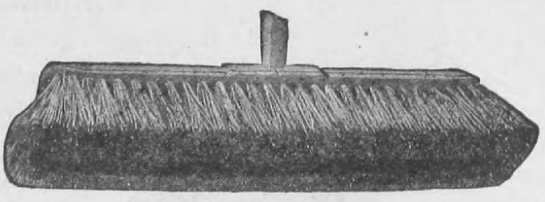
Packed—One-Twelfth Dozen in a Box.

Nos. 1034 to 1038.

Serviceable Floor Brushes, 4¼ inch Extra Quality Gray Russian Bristles, Heavy Set, Square End Polished Red Blocks, with 54 inch Handles to match, and Rubber Bumpers to protect furniture and baseboards.

Nos.	1034	1036	1038
Length, inches	14	16	18
Per Dozen	$53.00	60.00	68.00

Packed—One-Twelfth Dozen in a Box.



Nos. 170 and 171.

Factory and Garage Floor Brushes.

This Brush is made for Factory and Garage use, on a hardwood Mahogany finished block, with two handle holes and a 5 foot polished handle. Center of Brush is made from an imported fibre which cuts the dirt loose and wears like wire.

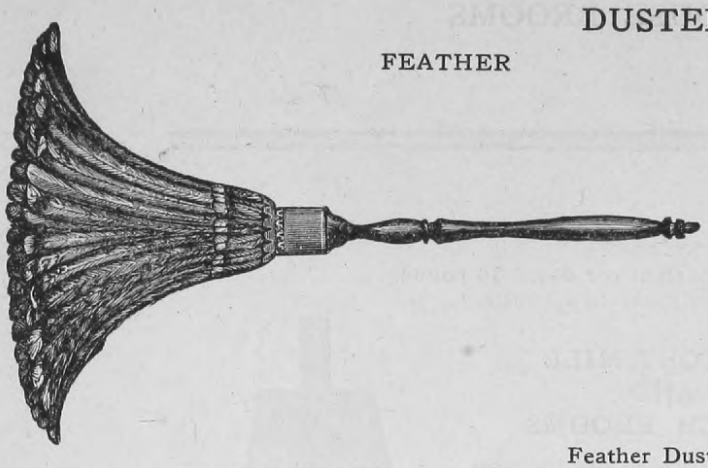
Nos.	170	171
Length, inches	16	18
Per Dozen	$26.00	33.00

Packed—One-Twelfth Dozen in a Box.

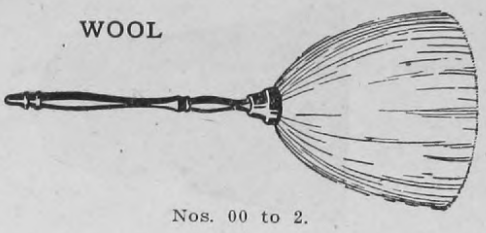
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DUSTERS

FEATHER



WOOL



Nos. 00 to 2.

Wool Dusters, with Black Enameled Wood Handles.

Nos.	00 Special	0 Special	2
Size	Small	Medium	Large
Wool, inches	7	8	9
Per Dozen	$3.00	5.50	8.50

Packed—Each in a Separate Wrapper.

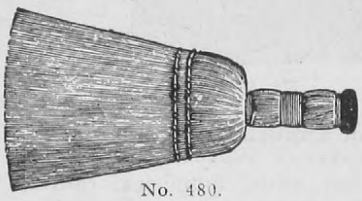
Feather Dusters

100 Selected Split and Milled Wing and Tail Curled Feathers, Black Enameled Blocks and Handles.

Feather Dusters ..... { Inches 14
Per Dozen $10.00

Packed—Each in a separate Sealed Moth-proof Bag.

WHISK BROOMS



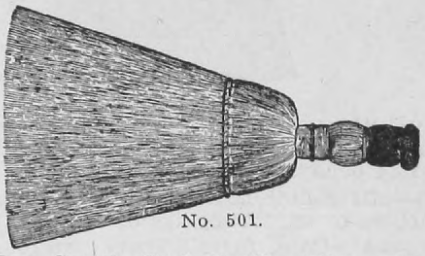
No. 480.

Two Sewed, Hurl Handle, Wire Wound Neck, Plush Cap, Hanging Loop.

No. 480—Length to Handle 7 inches, Width at Bottom 6 inches..... .....Per Dozen, $3.30

Packed—One Dozen in a Box.

Beats 'Em All.



No. 501.

Two Sewed, Hurl Handle, Wire and Plush Wound Neck, Plush Cap, Hanging Loop.

No. 501—Length to Handle 7 inches, Width at Bottom 6 inches..... .....Per Dozen, $4.00

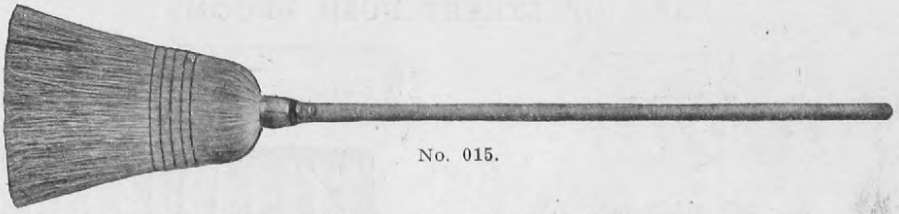
Packed—One Dozen in a Box.

Made from imported Bassine Fibre, Metal Case Nailed, Clinched and Compressed. Length 10½ inches over all, and width at bottom 5 inches, adapted for factory use.

Beats 'Em All Bench Broom.....Per Dozen, $5.00

Packed—One Dozen in a Bundle.

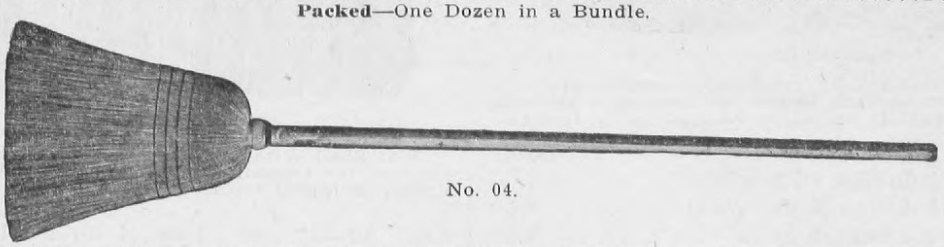
HOUSE BROOMS



No. 015.

No. 015—Ladies' Favorite, All Corn House Brooms, Five Sewed, 17 inches long, Weight per dozen 28 pounds .....Per Dozen, $21.00

Packed—One Dozen in a Bundle.



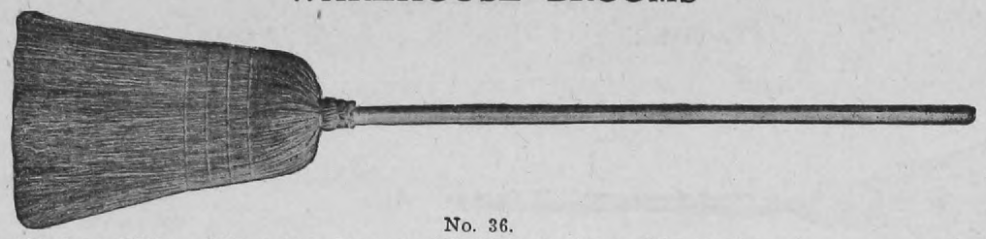
No. 04.

No. 04—All Corn House Brooms, Four Sewed, 14½ inches long, Weight per dozen 22 pounds. Per Dozen, $15.00
No. 05—All Corn House Brooms, Five Sewed, 15½ inches long, Weight per dozen 24 pounds. Per Dozen, 16.50
No. 06—All Corn House Brooms, Six Sewed, 17 inches long, Weight per dozen 26 pounds. Per Dozen, 17.00
No. 100—Children's Brooms, Length of Handle 28 inches, Length of Head 9 inches.....Per Dozen, 4.00

Packed—One Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WAREHOUSE BROOMS



No. 36.

No. 36—Heavy All Corn Mill or Warehouse Brooms, Weight per dozen 36 pounds.....Per Dozen, $17.00

Packed—One Dozen in a Bundle.

Nos. 9 to 24.

FACTORY, MILL AND SWITCH BROOMS

Capital Mill Brooms are the most practical conception of heavy broom construction and by far the nearest to indestructibility. They are made in a wide metal case, compressed under hydraulic pressure, nailed from each side with wrought iron nails, six of them going through the handle, then supplemented by a metal band and two sewings of waxed waterproof twine. Fitted with standard length handles.

No. 2B.

No. 9—Mixed Japanese Fibre and Broom Corn, for heavy sweepings, such as from factories, foundries, iron and steel mills, railroads, warehouses, saw mills, or any sweepings of a rough nature. Weight 33 to 34 pounds to the dozen.....Per Dozen, $12.00

No. 5—Mixed Soft Rattan and Best Broom Corn, for factories, steel and iron mills, foundries, railroad houses or any sweepings of a rough nature. Weight 38 to 39 pounds per dozen.....Per Dozen, 14.50

No. 14—All Corn, for all heavy sweeping where there is no heavy or bulky rubbish, or upon smooth floors where the dirt moves easily. Weight 33 to 34 pounds per dozen.....Per Dozen, 13.00

No. 20—Japanese Fibre or Bamboo, for extra heavy sweeping. Especially adapted for Factories, Foundries, etc., as the fibre will not burn up as quick as broom corn. Weight 30 to 32 lbs. per dozen..Per Dozen, 7.00

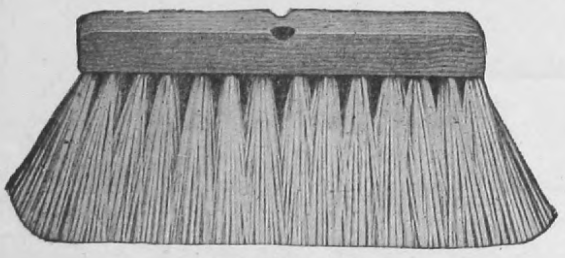
No. 24—Japanese Fibre or Bamboo, for extra heavy sweeping and for sweeping or scrubbing brick, rough cement or plank floors. Especially adapted for Factories, Foundries, etc., as the fibre will not burn up as quick as broom corn. Weight 40 to 42 pounds per dozen.....Per Dozen, 9.50

No. 2B—Double Band **Snow and Switch** Broom, Rattan Center, Bamboo outside. Weight 30 pounds per dozen.....Per Dozen, 10.50

Chisel Handles on No. 2B. Extra.....Per Dozen, 2.50

Packed—Half Dozen in a Bundle

BARN OR STREET PUSH BROOMS

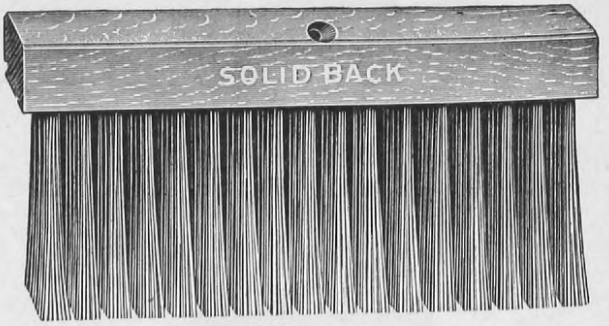


Nos. 72 to 76.

Made of Bamboo, solidly cemented, recommended for barn and street use. This Broom renders such splendid service that it is rapidly becoming very popular. Has two handle holes.

		Per Dozen
No. 72	—14 inch Blocks, 4 Rows Wide.....	$ 6.50
No. 73	—16 inch Blocks, 4 Rows Wide.....	7.50
No. 76	—16 inch Blocks, 5 Rows Wide.....	8.50
No. 7291	—Same as No. 72, **with** Handles.....	8.50
No 7391	—Same as No. 73, **with** Handles.....	9.50
No. 7691	—Same as No. 76, **with** Handles.....	10.50

Packed—One Dozen in a Crate.



Nos. 12 and 14.

Flat Steel Wires, 5 inches long. Recommended for barn use and for spreading asphalt, broken stone or gravel on streets or tarred roofs.

		Per Dozen
No. 12	—12 inch Blocks, 4 Rows Wide.....	$ 9.00
No. 14	—14 inch Blocks, 4 Rows Wide.....	11.00
No. 1291	—Same as No. 12, **with** Handles.....	12.50
No. 1491	—Same as No. 14, **with** Handles.....	14.50

Packed—One Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

O-Cedar Polish

	List per dozen
25c 4 oz. Bottle	$ 3.00
(6 doz. in crate, 57 lbs.)	
50c 12 oz. Bottle	6.00
(6 doz. in crate, 121 lbs.)	
$1.00 Quart Can	12.00
(1 doz. to box, 31 lbs.)	
$1.50 Half-Gallon Can	18.00
(1 doz. to box, 59 lbs.)	
$2.50 Gallon Can	30.00
(Half-doz. to box, 55 lbs.)	

O-Cedar Mops

ROUND

No. 1—$1.25 Size.....List per doz., $15.00
Packed—2 doz. to carton, 50 lbs.
No. 2—75c Size.....List per doz., 9.00
Packed—2 doz. to carton, 44 lbs.

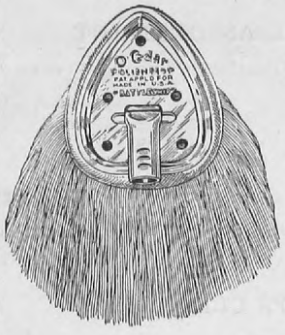
TRIANGULAR

No. 3—$1.25 Size.....List per doz., $15.00
Packed—2 doz. to carton, 54 lbs.
No. 4—75c Size.....List per doz., 9.00
Packed—2 doz. to carton, 46 lbs.

Each Mop Packed in Attractive Tin Container with Full Directions for Use and Renewing

ALL HANDLES 54 INCHES LONG

O-Cedar



BATTLESHIP "POLISH" MOPS.
No. 10—$1.00 Size
List per doz., $12.00
Packed—2 Dozen in a Carton.

BATTLESHIP "DUSTING" MOPS.
No. 11—$1.00 Size
List per doz., $12.00
Packed—2 Dozen in a Carton.

O-Cedar Duster

List per doz.

25c Hand Duster, Black, Small size (1 doz. to case, 8 lbs.).....$3.00
75c Hand Duster, Black, (1 doz. to case, 10 lbs.)..... 9.00

O-Cedar Dust Cloth

	List per dozen
Small, 18 x 24	$1.80
Medium, 36 x 36	3.00
Large, 36 x 54	6.00
(1 doz. to package)	

O-Cedar Dusting Mops

ROUND

List per dozen

No. 5—$1.25 Size **$15.00**
(2 doz. to carton, 34 lbs.)

No. 6—75c Size $9.00
(2 doz. to carton, 30 lbs.)

TRIANGULAR

No. 8—$1.25 Size (2 doz. to carton, 34 lbs.) List per doz. **$15.00**
No. 9— .75 Size (2 doz. to carton, 30 lbs.) List per doz. 9.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FURNITURE POLISH

VELVET FURNITURE POLISH

Nos. 1 to 3.

Food and life to a varnished surface.

Velvet Polish, for cleaning and polishing woodwork, pianos, furniture, hardwood floors, carriages, automobiles, bicycles, etc. Makes old things new, and gives life to a varnished surface.

No. 1—In Small Bottles.....Per Dozen, $3.00
No. 2—In Medium Bottles.....Per Dozen, 6.00
No. 3—In Quart Cans.....Per Dozen, 9.00

Packed—One Dozen in a Case.

VELVET CEDAR OIL

For renewing floor mops and dustless dusters. A Sanitary preparation, when applied to a dustless duster or floor mop will absorb and remove all dust and dirt, making the floors and furniture hygienically clean.

Velvet Cedar Oil.....	½ Pint	1 Pint
Per Dozen	$.....	.....

Packed—One Dozen in a Carton.

JOHNSON'S PREPARED WAX

Household Size.

Johnson's Prepared Wax, in paste form, cleans and polishes Furniture, Pianos, Floors, Linoleum, Woodwork, Automobiles, Leather Goods, etc.

In 5 Ounce Cans.....Per Dozen, $4.20
Packed—One Dozen in a Display Carton
In 1 Pound Cans—"1 Pint".....Per Dozen, 7.20
Packed—In Open Stock.

LIQUID VENEER

Nos. 4 to 7.

Liquid Veneer for cleaning and polishing woodwork, pianos, furniture, hardwood floors, carriages, automobiles bicycles, etc. Makes old things new, and gives life to a varnished surface.

No. 4—In 4 Ounce Bottles.....Per Dozen, $ 3.00
No. 5—In 12 Ounce Bottles.....Per Dozen, 6.00
No. 6—In 1 Quart Cans.....Per Dozen, 12.60
No. 7—In 1 Gallon Cans.....Per Dozen, 31.50

Packed—One Dozen in a Case.

DANDY DEAL ASSORTMENT

Consisting of 5½ Dozen Bottles of Liquid Veneer as follows:

3 dozen, 4 ounce, 25 cent size bottles.
2 dozen, 12 ounce, 50 cent size bottles.
½ dozen, 4 ounce, 25 cent size bottles.

Dandy Deal Assortment.....Per Assortment, $21.00

Packed—One Assortment in a Box with Advertising Matter.

JOHNSON'S CLEANER

For Household Use, Automobiles, Etc.

Johnson's Cleaner.

Johnson's Cleaner removes spots and stains from Floors, Woodwork, Furniture, Automobiles, Bath Tubs, Sinks and all Wood, Metal and Enamel surfaces.

Johnson's Cleaner, Half Pound Can....Per Dozen, $4.20

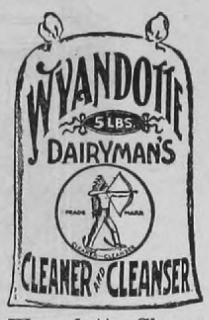
Packed—One Dozen in a Display Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CLEANERS AND CLEANSERS

Old Dutch Cleanser.

Keen Kleener.



Wyandotte Cleaner.

Cleans, scrubs, scours and polishes; very convenient for washing windows, floors, sinks, bath tubs, brass, nickel plated ware, etc.

Old Dutch Cleanser, in 1 Pound Sifter Top Cans.. .....Per Case, $5.10

Packed—Four Dozen in a Case.

Used and endorsed by all the State Dairy Colleges, recommended by Pure Food and Milk Inspectors, Boards of Health, etc. Contains no preservatives, has no grease to sour or become stale. Makes sour and stale places sweet and fresh like new. Inexpensive and effective.

Wyandotte Dairyman's Cleaner and Cleanser, in 5 Pound Cotton Sacks.....Per Barrel, $14.50

Packed—Fifty Sacks in a Barrel.

Keen Kleener

For general household uses and for hands. Cleans and brightens all surfaces, will not scratch or mar. Ground much finer than other cleansers in its class. It is pure white.

Keen Kleener—In 15 Ounce Sifter Top Cans.....Per Case, $2.70

Packed—Four Dozen in a Case.

Wall Paper Cleaner.

Cleans the finest to the cheapest wall paper, also window shades, calcimines, etc.

Climax Wall Paper Cleaner.....Per Dozen, $1.50

Packed—Three Dozen in a Carton.

"Thermosol."

For removing obstructions such as Grease, Slime, Waste-paper, Hair, Cloth, Leather, Vegetable Matter, and other accumulations of filth from water-pipes, sewers, closets and drain pipes. Unexcelled for thawing out frozen water pipes. Will not attack lead, tin, copper or brass nor will it injure slate, tile or porcelain.

Thermosol Pipe Opener and Cleanser..Per Dozen, $5.65

Packed—Two Dozen in a Carton.

HAND SOAP

"O-My."

"O-My" Hand Soap, in 1 Pound Tin Cans..... .....Per Dozen, $1.35

Packed—One Dozen in a Carton.

ALUMINUM CLEANER

"Orona."

For cleaning aluminum, bath-tubs, bowls, tiling, marble, painted and polished woodwork, Floors and linoleum. Contains no acid.

		Per Dozen
No. 10—10c Size,	3 or 6 Dozen in a Case.....	$ 1.70
No. 15—15c "	3 " " " "	2.40
No. 25—25c "	2 " " " "	4.00
No. 60—60c "	1 " " " "	10.00

ALUMINUM POLISH

"Alumishine."

The No-Acid Cleaner-Polish. For polishing Aluminum and all other metals, including Silver and Gold, also cleans and polishes Glass, Marble, Tiling, etc. Contains no acids, no free alkali, no sediment.

		Per Dozen
No. 10—	10c Size, 3 or 6 Dozen in a Case....	$ 1.70
No. 25—	25c " 3 " " " "	4.00
No. 50—	50c " 1 " " " "	8.00
No. 200—$2.00 "	In Open Stock.....	32.00

Digitized by UNIVERSITY OF MICHIGAN
Digitized by UNIVERSITY OF MICHIGAN

METAL POLISH

Nos. 2 to 7.

Burnishine Liquid Metal Polish, produces a brilliant, lasting lustre on all metals; contains nothing injurious to hands or metal. Put up in screw top tin cans.

No. 2—In	¼	Pint Cans.....Per Dozen,	$ 1.30
No. 3—In	½	Pint Cans.....Per Dozen,	1.90
No. 4—In	1	Pint Cans.....Per Dozen,	3.00
No. 5—In	1	Quart Cans.....Per Dozen,	5.25
No. 6—In	½	Gallon Cans.....Per Dozen,	9.00
No. 7—In	1	Gallon Cans.....Per Dozen,	15.00

Packed—Nos. 2 and 3, Six Dozen; No. 4, Four Dozen; No. 5, Two Dozen; No. 6, One Dozen; No. 7, Half Dozen in Case.

Nos. 3 to 7.

Dragon Liquid Metal Polish produces a brilliant, lasting lustre on all metals; contains nothing injurious to hands or metal. Put up in screw top tin cans.

No. 3—In	½	Pint Cans.....Per Dozen,	$1.30
No. 4—In	1	Pint Cans.....Per Dozen,	2.25
No. 5—In	1	Qt. Cans.....Per Dozen,	3.40
No. 6—In	½	Gal. Cans.....Per Dozen,	5.65
No. 7—In	1	Gal. Cans.....Per Dozen,	9.40

Packed—No. 3, Six Dozen; No. 4, Four Dozen; No. 5, Two Dozen; No. 6, One Dozen; No. 7, Half Dozen in a Case.

Parrot.

A non-settling, non-burnable liquid polish for Copper, Brass, Nickel and Aluminum. Contains no Gasoline, Naphtha, Ammonia or Acid. An excellent polish for Mirrors and Windows. Will not stain or injure the hands.

Parrot Metal Polish.....	½ pt.	1 pt.
Per Dozen.....	$1.90	3.15

Packed—½ Pt., Three Dozen; 1 Pt., Two Dozen in a Case.

"Putz Cream." A white liquid metal polish especially adapted for engineers, firemen, etc. It is made of the best oils and produces a brilliant, lasting polish, on any metal, hot or cold. Will not deteriorate, does not stick in crevices. Put up in screw top cans.

Sizes	½ pt.	1 pt.	1 qt.	½ gal.	1 gal.
Per Dozen...	$2.00	3.45	6.20	10.80	18.75

Packed—½ Pt., Six Dozen; 1 Pt., Four Dozen; 1 Qt., Two Dozen; ½ Gal., One Dozen; 1 Gal., Half Dozen in a Case.

POLISHING CREAM

Electro-Silicon.

No. 8.

Universal Putz Pomade, Superior Quality, for polishing all metals. Put up in round Tin Boxes.

No. 3—	3 ounce size,	Per Dozen,	$0.60
No. 8—	8 ounce size,	Per Dozen,	1.90
No. 16—	16 ounce size,	Per Dozen,	3.15

Packed—No. 3, Twelve Dozen; No. 8, Three Dozen, No. 16, Two Dozen in a Case.

POLISHING CREAM

Silvona.

For cleaning and polishing all household and toilet articles of Gold, Silver, Plated Ware, Nickel, Tin, Copper, Brass, Steel, Porcelain, Glass, etc. Free from any injurious substances.

Electro-Silicon, in 12 ounce Cans.....Per Dozen, $2.25
Packed—One Dozen in a Carton.

For polishing Silver or Plated Ware, Cut Glass, etc. Made of the finest material, free from grit or acid, works easy and quick and gives a beautiful lustre.

Silvona Cream, in 8 ounce Jars.....Per Dozen, $2.00
Packed—Three Dozen in a Carton.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

POLISHING MOPS

No. 25.

This Mop cleans, polishes and renews the finish. Comes treated with Wizard Polish. Triangular in shape and has adjustable socket for handle.

No. 25—Wizard Mop, with handle..... .....Per Dozen, $4.50

Packed—Each Mop Head wrapped in Oil parchment paper and put up in a Paper Carton.

DISH MOPS

Nos. 5 and 10.

For sanitary washing of kettles, pots, pans and especially milk bottles. Metal wire into which a special grade of cotton string has been twisted makes the mop strong and durable. Best grade of maple handle is used.

No. 5—Dish Mop, Small Size.....Per Dozen, $1.10

No. 10—Dish Mop, Large Size.....Per Dozen, 1.65

Packed—In Open Stock.

DUSTLESS MOP HEADS

No. 12.

Made of best black yarn, chemically treated. These mop heads are very practical and can be attached to any mop stick. No oil to soil the rugs. Dusts, cleans and polishes all Hardwood and Finished Floors.

No. 12—Hayden's Black Dustless Mop Heads .....Per Dozen, $4.50

Packed—Each in a Separate Carton.

COTTON MOP HEADS

Nos. 9 to 15.

HANDLED MOPS

No. 116.

Mop Heads—Not Handled

Cotton Mop Heads, Machine Sewed, **Not Handled.**

Nos.	9	12	15
Pounds to Dozen	9	12	15
Ounces, Each	12	16	20
Per Dozen	$3.30	4.30	5.85

Slasher Linen Thread Mop Heads, Machine Sewed, **Not Handled.**

Nos.	90	120	180
Pounds to Dozen	9	12	18
Ounces, Each	12	16	24
Per Dozen	$4.00	5.40	8.00

Packed—One Dozen in a Bundle. Weights given are approximate.

Handled Cotton Mops

No. 116—With Plain Round Wood Handles. Heads weigh about 16 pounds to dozen.....Per Dozen, $6.00

Packed—Half Dozen in a Bundle.

GREEN SWEEPING COMPOUND

A sweeping compound which sticks to the dust—not to the floor. This compound is non-combustible and non-inflammable. It settles and absorbs the dust while sweeping and produces a healthy, clean atmosphere free from dust and dirt. Sweeping can be done during working hours.

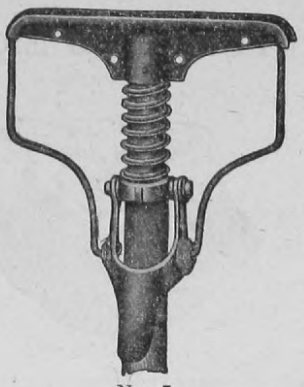
Green Sweeping Compound.....	In.....25 lb. Pkgs.	100 lb. Barrels	300 lb. Barrels
	Each..... $1.50	4.00	10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOP STICKS

No. 3.

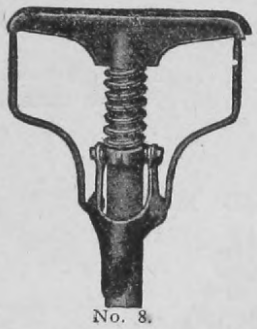
No. 5.



No. 7.

No. 3—Dandy Common Mop Sticks, Coppered Iron Heads, Hardwood Handles ..... Per Dozen, $2.90
No. 5—Dandy Brush Holding Mop Sticks, Coppered Iron Heads, Hardwood Handles..... Per Dozen, 3.40
No. 7—Ideal Lever Spring Mops, Polished Hardwood Handle, Coppered Iron Heads..... Per Dozen, 2.90

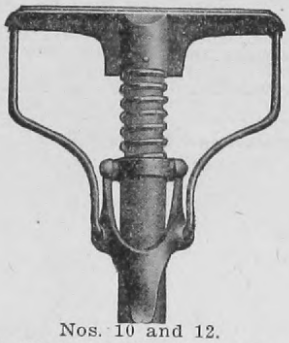
Packed—One Dozen in a Bundle.



No. 8.

No. 8—Ideal Lever Spring Mops, Polished Hardwood Handles, Coppered Steel Heads..... Per Dozen, $3.20

Packed—One Dozen in a Bundle.



Nos. 10 and 12.

Ideal "Janitor" Level Spring Mops, built on the same principle as No. 7 but heavier and stronger. For use in office buildings, schools, stores, churches and other places where men do the cleaning. Heads 7¼ inches wide. Handles 1⅛ inches in diameter and extra long.

No. 10—Polished Hardwood Handles, Coppered Iron Heads..... Per Dozen, $5.60
No. 12—Polished Hardwood Handles, Tinned Iron Heads ..... Per Dozen, 6.30

Packed—One Dozen in a Bundle.

MOP WRINGERS

White Mop Wringers.

Made of selected Hardwood and Best Malleable Iron. Do not pull the mop to pieces. Fit any kind and size of pail. Fitted with a pair of Steel Springs which open the wringer and keep it open in readiness for the mop.

No. 01—Hotel and Janitor Size, wrings mops 16 to 24 ounces..... Per Dozen, $30.00
No. 03—Family Size, wrings mops 8 to 16 ounces..... Per Dozen, 26.00

Packed—Half Dozen in a Crate.

MOP WRINGERS

Nos. 1 2 3

Eagle Mop Wringers, very powerful, easily operated. White Cedar Pails, Maple Rollers with Steel Axles. Oil tempered Steel Springs. Machine Steel Treadle and Portable Roller Shank, Malleable Iron Guide Plates, Treadle Pivots and Foot Holders. A very powerful Wringer which operates easily.

No. 1—Domestic Size, holds 10 quarts..... Per Dozen, $17.25
No. 2—Standard Size, holds 14 quarts..... Per Dozen, 19.50
No. 3—Janitor's Size, holds 22 quarts..... Per Dozen, 24.00

Packed—One-Third Dozen in a Crate.

No. 87.

Nos. 88 and 89.

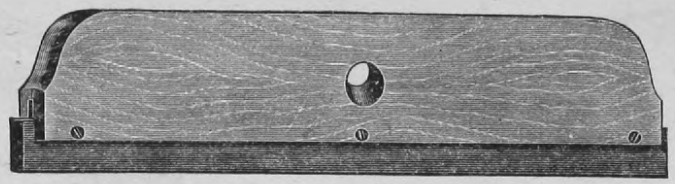
Vanco Mop Wringers, made of Heavy Pressed Steel, galvanized after assembling and fitted with Hardwood Handles. Has no springs, gears or rollers to wear out. Works entirely by leverage and adapts itself to shape of the mop.

No. 87—For Domestic Use, wrings mops 16 ounces or smaller..... Per Dozen, $21.00
No. 88—For General Use, wrings mops up to 20 ounces ..... Per Dozen, 29.25
No. 89—For Janitor's Use, wrings mops from 20 to 36 ounces..... Per Dozen, 36.00

Packed—Half Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLOOR SCRUBBERS



Nos. 212 to 218.

Floor Scrubbers with 4½ foot Handles, very useful for scrubbing and cleaning floors and sidewalks.

⅞ inch Ash Block, 3/16 inch Rubber.

Nos.	212	214	216
Inches	12	14	16
Per Dozen	$4.00	5.00	6.00

Packed—Half Dozen in a Bundle.

1 inch Ash Block, ¼ inch Rubber.

No.	218
Inches	18
Per Dozen	$8.00

Packed—Half Dozen in a Bundle.

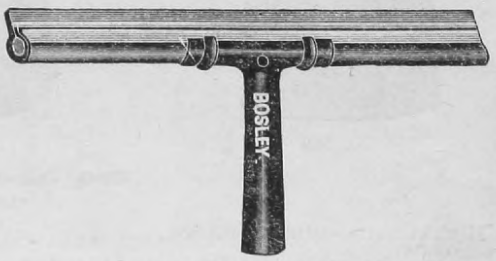
WINDOW CLEANERS

Nos. 10 to 16.

Peerless Window Cleaners, made of Hardwood, Oil Finished, with Improved Drip Catcher and Sheet Steel Handle Socket.

Nos.	10	12	14	16
Inches	10	12	14	16
Per Dozen	$4.80	5.40	6.00	7.50

Packed—One Dozen in a Box.



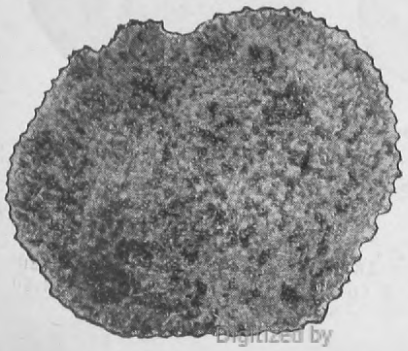
Nos. 110 to 116.

X. L. C. R. Window Cleaners, made of best quality Pure Rubber, Galvanized Iron Frame and Japanned Sheet Steel Handle Socket.

Nos.	110	112	114	116
Inches	10	12	14	16
Per Dozen	$4.80	5.40	6.00	7.00

Packed—One Dozen in a Box.

SPONGES

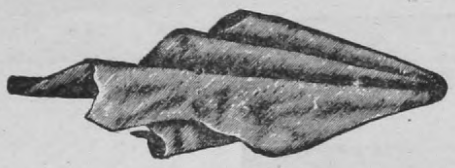


FORMED SPONGES

No. 1—Grass, 10 to 14 to a pound.....Per Pound, $2.00
No. 2—Key Yellow Wool, 10 to 14 to a pound.....Per Pound, 4.40
No. 3—Nassau Wool, 10 to 14 to a pound.....Per Pound, 6.00
No. 4—Sheep's Wool, 10 to 12 to a pound.....Per Pound, 8.80
No. 5—Rock Island Sheep's Wool, 10 to 12 to a pound...Per Pound, 13.00
No. 6—Rock Island Sheep's Wool, 8 to 10 to a pound....Per Pound, 14.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAMOIS SKINS



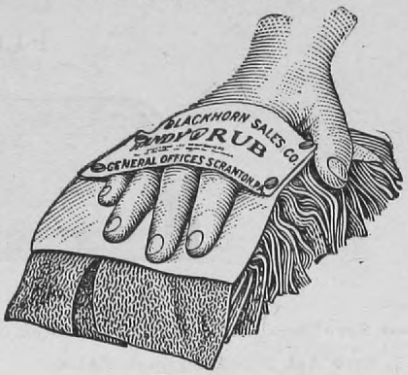
Nos. 6 to 17.

Fine Soft Chamois Skins.

Nos.	**6**	**15**	**16**	**17**
Inches	10x13½	13x16	16x21	20x26
Per Dozen	$4.50	6.30	10.50	24.00

Packed—One Dozen in a Roll.

CHAMOIS RUBS



Handy.

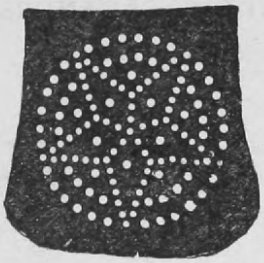
Made of Genuine Oil Tanned Chamois. For polishing Brass, Glass, Furniture, Hardwood Floors, Automobiles Stoves and Shoes.

Handy Rubs.....Per Dozen, $3.00

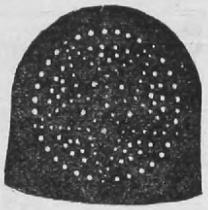
Packed—In Open Stock.

VENEERED CHAIR SEATS

No. 300.



No. 0810.



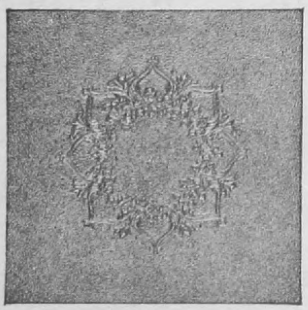
No. 400.

Birch Veneered Perforated Chair Seats.
Strong and Durable.

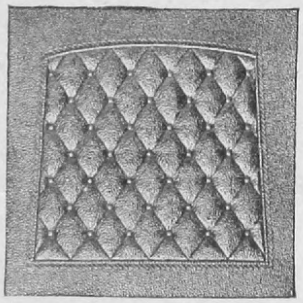
Child's High Chair—Width, inches	12	**Crown** Dining—Width, inches			14	15
No. 300—Per Dozen	$0.72	**No. 400**—Per Dozen			$0.82	1.00
Ball Top—Width, inches	12	13	14	15	16	18
No. 0810—Per Dozen	$0.72	.75	.82	1.00	1.10	1.42

Packed—One Dozen in a Package.

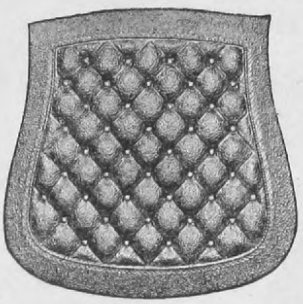
FIBRE CHAIR SEATS



No. 631—Square
Embossed Design.



No. 800—Square
Tufted Design



No. 810—Ball Top
Tufted Design.

No. 405—Round
Tufted Design.

Black Fibre Chair Seats, made of Best Quality Fibre Board, Strong and Durable.

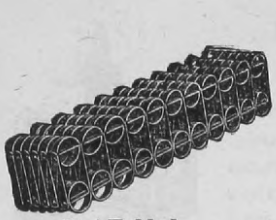
All Styles

Width, inches	12	13	14	15	16	17	18	20
Per Dozen	$1.00	1.10	1.20	1.30	1.40	2.25	2.62	3.40

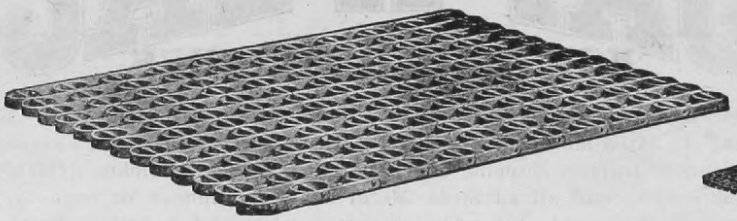
Packed—One Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

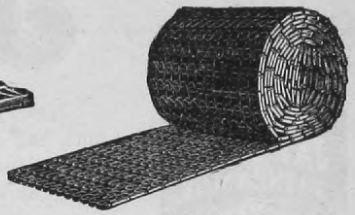
GLEN FOLDING DOOR MATS



Mat Folded.



Nos. 2 to 9.



Mat Rolled.

Reversible and Sanitary. Made Entirely of Wrought Steel.

The Glen Steel Folding Mat excels all others in beauty, flexibity, and in the usefulness of its construction. It does not mar tile, marble, wood or linoleum. Is a perfect scraper and does not curl up at the corners. It conforms to uneven surfaces in the flooring and is easily cleaned. The most durable Mat on the market, indispensable for bars, soda fountains, hallways in public buildings, etc.

For Residences, Store Entrances, Vestibules, Churches, Schools, Theaters, Elevators, Bar Toilets, Street Cars, Railroad Coaches, Steamship and Furnace Rooms.

Regular Sizes.

No. 2—Size, 15½x23½ inches.....Each, $1.50
No. 3—Size, 17¼x30 inches.....Each, 2.00
No. 4—Size, 21½x36 inches.....Each, 3.00
No. 5—Size, 25½x48 inches.....Each, 4.50

Regular Sizes.

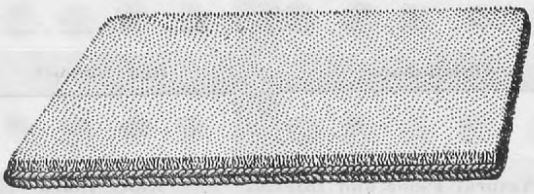
No. 6—Size, 30x48 inches.....Each, $ 5.25
No. 7—Size, 34x50 inches.....Each, 6.50
No. 8—Size, 36x60 inches.....Each, 8.00
No. 9—Size, 36x73 inches.....Each, 10.00

Packed—Each in a Separate Carton, Folded.

Special Sizes.

Special Sizes—Made to Order Any Size Desired.....Per Square Foot, $0.75

COCOA DOOR MATS



Nos. 01 to 5.

Common Grade.

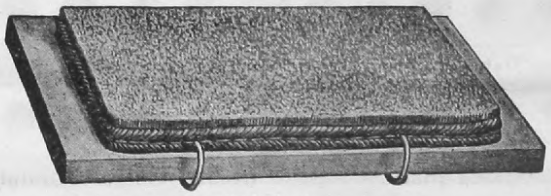
Nos.	01	02	03
Inches	14x25	16x27	18x30
Per Dozen	$12.30	16.50	21.00

Medium Grade.

Nos.	1	2	3	4	5
Inches	14x25	16x27	18x30	20x33	22x36
Per Dozen	$16.50	21.00	27.00	33.00	40.50

Packed—In open Stock.

COCOA RUNNING BOARD MATS



Holdfast.

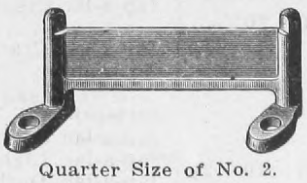
Size, 8½x15 inches.

"Holdfast" Running Board Mats are made of selected yarn, practically indestructible and are not injured by moisture, heat or cold. Steel clips, furnished with each mat, holds them securely in place and yet allows their removal.

No. C—Holdfast Running Board Mats.....Each, $1.45

Packed—Two Dozen in Bale. Half Dozen in a Package.

FOOT SCRAPERS



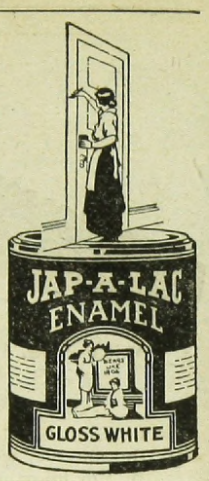
Quarter Size of No. 2.

No. 2—Cast Iron, Japanned, 5 inches wide.....Per Dozen, $1.00

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

JAP-A-LAC
HOUSEHOLD FINISHES



Known everywhere as a quality product of the Glidden Line. Every home has its Jap-a-lac need. Used on hard or soft wood floors, baseboards, stairs, window frames, screens, doors, porches, fences, vehicles, agricultural implements—any and all surfaces, Metal or Wood, indoor or outdoor, that are worn or discolored, Jap-a-lac gives a lasting and beautiful finish and adds immeasurably to the life of the wood.

The color card below shows the wide range of colors which make it easy to obtain an individual and harmonizing finish.

COLOR CARD

Flat White.

White Enamel Gloss.

Light Oak.

Dark Oak.

Old Ivory Enamel.

Pale Blue Enamel.

Cherry.

Malachite Green.

Pink Enamel.

Pale Green Enamel.

Mahogany.

Walnut.

Apple Green Enamel.

Dark Green Enamel.

Oxblood Red.

Gold.

Aluminum.

Red Enamel.

Dead Black.

Ground Color. Graining Color.

Natural Floor and Interior Varnish.

Gloss Black.

Retail Price List Per Can—Effective June 5th, 1917

Size, Cans	1 Gal.	½ Gal.	Qt.	Pt.	½ Pt.	¼ Pt.	⅛ Pt.
Covering Properties. Sq. feet, two coats.	400	200	100	50	25	12½	6¼
*Oak *Dark Oak *Walnut *Mahogany *Cherry *Malachite Green *Ox-Blood Red *Floor and Interior Varnish (Natural) †Brilliant Black †Dead Black †Flat White	List prices per can:						
	$4.00	2.15	1.20	.65	.40	.25	.15
†Ground Color	3.50	1.85	1.00	.55	.30	.20	...
†Dark Green Enamel †Pale Green Enamel †Apple Green Enamel †Pink Enamel †Pale Blue Enamel †Red Enamel †White Enamel (Gloss) †Old Ivory Enamel	4.75	2.50	1.35	.75	.45	.30	.20

Size, Cans	1 Gal.	½ Gal.	Qt.	Pt.	½ Pt.	¼ Pt.	⅛ Pt.
Covering Properties. Sq. feet, two coats.	400	200	100	50	25	12½	6¼
†Stove Pipe Enamel,	$2.00	1.10	.65	.40	.25	.15	...
†Screen Black "	2.00	1.10	.65	.40	.25	...	...
†Screen Green "	4.00	2.15	1.20	.65	.40	...	...
*Transparent Colors. †Solid Colors.							

Size Number	5	4	3	2	1
Covering Properties. Sq. feet, one coat.	150	75	37½	18¾	9⅜
Gold.....List per Can,	$3.00	1.55	.80	.45	.25
Aluminum....List per Can,	2.00	1.10	.65	.40	.25

Jap-a-lac Floor and Interior Varnish (Natural) in 5 gallon cans at $3.90 list per gallon.

Jap-a-lac Crack and Crevice Filler, 1 lb. packages, ...Each, $0.35

Jap-a-lac Crack and Crevice Filler, 2½ lb. packages .....Each, .70

(One pound is sufficient for about forty square feet of surface).

Jap-a-lac Graining Tool.....Each, $0.35

Jap-a-lac Light Graining Color, pints only, Each, .35

Jap-a-lac Dark Graining Color, pints only, Each, .35

(One pint of Graining Color is sufficient to grain about one hundred square feet)

Jap-a-lac Model Floor Set.....Each, $3.50

Note.—The above prices apply to sales in the United States only.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

JAP-A-LAC
HOUSEHOLD FINISHES

JAP-A-LAC PORCH AND FLOOR PAINT

A Sanitary Paint for the preservation, protection and decoration of interior and exterior floors, where extreme durability is required. It is weather-proof and especially adapted for stairs and wainscotings, Kitchen Floors, Verandas and Sleeping Porches.

For years Jap-a-lac Porch and Floor Paint has enjoyed a big demand and its sales are increasing each year.

YELLOW	TERRA COTTA	DARK GRAY
TAN	LIGHT GRAY	SLATE

All Colors	1 Gal.	½ Gal.	¼ Gal.	⅛ Gal.
Per Gallon	$.....	.....	.....	.....

HELPING THE DEALER SELL JAP-A-LAC

For years Jap-a-lac Household Finishes have been nationally advertised—**your customers** read about Jap-a-lac in their favorite magazines. The Glidden free advertising service helps you to sell your customers Jap-a-lac Household Finishes and attract new customers to your store and increase your profits.

Electros shown here, as well as many others, are sent free to dealers. Catalog of electros sent on request.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

JAPSPAR

"The All-Test Varnish"

JapSpar is one of the well known Glidden Green Label Varnishes. It is not a one test varnish. It stands all tests. It is pale in color, easy to apply and dries with a tough elastic surface.

For all exposed surfaces, and whether applied to wood metal or other varnishable surface, JapSpar will give the same rich gloss and durable finish. It dries hard in from twenty-four to forty-eight hours and may be rubbed to a beautiful dull finish if desired. It is an ideal combination of all desirable varnish qualities.

Attractive window displays and other advertising features are free to the dealer.

Note.—For List Prices see following page.

JAP-A-LAC SCREEN ENAMEL

Use These Silent Salesmen

These beautiful counter displays are lithographed in colors and display Jap-a-lac specialities in a very attractive manner. Good displays like these will catch many sales and, of course, are free with your order.

JAP-A-LAC STOVE PIPE ENAMEL

Jap-a-lac Screen Black and Green.

Cans	Gal.	½ Gals.	Qts.	Pts.	½ Pts.
Black	Each, $2.00	1.10	.65	.40	.25
Green	Each, 4.00	2.15	1.20	.65	.40

For use on the wire cloth and frames of wood or metal screens. Beautifies and prevents rust and deterioration. Dries quickly with a jet black lustre.

Jap-a-lac Stove Pipe Enamel.

Cans	Gal.	½ Gals.	Qts.	Pts.	½ Pts.	¼ Pts.
Each	$2.00	1.10	.65	.40	.25	.15

For use on stove pipes, registers, grate fronts, hot and cold water pipes, iron work, etc. Dries quickly, with a beautiful glossy black finish. Resists heat and atmospheric conditions to a wonderful degree.

JAP-A-LAC MODEL FLOOR SETS

Jap-a-lac Model Floor Set.

Model Floor Sets ..... Per Set, $3.50

Each set contains all necessary materials for graining; 1 quart Ground Color, 1 pint Graining Color, 1 quart Natural Varnish, 1 Graining Tool and 3 Brushes.

Note.

Gold and Aluminum JAP-A-LAC may be used to produce that beautiful gold leaf or aluminum finish, so much admired, on almost any article of wood or metal about the home. It dries with a beautiful smooth and lustrous finish, and does not tarnish nor rub off.

Radiators, registers, water pipes, water tanks, etc., should be coated with JAP-A-LAC in either Gold, or Aluminum.

JAP-A-LAC GOLD AND ALUMINUM

Jap-a-lac Gold and Aluminum.

One Doz. Size No. 1, in a Display Carton .....
Gold ..... Per Carton, $3.00
Aluminum ..... Per Carton, 3.00

Gold and Aluminum JAP-A-LAC are put up in double-compartment cans—the powder in one container, the liquid in the other. Mix just before using.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

GLIDDEN GREEN LABEL VARNISHES, ENAMELS AND SPECIALTIES

The name GLIDDEN on a label is a guarantee of quality. Nearly fifty years' experience in the manufacture of varnishes and specialties for all purposes, together with the most modern facilities, insures uniform quality, and goods that can be depended upon to give perfect satisfaction. Any person purchasing goods under the Green Label brands, can feel assured that he is receiving full value for the price paid, and that he is obtaining the highest grade and standard quality of that particular brand.

Glidden Velvet White Enamel

(Egg Shell Finish).

Glidden Velvet White Enamel meets all economy requirements and still produces the most beautiful, soft, velvety effect. It does not require expensive rubbing. Four coats will do the work of seven and it is especially adapted for finest interior woodwork, plaster, Keene cement and metal work. It works out under the brush very easily and retains its pure white velvety appearance for an indefinite period. Velvet is especially useful in bringing out the rubbed effect on spindles, moulding, etc., where rubbing is not practical.

Important.—In order to produce best results always apply two or more coats Perfect Enamel **Undercoat** before applying Enamel.

Glidden Superior White Enamel

(Gloss Finish).

This Enamel dries with a pure white, high gloss finish, and retains its natural beauty through exposure and wear, and does not turn yellow with age. On account of its porcelain-like hardness it is easily kept clean, and repeated washing, alkalies and atmospheric conditions do not affect it. It sets dust free in three to four hours, and dries in three to four days, according to conditions.

This Enamel is intended for use on the finest interior trim, plaster, Keene cement, and metal work. We especially recommend it for the finishing of fine residences, hotels, hospitals, sanitariums, etc. It is also adapted for use on cold storage plants and finishing the interior of show windows.

Important.—In order to produce best results always apply two or more coats Perfect Enamel **Undercoat** before applying Enamel.

Glidden Green Label Varnishes

Jap Spar

A Varnish combining every advantage of every other spar varnish manufactured, while their shortcomings have been eliminated.

For exposed surfaces, such as doors, porch ceilings, window sills, boats, yachts etc. there is nothing to compare with JAPSPAR.

Can be rubbed to a beautiful dull finish if desired.

M. P. Durable Interior

The highest grade manufactured for general interior use. Light in color, has wonderful flowing and brushing properties, and is extremely elastic and durable. It sets dust free in three to four hours, and dries in 24 to 48 hours, according to conditions. Can be rubbed to a dull finish, polished, or left bright, as preferred. A perfect varnish for finishing the very finest interior trim in residences, banks, hospitals, offices, and buildings of all kinds.

M. P. Durable Floor

For finishing natural, painted or grained floors. It combines hard and quick drying properties without sacrificing the elasticity so essential to a floor varnish. It is impervious to water, and withstands the hard usage to which floors are subjected. Does not mar nor scratch white. Sets dust free in two to three hours, and hard in 15 to 24 hours, according to conditions. Can be rubbed and polished, or left bright.

No. 1 Coach

This varnish possesses excellent flowing and brushing properties, good body, is light in color and elastic.

We recommend it for the finishing of all kinds of interior trim, where a moderate priced varnish is required. It sets dust free in three to four hours, and dries in about 24 to 36 hours. Has a brilliant gloss and can be rubbed.

Like-A-Rub—Dull Finish

This material dries with an egg-shell finish and overcomes the common objection to other varnishes of this nature now on the market inasmuch as it is a clear varnish, free from pigments or flatting powders. Sets dust free in about one hour and hardens over night. This finish can be used successfully over shellac, varnished surfaces, various wood fillers (properly sanded) and is unequaled for mission finishes.

Important.—To obtain best results, we recommend that this finish be used over a varnished surface.

Linoleum and Oil Cloth Varnish

This varnish is made particularly for use on linoleum or oil cloth.

It is pale in color, elastic and quick drying.

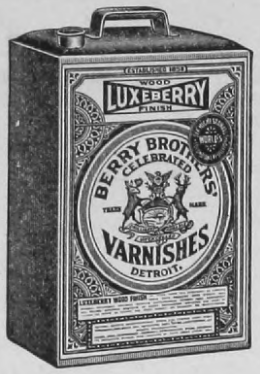
It withstands repeated washings and prolongs the life of the linoleum or oil cloth fifty per cent.

List Prices—Effective January 1st, 1918

Packages	Bbl. and ½ Bbl. Per Gal.	Fives Per Gal.	Gals. Each	½ Gal. Each	Qts. Each	Pts. Each	¼ Pts. Each
JapSpar (The All Test Varnish)	.....	$5.40	$5.50	$2.85	$1.50	$0.80	$0.45
M. P. Durable Interior	.....	4.40	4.50	2.35	1.30	.70	.40
M. P. Durable Floor	4.25	4.40	4.50	2.35	1.30	.70	.40
M. P. Elastic Interior	.....	3.40	3.50	1.85	1.00	.55	.35
Velvet White Enamel (Egg Shell Finish)	.....	.....	6.50	3.40	1.80	.95	.50
Superior White Enamel (Gloss Finish)	.....	.....	6.50	3.40	1.80	.95	.50
Perfect Enamel **Undercoat**—White	.....	3.90	4.00	2.10	1.15	.60	.35
Lik-A-Rub	.....	4.40	4.50	2.35	1.30	.70	.40
Linoleum Varnish	4.25	4.40	4.50	2.35	1.30	.70	.40
Inside Spar	3.00	3.15	3.25	1.75	.95	.55	.35
No. 1 Coach	2.50	2.60	2.75	1.50	.85	.45	.30
Hard Oil Finish	2.25	2.40	2.50	1.35	.80	.45	.30
No. 1 Furniture	2.00	2.15	2.25	1.25	.70	.40	.25
Superior Bronzing Liquid	2.00	2.15	2.25	1.25	.70	.40	.25
Extra Japan Drier	1.90	2.05	2.15	1.20	.70	.40	.25
Puritan Liquid Wood Filler	2.00	2.15	2.25	1.25	.70	.40	.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BERRY-BROTHERS' VARNISHES, ETC.



HOUSE FINISHING VARNISHES

Luxeberry Wood Finish

(White and Light.)

Formerly known as Berry Brothers' Hard Oil Finish (the original and only genuine Hard Oil Finish ever made.)

For general interior work, unequaled for producing a handsome and durable finish on all woods. It develops and preserves the grain, and can either be left in the natural gloss or rubbed and polished, as may be desired.

Luxeberry Wood Finish **"White"** is very pale and can be used on the lightest woods without discoloring them in the least, while the **"Light"** is suitable for Oak, Ash, Chestnut and similar woods.

Luxeberry "Spar" Varnish

An excellent Varnish of great durability especially adapted for Marine and all **outside** work, also very fine for bar tops. It is **waterproof,** dries dust free quickly, and hardens with a fine lustre.

Liquid Granite—for Natural Wood Floors

Combining the three principal requisites of a floor finish—elasticity, toughness and durability. Thoroughly tested and approved, and the best article of its kind in the market, made in two grades, A and B. **A** is heavy in body and intended for use on new floors, while **B** is lighter in body and intended for restoring or refinishing old floors, and for use on linoleum.

Elastic Interior Finish

For interior work subjected to severe exposure or usage such as inside blinds, bath rooms, etc. Possesses great elasticity combined with unusual durability, will resist the action of hot water, soap, etc., longer than anything else we know of.

Medium Hard Oil Finish

A high grade finish for interior work, and well adapted for natural wood, dries hard with a rich full gloss, rubs and polishes perfectly.

Dulgloss Finish

For producing an imitation rubbed effect over a varnish surface, light in color, flows out very freely under the brush, dries dust free in 4 hours and hardens in 48 hours.

Dries naturally with a soft, velvety effect closely resembling a rubbed finish, but is not unduly susceptible to wear and tear.

Painters' Extra Coach

This is an excellent wearing Varnish, heavy bodied, light in color and dries in from ten to twelve hours with a fine lustre.

No. 1 Coach Varnish

A free working interior varnish, of good body, quick drying and making a fine lustrous finish.

Gloss Coach Varnish

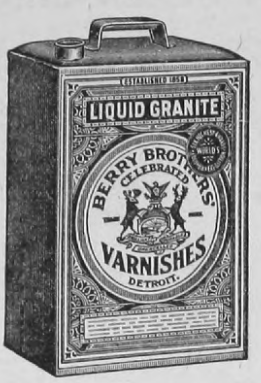
This is a free working interior varnish, same as the Inside Coach Varnish but of a slightly lower price.

Extra Damar

Made from selected Batavia Damar Gum; perfectly white, heavy bodied, and dries well.

No. 1 Damar

An excellent pale Varnish, of good body, and reliable in every way.



FURNITURE VARNISHES

No. 1 Furniture

This Varnish is a fine article, made from good selected hard gum. Heavy bodied, dries well, with a fine lustre; suitable for all kinds of furniture.

FINE COACH AND AUTOMOBILE VARNISHES

Wearing Body Varnish

For finishing coats, dries in from twelve to sixteen hours, is durable, has a good lustre, and is well adapted for new or old work, and hardens in four or five days.

Elastic Gear Varnish

For finishing the running parts of carriages, automobiles, etc., very pale, possesses great brilliancy, dries out of the way of dust in from twelve to sixteen hours; and hardens in four or five days.

One Coat Coach

For general carriage and automobile work where but one coat is practicable. This Varnish dries out of the way of dust in about twelve hours; is light colored, makes as nice a finish as the best "Wearing Body," and is very durable.

Auto and Carriage Top Dressing

Waterproof elastic and pliable, dries over night with a bright lustre.

MISCELLANEOUS ITEMS

Lusterlo Floor Dressing

Keeps varnished floors in fine condition. Refinishes worn spots. Dries over night. A sanitary dressing, easily applied. Protects—renews Linoleum.

No. 1 Japan Dryer.

Light in color, mixes with oil, dries hard and quickly, and will not injure paint.

B Asphaltum

Made from selected bright gum, used for coal hods, agricultural implements, and castings of every description, where a bright, quick drying varnish is required. It is heavy bodied, and dries in about one hour.

Bronzing Liquid

Light in color, preserves its bronze effect under all conditions, especially when submitted to heat as on steam coils and radiators.

Wall Size

An excellent priming for use over plastered walls and other porous surfaces intended to be painted, kalsomined or otherwise decorated. Light in color, dries quickly, has a good body and is easy working. Care must be taken that the walls, etc., are perfectly dry before applying.

Liquid Wood Filler

This Filler seals the pores of the wood perfectly, dries well and sands easily. Furnished in three grades, Nos. 5, 10 and Antique.

Note.—For **Paste** Wood Filler see following page.

"Berrycraft" Stain Finish

This is a correctly blended stain and varnish adapted to floors and all kinds of interior finishing.

It dries nicely and produces a smooth lustrous finish that is artistic and durable.

It is all ready for the brush, and is put up in handy friction top cans that are easily opened, and quickly and securely closed when not in use.

It is applied in the same manner as paint or varnish and its use is so easy that absolutely no skill is required.

There are unlimited possibilities in the use of **Berrycraft Stain Finishes,** not only in an artistic sense but of economy also.

Articles of Furniture, etc., that have been discarded because they were shabby and worn, may be restored to beauty and usefulness at an outlay of a few cents.

Colors—It comes in eight attractive colors. Light Oak, Dark Oak, Golden Oak, Walnut, Cherry, Mahogany, Rosewood, Malachite Green, and an undercoat, and is equally suitable for both new and old work.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BERRY BROTHERS' VARNISHES, ETC.

WOOD STAINS

Oil and Spirit Stains

Our price list embraces both **Oil** and **Spirit** Stains; the regular colors being Brown. Mahogany, Light Weathered, Light or Dark Fumed Oak, Green Flemish, Dark Golden Oak, Malachite Green, Filipino and Forest Green. Orders for other colors only accepted conditionally and a sample of color desired must accompany the order. Do not quote prices on special colors without consulting us.

Water Stains

Water Stains produce bright and transparent color effects but require careful handling to prevent raising the grain of the wood, a contingency to which neither oil or spirit stains are so liable. Our list of colors comprises Light and Dark Fumed, Light and Dark Oak, Antique, Antwerp.

Shingletint

It possesses great penetrative and preservative qualities, being a scientific combination of linseed oil, coloring pigments, creosote oils and the necessary drying agents, and prolongs the life of the shingles by retarding decay, at the same time imparting an artistic finish. Our line of colors embraces Light and Weathered Green, Moss Green, Dark and Dark Weathered Brown, Light and Dark Golden Brown, Rich Brown and Light Gray. Other colors at special prices.

For color and key numbers to same see our wood samples.

Lacklustre

For producing dull effects on wood. The finish does not in any way resemble a rubbed varnish surface, but presents a dull and lustreless effect more like a wax finish. A single operation produces the finish which is adapted to both hard and soft woods, and the method of application is extremely simple. **Suitable** for inside and outside work.

Colors. Made in 12 attractive shades: Green Flemish, Brown Flemish, Black Flemish, Silver Gray, Mission, Light Weathered, Dark Weathered, Filipino, Golden, Antwerp, Forest Green and Bog.

Price per Gallon	5 Gallon Cans	1 Gallon Cans	½ Gallon Cans	¼ Gallon Cans	⅛ Gallon Cans	1/16 Gallon Cans
Luxeberry Wood Finish "White"	$5.90	6.00	6.25	6.60	7.00	8.00
Luxeberry Wood Finish "Light"	3.90	4.00	4.25	4.60	5.00	6.00
Luxeberry Wood Finish "Spar"	5.40	5.50	5.75	6.10	6.50	7.50
Liquid Granite A and B	3.90	4.00	4.25	4.60	5.00	6.00
Lusterlo (Floor Dressing)	2.40	2.50	2.75	3.10	3.50	4.50
Elastic Interior Finish	3.90	4.00	4.25	4.60	5.00	6.00
Medium Hard Oil Finish	3.40	3.50	3.75	4.10	4.50	5.50
Dulgloss Finish	3.90	4.00	4.25	4.60	5.00	6.00
Luxeberry Wall Size	1.90	2.00	2.25	2.60	3.00	4.00
Painters' Extra Coach	3.90	4.00	4.25	4.60	5.00	6.00
No. 1 Coach	3.15	3.25	3.50	3.85	4.25	5.25
Gloss Coach	2.15	2.25	2.50	2.85	3.25	4.25
Extra Damar	3.40	3.50	3.75	4.10	4.50	5.50
No. 1 Damar	2.90	3.00	3.25	3.60	4.00	5.00
No. 1 Furniture	2.40	2.50	2.75	3.10	3.50	4.50
Wearing Body	....	6.00	6.25	6.60	7.00	8.00
Elastic Gear	....	6.00	6.25	6.60	7.00	8.00
One Coat Coach	....	5.00	5.25	5.60	6.00	7.00
Auto and Carriage Top Dressing	....	2.50	2.80	3.20	3.60	4.80
No. 1 Japan Drier	2.40	2.50	2.75	3.10	3.50	4.50
B Asphaltum	1.40	1.50	1.75	2.10	2.50	3.50
Bronzing Liquid	2.15	2.25	2.50	2.60	3.00	4.00
Wall Size	1.65	1.75	2.00	2.35	2.75	3.75
No. 5 Light Liquid Wood Filler	2.15	2.25	2.50	2.85	3.25	4.25
No. 10 Light Liquid Wood Filler	1.90	2.00	2.25	2.60	3.00	4.00
Shingletint	1.50	1.60	....	....	....	....
Lacklustre—All colors	4.15	4.25	4.50	4.85	5.25	6.25

Stain Finishes

Quantity in Can	1 Gal.	½ Gal.	Quart	Pint	½ Pint	¼ Pint
Berrycraft Stain Finish Per Can,	$4.00	2.15	1.15	.65	.38	.22
Oil Stains, Standard Colors Per Gallon,	2.50	2.76	3.12	3.60	4.48	....
Spirit Stains, Standard Colors Per Gallon,	4.50	4.76	5.12	5.60	6.40	....
Water Stains, Standard Colors Per Gallon,	1.25	1.50	1.84	2.24	3.20	....

Paste Wood Filler

"Light" for light woods, "Antique" for dark woods. **Specify** kind desired when ordering.

Put up in	1 lb. Cans	2 lb. Cans	5 lb. Cans	10 lb. Cans	25 lb. Cans	100 lb. Kegs	½ Bbls.	Bbls.
Per Pound	$0.21	.21	.19	.18	.14	.12	.11½	.11

Apex Paint and Varnish Remover

A thoroughly reliable article possessing every essential feature for the complete removal of old paint and varnish. Performs its work rapidly and effectively, undermining and breaking up old varnish or paint. It gathers body so quickly that it has no undue tendency to run off when used on upright surfaces. One liberal application will usually be found sufficient. Two teaspoonfuls to each cylinder alternately over night will effectively remove carbon from automobile cylinders.

Quantity in Can	1 Gal.	½ Gal.	¼ Gal.	⅛ Gal.	1/16 Gal.
Per Gallon	$.....	.....	.....	.....	.....

"B. L." Shellac

For foundation coat, covering knots and other purposes. Made of best pure gum and alcohol.

Package	Per Gallon 5 Gal.	1 Gal.	½ Gal.	¼ Gal.	⅛ Gal.
Orange	$.....	.....	.....	.....	.....
White	.....	.....	.....	.....	.....

Package	Per Dozen 1/16 Gal.	1/32 Gal.
Orange	$.....	.....
White	.....	.....

Prices quoted on Application.

Note.—Twelve Gallons of Varnish will be packed in a Berry Bros.' Wagon when so ordered. Wagons are **not** furnished with orders for less than twelve gallons.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

LIQUID ASPHALT CEMENT

HARD ASPHALT CEMENT

Buhl Liquid Asphalt Joint Cement.

A heavy bodied, slow drying tough, adhesive Asphalt Compound. Useful as a Roofing Joint Cement, for repairing Leaky Roofs and General Waterproofing purposes. Ready for use, does not require heating.

Put up in..	1 Pint Cans, Less than Case	1 Pint Cans, Twelve in a Case,	1 Quart Cans	1 Gallon Cans	5 Gallon Kits	50 Gal. Bbls.
Per Gallon..	$.....	.....	.....	.....	.....	.....

Hard Mineral Asphalt Cement.

Best Quality, nothing better for cementing, repairing and waterproofing where a heavy body is required, made into a liquid by heating. Estimated weight per gallon, 7 to 10 pounds.

Put up in.....	7½ lb. Boxes	22½ lb. Boxes	37½ lb. Boxes	Barrel Lots	Ton Lots
Per Pound.....	$.....	.....	.....	.....	.....

ELASTIC OIL ROOF CEMENT

American Seal Elastic Oil Roof Cement combines Firm Adhesiveness with Elasticity. It will adhere to Slate, Tile or Metal and will not crack or crumble. Especially recommended for repairing leaks around chimneys, dormer windows, skylights and firewalls. It will answer to repair a roof when solder cannot be used.

Per 100 Lbs.	In 1 lb. Cans.	In 5 lb. Cans.	In 25 lb. Pails.	In 135 lb. Drums.
Brown	$.....	.....	.....	.....
Red	.....	.....	.....	.....

COLD WATER PASTE

Crown Cold Water Paste, for pasting asbestos paper to hot air furnace pipes. A perfect paste in powder form, strong, sticky, white, stainless and absolutely lumpless, twelve ounces makes one gallon of heavy paste.

Put up in.....	5 lb. Cans	50 lb. Tubs
Per Pound.....	$.....	.....

BLACK CARBON ROOF CEMENT

American Seal Black Carbon **"Asbestos Filled"** Roof Cement. The Peer of All Light Weight Cements—about twice the bulk of Oil Cement and no heavier. Unsurpassed for Surfacing or Patching metal, slate, tile or composition roofs, valleys, gutters, etc. Used extensively for sealing pumps, cisterns or cracks in foundations. Can be applied with a plastering trowel.

Per 100 lbs.	1 lb. Cans In Full Cases	1 lb. Cans. Less than Case	5 lb. Cans In Full Cases	5 lb. Cans. Less than Case	25 lb. Pails	135 lb. Kegs	640 lb. Barrels
Black—	$.....	.....	.....	.....	.....	.....	.....

Packed—One Pound Cans, 12 in a Case; Five Pound Cans, 6 in a Case.

COAL TAR

Made of Coal Gas, Refined for Roofing Purposes.

In Liquid Form.

Refined Coal Tar.....Per Gallon, $.....

ROOFING PITCH

Made of Coal Gas, Refined for Roofing Purposes.

In Hard, Solid Form.

Refined Roofing Pitch.....Per 100 Pounds, $.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ASPHALT COMPOSITION ROOF COATING

Black.

Red.

Green

Buhl Asphalt Composition Roof Coating is a high grade coating made from the best of high grade Asphalt and Gums, melted, specially treated, and combined with just sufficient chemically pure and natural Oxide Pigments to produce the beautiful colors shown.

Buhl Asphalt Roof Coating renews smooth, rubber, and rock-surfaced composition roofs. By using this Coating artistic and harmonious results may be obtained.

Ordinary oil paints are detrimental to composition roofs as they dry too hard, "alligator" and curl up, injuring rather than improving. Buhl Asphalt Roof Coating becomes a part of the roof, not only adding to its sightly appearance, but renewing, strengthening and reinforcing so as to greatly increase its durability.

Covering Capacity—One gallon will cover from 100 to 250 square feet on smooth or Rubber-Surfaced Roofings—from 50 to 150 square feet on Rock-Surfaced Roofings.

Colors	In 1 Gallon Cans Less than Case	In 1 Gallon Cans Six in a Case	In 5 Gallon Cans One in a Case	In 50 Gallon Barrels
Black .....Per Gallon,	$.....	.....	.....	.....
Red .....Per Gallon,	.....	.....	.....	.....
Green .....Per Gallon,	.....	.....	.....	.....

BARN AND METAL PAINT

Red.

Brown.

Black.

Green.

Buhl

Gray.

Buhl Barn and Metal Paint is the best on the market at its price for general outside work, such as houses, factories, barns, sheds, fences, shingle roofs, metal roofing and siding, bridges, structural iron and steel work, metal surfaces and general outside painting. It is absolutely free from coal tar and other cheap adulterants. For Floors, Porches, Stairs and Steps use Buhl Gray Barn and Metal Paint.

It is made from pure oxide pigments, thoroughly ground in oil and thinned with a combination of asphalt enamel oil, that is the result of our many years' experience in producing high-grade materials and preservatives.

Directions—Stir paint thoroughly and keep well stirred while using. All surfaces should be thoroughly cleaned and allowed to become perfectly dry before applying paint. In cold weather the addition of about 5% turpentine will make the paint spread more easily. Ordinarily one coat is sufficient, but porous surfaces should be given two coats.

On new woodwork or old work that is badly in need of painting, it is well to use two coats, the first being thinned with a half gallon raw linseed oil per gallon, the second coat being applied just as it comes in the original package.

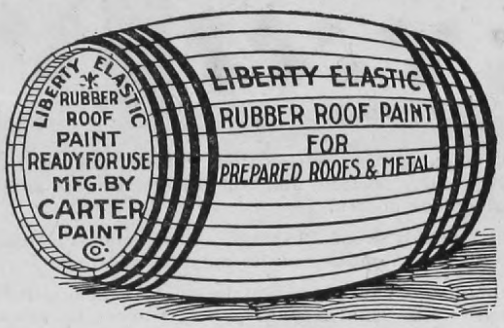
Covering Capacity—Covering capacity varies according to the nature and condition of the surface to be painted. On ordinary wood surfaces, one gallon will cover 200 to 350 square feet, one coat; on metal one gallon will cover 300 to 450 square feet, one coat.

Colors	In 1 Gallon Cans Less than Case	In 1 Gallon Cans Six in a Case	In 5 Gallon Cans One in a Case	In 50 Gallon Barrels
Red .....Per Gallon,	$.....	.....	.....	.....
Brown .....Per Gallon,	.....	.....	.....	.....
Black .....Per Gallon,	.....	.....	.....	.....
Green .....Per Gallon,	.....	.....	.....	.....
Gray .....Per Gallon,	.....	.....	.....	.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ROOF COATING

ROOF PAINT



Liberty.

Beaver Roof Coating

Specially prepared for surfacing Alto and other Tar Roofings. One-half gallon required per square for laps, 2 to 3 gallons for surfacing with two coats. The Cans are suitable for heating, which facilitates spreading and absorption, especially in cold weather.

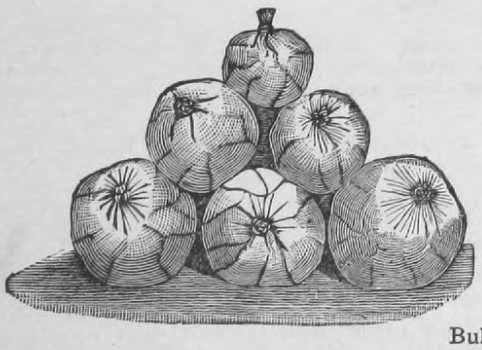
	In 1 Gallon Cans Less than Case	In 1 Gallon Cans Six in a Case	In 5 Gallon Cans
Beaver Roof Coating.....Per Gallon	$.....	.....	.....

Liberty Elastic Rubber Roof Paint

Weather, water, sun, rust and acid proof. For use on shingle, felt, rubber or metal roofs of all kinds, pipes, tanks, boilers, fences, iron and steel work of all kinds, also for preserving the ground ends of fence posts and telephone poles. This is the only paint containing decomposed cedar wood, which gives it elasticity as well as expansive and contractive qualities, rendering it proof against violent weather fluctuations. This is a low priced black paint which sets quickly, but dries slowly with a jet black glossy finish, is odorless when dry and will not discolor or impart a taste to rain water. Requires no mixing or thinning, always ready for use. One gallon will cover from 250 to 400 square feet of metal and from 150 to 250 square feet of felt or composition roofing, depending upon the condition of the surface to be covered.

Package, Per Gallon.....	In 1 Gallon Cans Less than Case	In 1 Gallon Cans Six in a Case	In 30 Gallon Half Barrels	In 50 Gallon Barrels
	$.....	.....	.....	.....

BUHL STRICTLY PURE PUTTY



Buhl Strictly Pure Putty

In **Bladders**.....	In Full Barrels of 300 to 400 pounds.....Per 100 Pounds,	$.....
	In Lots of 200 pounds or less .....Per 100 Pounds,	.....
	In Lots of 100 pounds or less .....Per 100 Pounds,	.....
In 100 Pound Steel Kits.....	Per 100 Pounds,	.....
In **25 Pound** Steel Kits.....	Per 100 Pounds,	.....
In 1 Pound Tin Cans....	In Full Cases containing fifty 1 Pound Cans.....Per 100 Pounds,	.....
	In Less than Full Case Lots.....Per 100 Pounds,	.....
In Bulk—In Full Barrels of about 800 pounds, **Direct** from factory only.....Per 100 Pounds,		.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LINSEED OIL

High Grade Pure Linseed Oil

Prices Quoted on Application but Subject to Market Changes Without Notice.

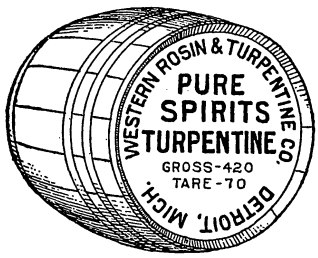
Per Gallon.....F. O. B.....Detroit	Toledo	Chicago	Minneapolis	Saginaw	Grand Rapids	Lima, Ohio
Raw, in 50 gallon Barrels..... $.....	.....	.....	.....	.....	.....	.....
Boiled, in 50 gallon Barrels.....	.....	.....	.....	.....	.....	.....

Note.—We do **not** furnish Half Barrels of Linseed Oil from any point.

Raw, in 5 gallon Wood Jacket Cans (including cans) "From Store" only.....Per Gallon, $.....

Boiled, in 5 gallon Wood Jacket Cans (including cans) "From Store" only.....Per Gallon, ...

TURPENTINE



Turpentine

Prices Quoted on Application but Subject to Market Changes Without Notice.

Turpentine...
- **In** 5 gallon Wood Jacket Cans (including cans) "From Store" only. Per Gallon, $.....
- **In** 30 gallon Half Barrels "From Store" only.....Per Gallon, ...
- In 30 Gallon Half Drums "From Store" only.....Per Gallon, ...

F. O. B.....	Detroit	Bay City	Grand Rapids	Toledo
In 50 Gallon Barrels.....Per Gallon, $.....	.....	.....	.....	.....
In 55 Gallon Drums.....Per Gallon, ...	.....	.....	.....	.....

Note.—Turpentine Drums or Half Drums will be invoiced at $10.00 each Net, which amount will be credited upon return of same per instructions on each drum, with freight charges collect. Do **not** return drums to us.

WHITE LEAD

American White Lead—In 1, 2, 3 and 5 Pound Cans, All Sizes.....Per Pound, $.....

Note.—American White Lead is **not** suitable for painting but is used for sealing joints and other similar purposes.

LAMP BLACK

		In Full Cases	Less than Full Case
Germantown Lamp Black..	¼ pound packages.....Per Pound, $.....		$0.11
	½ pound packages.....Per Pound, ...		.09
	1 pound packages.....Per Pound, ...		.07

Packed—Fifty Pounds (of One Size Package) in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SINGLE STRENGTH "A" AMERICAN WINDOW GLASS

Manufactured by American Window Glass Co.—Official List, March 1st, 1913

Note.—All sizes not listed will take the list price and same number of lights per box of next larger listed size. All sizes over 100 united inches are packed in 100-feet boxes only. **Brackets**—The first three Brackets often referred to in quotations consist of all sizes from 6x8" to 40 united inches except 18x22" and 20x20" which two sizes are included in the 5th Bracket. **United Inches** are arrived at by adding the two dimensions of a light of glass—for example a light of glass 16x24"=40 united inches or a light of glass 24x30"=54 united inches.

Size Inches	Per Box	Per Light	Lts. in a Box	Size Inches	Per Box	Per Light	Lts. in a Box	Size Inches	Per Box	Per Light	Lts. in a Box	Size Inches	Per Box	Per Light	Lts. in a Box	Size Inches	Per Box	Per Light	Lts. in a Box
6x 8	$30.00	$0.25	150	11x46	$40.00	$3.57	14	14x42	$40.00	$4.18	12	18x50	$43.50	$6.80	8	26x44	$43.50	$9.07	6
				11x48	40.00	3.57	14	14x44	40.00	4.18	12	18x52	43.50	6.80	8	26x46	49.50	10.32	6
7x 9	30.00	.33	114	11x50	43.50	4.19	13	14x46	40.00	4.55	11					26x48	49.50	10.32	6
								14x48	43.50	4.95	11	20x20	37.00	2.58	18	26x50	49.50	10.32	6
8x10	30.00	.42	90	12x12	30.00	.75	50	14x50	43.50	5.44	10	20x22	37.00	2.90	16	26x52	49.50	12.38	5
8x12	30.00	.50	75	12x13	31.00	.85	46	14x52	43.50	5.44	10	20x24	37.00	3.09	15				
8x13	30.00	.54	69	12x14	31.00	.91	43	14x54	52.50	6.57	10	20x26	37.00	3.31	14	28x28	40.00	5.56	9
8x14	30.00	.59	64	12x15	31.00	.97	40	14x56	52.50	7.30	9	20x28	37.00	3.56	13	28x30	40.00	5.56	9
8x15	30.00	.62	60	12x16	31.00	1.02	38	14x58	52.50	7.30	9	20x30	37.00	3.86	12	28x32	43.50	6.80	8
8x16	30.00	.67	56	12x18	31.00	1.18	33	14x60	52.50	7.30	9	20x32	38.00	4.32	11	28x34	43.50	6.80	8
8x18	31.00	.78	50	12x19	31.00	1.22	32					20x34	38.00	4.32	11	28x36	43.50	7.77	7
8x20	31.00	.87	45	12x20	31.00	1.30	30	15x15	31.00	1.22	32	20x36	40.00	5.00	10	28x38	43.50	7.77	7
				12x22	31.00	1.44	27	15x16	31.00	1.30	30	20x38	40.00	5.56	9	28x40	43.50	9.07	6
8½x21	34.10	1.07	36	12x24	33.00	1.65	25	15x18	31.00	1.44	27	20x40	40.00	5.56	9	28x42	43.50	9.07	6
				12x26	33.00	1.80	23	15x20	33.00	1.72	24	20x42	43.50	6.05	9	28x44	49.50	10.32	6
9x11	30.00	.51	73	12x28	33.00	1.97	21	15x22	33.00	1.88	22	20x44	43.50	6.80	8	28x46	49.50	10.32	6
9x12	30.00	.56	67	12x30	37.00	2.31	20	15x24	33.00	2.07	20	20x46	43.50	6.80	8	28x48	49.50	12.38	5
9x13	30.00	.60	62	12x32	37.00	2.44	19	15x26	37.00	2.58	18	20x48	43.50	6.80	8	28x50	49.50	12.38	5
9x14	30.00	.66	57	12x34	37.00	2.58	18	15x28	37.00	2.73	17	20x50	43.50	7.77	7	28x52	49.50	12.38	5
9x15	30.00	.71	53	12x36	37.00	2.73	17	15x30	37.00	2.90	16	20x52	49.50	8.84	7	28x54	52.50	13.13	5
9x16	30.00	.75	50	12x38	37.00	2.90	16	15x32	37.00	3.09	15					28x56	52.50	13.13	5
9x18	31.00	.89	44	12x40	38.00	3.17	15	15x34	37.00	3.31	14	22x22	37.00	3.09	15				
9x20	31.00	.97	40	12x42	38.00	3.40	14	15x36	38.00	3.65	13	22x24	37.00	3.31	14	30x30	43.50	6.80	8
9x22	31.00	1.08	36	12x44	40.00	3.57	14	15x38	38.00	3.65	13	22x26	37.00	3.56	13	30x32	43.50	6.80	8
10x12	30.00	.62	60	12x46	40.00	3.85	13	15x40	40.00	4.18	12	22x28	37.00	3.86	12	30x34	43.50	7.77	7
10x13	30.00	.68	55	12x48	40.00	3.85	13	15x42	40.00	4.55	11	22x30	38.00	4.32	11	30x36	43.50	7.77	7
10x14	30.00	.73	51	12x50	43.50	4.54	12	15x44	40.00	4.55	11	22x32	38.00	4.75	10	30x38	43.50	9.07	6
10x15	30.00	.78	48	12x52	43.50	4.54	12	15x46	43.50	5.44	10	22x34	40.00	5.00	10	30x40	43.50	9.07	6
10x16	31.00	.87	45	12x54	52.50	5.97	11	15x48	43.50	5.44	10	22x36	40.00	5.56	9	30x42	49.50	10.32	6
10x18	31.00	.97	40	12x56	52.50	5.97	11	15x50	43.50	5.44	10	22x38	40.00	5.56	9	30x44	49.50	12.38	5
10x19	31.00	1.02	38	12x58	52.50	6.57	10					22x40	43.50	6.80	8	30x46	49.50	12.38	5
10x20	31.00	1.08	36	12x60	52.00	6.57	10	16x16	31.00	1.39	28	22x42	43.50	6.80	8	30x48	49.50	12.38	5
10x22	31.00	1.18	33					16x18	31.00	1.55	25	22x44	43.50	7.77	7	30x50	49.50	12.38	5
10x24	31.00	1.30	30	13x15	31.00	1.05	37	16x20	33.00	1.80	23	22x46	43.50	7.77	7	30x52	52.50	13.13	5
10x26	33.00	1.48	28	13x16	31.00	1.11	35	16x22	33.00	2.07	20	22x48	43.50	7.77	7	30x54	52.50	16.41	4
10x28	33.00	1.59	26	13x18	31.00	1.25	31	16x24	33.00	2.18	19	22x50	49.50	8.84	7				
10x30	33.00	1.72	24	13x20	31.00	1.39	28	16x26	37.00	2.73	17	22x52	49.50	10.32	6	32x32	43.50	7.77	7
10x32	37.00	2.01	23	13x22	33.00	1.65	25	16x28	37.00	2.90	16					32x34	43.50	7.77	7
10x34	37.00	2.20	21	13x24	33.00	1.80	23	16x30	37.00	3.09	15	24x24	37.00	3.86	12	32x36	43.50	9.07	6
10x36	37.00	2.31	20	13x26	33.00	1.97	21	16x32	37.00	3.31	14	24x26	37.00	3.86	12	32x38	49.50	10.32	6
10x38	37.00	2.43	19	13x28	37.00	2.31	20	16x34	37.00	3.56	13	24x28	38.00	4.32	11	32x40	49.50	10.32	6
10x40	37.00	2.57	18	13x30	37.00	2.58	18	16x36	38.00	3.65	13	24x30	38.00	4.75	10	32x42	49.50	12.38	5
10x42	38.00	2.80	17	13x32	37.00	2.73	17	16x38	38.00	3.97	12	24x32	40.00	5.54	9	32x44	49.50	12.38	5
10x44	38.00	2.97	16	13x34	37.00	2.90	16	16x40	40.00	4.55	11	24x34	40.00	5.54	9	32x46	49.50	12.38	5
10x46	40.00	3.13	16	13x36	37.00	3.09	15	16x42	40.00	4.55	11	24x36	40.00	6.25	8	32x48	49.50	12.38	5
10x48	40.00	3.34	15	13x38	38.00	3.17	15	16x44	40.00	5.00	10	24x38	43.50	6.80	8	32x50	52.50	13.13	5
10x50	40.00	3.57	14	13x40	38.00	3.40	14	16x46	43.50	5.44	10	24x40	43.50	6.80	8	32x52	52.50	16.41	4
				13x42	40.00	3.85	13	16x48	43.50	6.05	9	24x42	43.50	7.77	7				
11x12	30.00	.68	55	13x44	40.00	3.85	13	16x50	43.50	6.05	9	24x44	43.50	7.77	7	34x34	43.50	9.07	6
11x14	31.00	.83	47	13x46	40.00	4.18	12	16x52	43.50	6.05	9	24x46	43.50	7.77	7	34x36	49.50	10.32	6
11x15	31.00	.89	44	13x48	43.50	4.54	12					24x48	49.50	10.32	6	34x38	49.50	10.32	6
11x16	31.00	.95	41	13x50	43.50	4.95	11	18x18	33.00	1.88	22	24x50	49.50	10.32	6	34x40	49.50	12.38	5
11x18	31.00	1.08	36					18x20	33.00	2.07	20	24x52	49.50	10.32	6	34x42	49.50	12.38	5
11x19	31.00	1.14	34	14x14	31.00	1.05	37	18x22	37.00	2.58	18	24x54	52.50	10.94	6	34x44	49.50	12.38	5
11x20	31.00	1.18	33	14x16	31.00	1.22	32	18x24	37.00	2.73	17	24x56	52.50	13.13	5	34x46	49.50	12.38	5
11x22	31.00	1.30	30	14x18	31.00	1.34	29	18x26	37.00	3.09	15	24x58	52.50	13.13	5	34x48	52.50	16.41	4
11x24	33.00	1.53	27	14x20	31.00	1.50	26	18x28	37.00	3.31	14	24x60	52.50	13.13	5	34x50	52.50	16.41	4
11x26	33.00	1.65	25	14x22	33.00	1.80	23	18x30	37.00	3.56	13								
11x28	33.00	1.80	23	14x24	33.00	1.97	21	18x32	37.00	3.56	13	26x26	38.00	4.32	11	36x36	49.50	10.32	6
11x30	37.00	2.10	22	14x26	33.00	2.07	20	18x34	38.00	3.97	12	26x28	40.00	5.00	10	36x38	49.50	12.38	5
11x32	37.00	2.31	20	14x28	37.00	2.58	18	18x36	38.00	4.32	11	26x30	40.00	5.56	9	36x40	49.50	12.38	5
11x34	37.00	2.44	19	14x30	37.00	2.73	17	18x38	40.00	4.55	11	26x32	40.00	5.56	9	36x42	49.50	12.38	5
11x36	37.00	2.58	18	14x32	37.00	2.89	16	18x40	40.00	5.00	10	26x34	43.50	6.80	8	36x44	49.50	12.38	5
11x38	37.00	2.73	17	14x34	37.00	3.09	15	18x42	40.00	5.00	10	26x36	43.50	6.80	8	36x46	52.50	16.41	4
11x40	38.00	2.97	16	14x36	37.00	3.31	14	18x44	43.50	6.05	9	26x38	43.50	7.77	7	36x48	52.50	16.41	4
11x42	38.00	2.97	16	14x38	38.00	3.40	14	18x46	43.50	6.05	9	26x40	43.50	7.77	7	.....	.....	.....	...
11x44	40.00	3.34	15	14x40	38.00	3.65	13	18x48	43.50	6.80	8	26x42	43.50	7.77	7	.....	.....	.....	...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DOUBLE STRENGTH "A" AMERICAN WINDOW GLASS

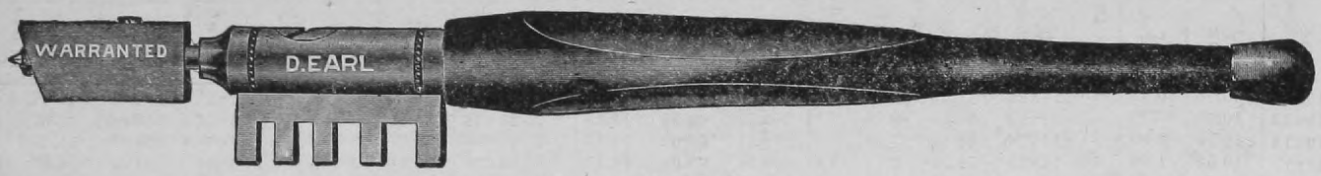
Manufactured by American Window Glass Co.—Official List, March 1st, 1913

Size Inches	Per Box	Per Light	Lts. in Box
10x12	$40.50	$0.85	60
10x13	40.50	.93	55
10x14	40.50	1.00	51
10x15	40.50	1.06	48
10x16	44.50	1.24	45
10x18	44.50	1.40	40
10x19	44.50	1.47	38
10x20	44.50	1.55	36
10x22	44.50	1.69	33
10x24	44.50	1.86	30
10x26	48.50	2.17	28
10x28	48.50	2.34	26
10x30	48.50	2.53	24
10x32	54.50	2.97	23
10x34	54.50	3.25	21
10x36	54.50	3.41	20
10x38	54.50	3.59	19
10x40	54.50	3.79	18
11x12	40.50	.93	55
11x14	44.50	1.19	47
11x15	44.50	1.27	44
11x16	44.50	1.36	41
11x18	44.50	1.55	36
11x19	44.50	1.64	34
11x20	44.50	1.69	33
11x22	44.50	1.86	30
11x24	48.50	2.25	27
11x26	48.50	2.43	25
11x28	48.50	2.64	23
11x30	54.50	3.10	22
11x32	54.50	3.41	20
11x34	54.50	3.59	19
11x36	54.50	3.79	18
11x38	54.50	4.01	17
11x40	56.00	4.38	16
12x12	40.50	1.02	50
12x13	44.50	1.21	46
12x14	44.50	1.30	43
12x15	44.50	1.40	40
12x16	44.50	1.47	38
12x18	44.50	1.69	33
12x19	44.50	1.74	32
12x20	44.50	1.86	30
12x22	44.50	2.07	27
12x24	48.50	2.43	25
12x26	48.50	2.64	23
12x28	48.50	2.89	21
12x30	54.50	3.41	20
12x32	54.50	3.59	19
12x34	54.50	3.79	18
12x36	54.50	4.01	17
12x38	54.50	4.26	16
12x40	56.00	4.67	15
13x15	44.50	1.51	37
13x16	44.50	1.59	35
13x18	44.50	1.80	31
13x20	44.50	1.99	28
13x22	48.50	2.43	25
13x24	48.50	2.64	23
13x26	48.50	2.89	21
13x28	54.50	3.41	20
13x30	54.50	3.79	18
13x32	54.50	4.01	17
13x34	54.50	4.26	16
13x36	54.50	4.55	15
13x38	56.00	4.67	15
13x40	56.00	5.00	14
13x42	57.00	5.49	13
14x14	44.50	1.51	37
14x16	44.50	1.74	32
14x18	44.50	1.92	29
14x20	44.50	2.14	26
14x22	$48.50	$2.64	23
14x24	48.50	2.89	21
14x26	48.50	3.04	20
14x28	54.50	3.79	18
14x30	54.50	4.01	17
14x32	54.50	4.26	16
14x34	54.50	4.55	15
14x36	54.50	4.87	14
14x38	56.00	5.00	14
14x40	56.00	5.39	13
14x42	57.00	5.94	12
15x15	44.50	1.74	32
15x16	44.50	1.86	30
15x18	44.50	2.07	27
15x20	48.50	2.53	24
15x22	48.50	2.76	22
15x24	48.50	3.04	20
15x26	54.50	3.79	18
15x28	54.50	4.01	17
15x30	54.50	4.26	16
15x32	54.50	4.55	15
15x34	54.50	4.87	14
15x36	56.00	5.39	13
15x38	56.00	5.39	13
15x40	57.00	5.94	12
15x42	57.00	6.48	11
15x44	57.00	6.48	11
16x16	44.50	1.99	28
16x18	44.50	2.23	25
16x20	48.50	2.64	23
16x22	48.50	3.04	20
16x24	48.50	3.20	19
16x26	54.50	4.01	17
16x28	54.50	4.26	16
16x30	54.50	4.55	15
16x32	54.50	4.87	14
16x34	54.50	5.25	13
16x36	56.00	5.39	13
16x38	56.00	5.84	12
16x40	57.00	6.48	11
16x42	57.00	6.48	11
16x44	57.00	7.13	10
18x18	48.50	2.76	22
18x20	48.50	3.04	20
18x22	54.50	3.79	18
18x24	54.50	4.01	17
18x26	54.50	4.55	15
18x28	54.50	4.87	14
18x30	54.50	5.25	13
18x32	54.50	5.25	13
18x34	56.00	5.84	12
18x36	56.00	6.37	11
18x38	57.00	6.48	11
18x40	57.00	7.13	10
18x42	57.00	7.13	10
18x44	61.00	8.48	9
18x46	61.00	8.48	9
20x20	54.50	3.79	18
20x22	54.50	4.26	16
20x24	54.50	4.55	15
20x26	54.50	4.87	14
20x28	54.50	5.25	13
20x30	54.50	5.68	12
20x32	56.00	6.37	11
20x34	56.00	6.37	11
20x36	57.00	7.13	10
20x38	57.00	7.92	9
20x40	57.00	7.92	9
20x42	61.00	8.48	9
20x44	61.00	9.54	8
20x46	61.00	9.54	8
20x48	61.00	9.54	8
20x50	$61.00	$10.90	7
20x52	66.50	11.89	7
20x54	68.00	12.15	7
20x56	68.00	14.17	6
20x58	68.00	14.17	6
20x60	68.00	14.17	6
22x22	54.50	4.55	15
22x24	54.50	4.87	14
22x26	54.50	5.25	13
22x28	54.50	5.68	12
22x30	56.00	6.37	11
22x32	56.00	7.00	10
22x34	57.00	7.13	10
22x36	57.00	7.92	9
22x38	57.00	7.92	9
22x40	61.00	9.54	8
22x42	61.00	9.54	8
22x44	61.00	10.90	7
22x46	61.00	10.90	7
22x48	61.00	10.90	7
22x50	66.50	11.88	7
22x52	66.50	13.86	6
22x54	68.00	14.17	6
22x56	68.00	14.17	6
22x58	68.00	14.17	6
22x60	68.00	17.00	5
24x24	54.50	5.68	12
24x26	54.50	5.68	12
24x28	56.00	6.37	11
24x30	56.00	7.00	10
24x32	57.00	7.92	9
24x34	57.00	7.92	9
24x36	57.00	8.91	8
24x38	61.00	9.54	8
24x40	61.00	9.54	8
24x42	61.00	10.90	7
24x44	61.00	10.90	7
24x46	61.00	10.90	7
24x48	66.50	13.86	6
24x50	66.50	13.86	6
24x52	66.50	13.86	6
24x54	68.00	14.17	6
24x56	68.00	17.00	5
24x58	68.00	17.00	5
24x60	68.00	17.00	5
26x26	56.00	6.37	11
26x28	57.00	7.13	10
26x30	57.00	7.92	9
26x32	57.00	7.92	9
26x34	61.00	9.54	8
26x36	61.00	9.54	8
26x38	61.00	10.90	7
26x40	61.00	10.90	7
26x42	61.00	10.90	7
26x44	61.00	12.71	6
26x46	66.50	13.86	6
26x48	66.50	13.86	6
26x50	66.50	13.86	6
26x52	66.50	16.63	5
26x54	68.00	17.00	5
26x56	68.00	17.00	5
26x58	68.00	17.00	5
26x60	72.00	18.00	5
28x28	57.00	7.92	9
28x30	57.00	7.92	9
28x32	61.00	9.54	8
28x34	61.00	9.54	8
28x36	61.00	10.90	7
28x38	61.00	10.90	7
28x40	61.00	10.90	7
28x42	61.00	10.90	7
28x44	66.50	13.86	6
28x46	$66.50	$13.86	6
28x48	66.50	16.63	5
28x50	66.50	16.63	5
28x52	66.50	16.63	5
28x54	68.00	17.00	5
28x56	68.00	17.00	5
28x58	72.00	22.50	4
28x60	72.00	22.50	4
30x30	61.00	9.54	8
30x32	61.00	9.54	8
30x34	61.00	10.90	7
30x36	61.00	10.90	7
30x38	61.00	12.71	6
30x40	61.00	12.71	6
30x42	66.50	13.86	6
30x44	66.50	16.63	5
30x46	66.50	16.63	5
30x48	66.50	16.63	5
30x50	66.50	16.63	5
30x52	68.00	17.00	5
30x54	68.00	21.25	4
30x56	72.00	22.50	4
30x58	72.00	22 50	4
30x60	72.00	22.50	4
30x62	73.00	22.82	4
30x64	73.00	22.82	4
30x66	85.00	26.57	4
30x68	85.00	26.57	4
30x70	85.00	35.42	3
32x32	61.00	10.90	7
32x34	61.00	10.90	7
32x36	61.00	12.71	6
32x38	66.50	13 85	6
32x40	66.50	13.86	6
32x42	66.50	16.63	5
32x44	66.50	16.63	5
32x46	66.50	16.63	5
32x48	66.50	16.63	5
32x50	68.00	17.00	5
32x52	68.00	21.25	4
32x54	72.00	22.50	4
32x56	72.00	22.50	4
32x58	72.00	22.50	4
32x60	73.00	22.82	4
32x62	73.00	22.82	4
32x64	85.00	26.57	4
32x66	85.00	35.42	3
32x68	85.00	35.42	3
32x70	178.50	37.19	6
32x72	178.50	37.19	6
32x74	200.00	41.67	6
32x76	200.00	41.67	6
34x34	61.00	12.71	6
34x36	66.50	13.86	6
34x38	66.50	13.86	6
34x40	66.50	16.63	5
34x42	66.50	16.63	5
34x44	66.50	16.63	5
34x46	66.50	16.63	5
34x48	68.00	21.25	4
34x50	68.00	21.25	4
34x52	72.00	22.50	4
34x54	72.00	22.50	4
34x56	72.00	22.50	4
34x58	73.00	22.82	4
34x60	73.00	22.82	4
34x62	85.00	35.42	3
34x64	85.00	35.42	3
34x66	85.00	35.42	3
34x68	178.50	37.19	6
34x70	178.50	37.19	6
34x72	200.00	41.67	6
34x74	$200.00	$41.67	6
34x76	200.00	41.67	6
34x78	221.00	55.25	5
34x80	221.00	55.25	5
36x36	66.50	13.86	6
36x38	66.50	16.63	5
36x40	66.50	16.63	5
36x42	66.50	16.63	5
36x44	66.50	16.63	5
36x46	68.00	21.25	4
36x48	68.00	21.25	4
36x50	72.00	22.50	4
36x52	72.00	22.50	4
36x54	72.00	22 50	4
36x56	73.00	22.82	4
36x58	73.00	30.42	3
36x60	85.00	35.42	3
36x62	85.00	35.42	3
36x64	85.00	35.42	3
36x66	178.50	37.19	6
36x68	178.50	37.19	6
36x70	200.00	41.67	6
36x72	200.00	41.67	6
36x74	200.00	50.00	5
36x76	221.00	55.25	5
36x78	221.00	55.25	5
36x80	258.50	64.63	5
38x38	66.50	16.63	5
38x40	66.50	16.63	5
38x42	66.50	16.63	5
38x44	68 00	21.25	4
38x46	68.00	21.25	4
38x48	72.00	22.50	4
38x50	72.00	22.50	4
38x52	72.00	22.50	4
38x54	73.00	22.82	4
38x56	73.00	30.42	3
38x58	85.00	35.42	3
38x60	85.00	35.42	3
38x62	85.00	35.42	3
38x64	178.50	37.19	6
38x66	178.50	37.19	6
38x68	200.00	41.67	6
38x70	200.00	50.00	5
38x72	200.00	50.00	5
38x74	221.00	55.25	5
38x76	221.00	55.25	5
38x78	258.50	64.63	5
38x80	258.50	64.63	5
40x40	66.50	16.63	5
40x42	68.00	21.25	4
40x44	68.00	21.25	4
40x46	72.00	22.50	4
40x48	72.00	22.50	4
40x50	72.00	22.50	4
40x52	73.00	22.82	4
40x54	73.00	30.42	3
40x56	85.00	35.42	3
40x58	85.00	35.42	3
40x60	85.00	35.42	3
40x62	178.50	37.19	6
40x64	173.50	37.19	6
40x66	200.00	50.00	5
40x68	200.00	50.00	5
40x70	200.00	50.00	5
40x72	221.00	55.25	5
40x74	221.00	55.25	5
40x76	258.50	64.63	5
40x78	258.50	64.63	5
40x80	258.50	64.63	5
40x82	285.50	89.22	4
40x84	285.50	89.22	4

Additional Sizes							
Lights	Inches	12x44	18x52	42x52	44x44	44x46	44x48
	Per Box	$57.00	61.00	80.30	79.20	79.20	80.30
	Per Light	14-5.09	8-9.54	3-33.47	4-24.75	3-24.75	3-33.47

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

GLAZIERS' DIAMONDS

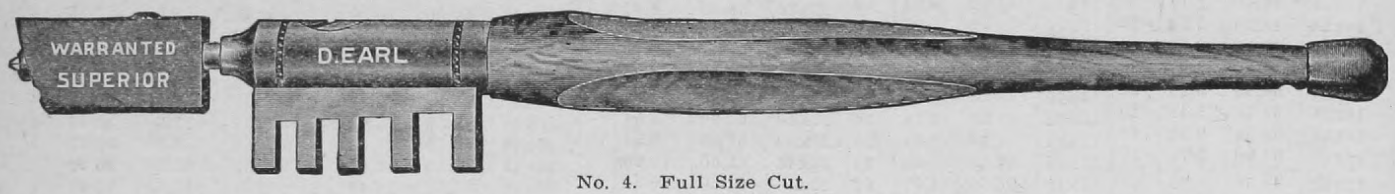


No. 3. Full Size Cut.

Earl Diamonds are strictly high grade. Each point is tested before being sent out and warranted perfect.

No. 3—Ebony Handle, Nickel Plated, for ordinary glass.....Each, $.....

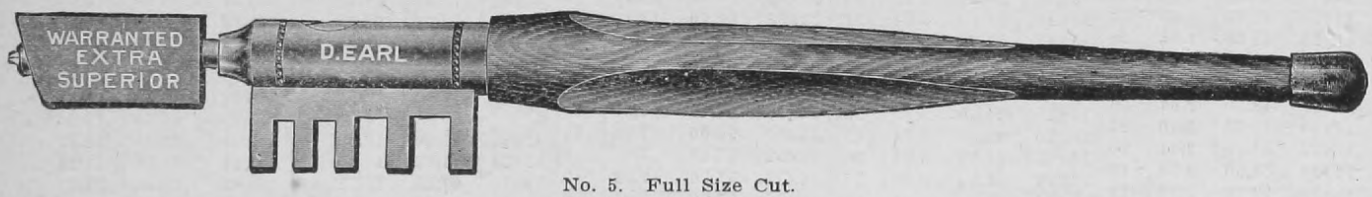
Packed—Six in a Box.



No. 4. Full Size Cut.

No. 4—Extra, Rosewood Handle, Nickel Plated, for single and double strength glass, well suited for heavy work.....Each, $.....

Packed—Six in a Box.

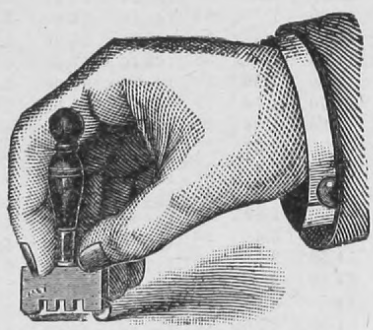


No. 5. Full Size Cut.

No. 5—Extra, Superior Coco Handle, Nickel Plated, adapted to single, double and triple strength glass, for general use by dealers in glass and for heavy work.....Each, $.....

Packed—Six in a Box.

Nos. 11 and 12. Full Size Cut.



Cut shows how Nos. 11 and 12 should be held.

Anybody can cut with this Diamond perfectly, however inexperienced in glass cutting. Has a Diamond on one end and a steel guide on the other. Merely requires to be set on the glass and drawn over it to make a perfect cut.

No. 11—Universal, Ebony Handle, Nickel Plated, for general use.....Each, $.....
No. 12—Sure Cut, Extra Rosewood Handle, Nickel Plated, for double strength glass.....Each, ...

Packed—Six in a Box.

GLASS CUTTERS

No. 300.

No. 300—Enameled Wood Handle, Nickel Plated, Six Perfect Cutting Steel Wheels set in a revolving turret, clamped in place by set screw.....Per Dozen, $3.60

Packed—Each in a Separate Carton. One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GLASS CUTTERS

No. 024.

No. 024—Practical Glaziers' Tool, each one tested, will give good satisfaction.....Per Dozen, $.....

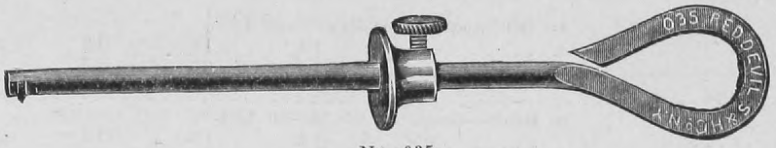
Packed—One Dozen in a Box.

No. 293.

No. 293—Glass Cutters, with Knob, Enameled Body, Polished Head.....Per Dozen, $.....

Packed—One Dozen in a Box.

GAUGE GLASS CUTTERS



No. 035.

No. 035—Gauge Glass or Tube Cutter for Engineers and Steam Fitters.....Per Dozen, $.....

Packed—Each in a separate Carton; One Dozen in a Box.

Nos. 9 and 14.

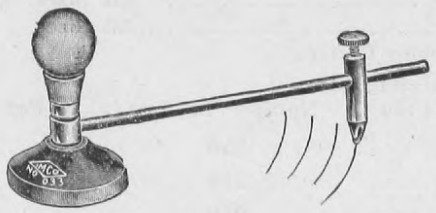
Directions for Using.—Take the tool in the right hand, place the Gauge Glass on a smooth straight-edge board, insert the rod, wheel down, inside the Glass, bear down lightly on the handle and then roll the Glass quickly toward you, turning it not over ¾ round, so as to avoid cutting twice in the same place, as by so doing it spoils the wheel. Extra Cutters come inside each handle, no extra charge.

No. 9—Morrill's Gauge Glass Cutters, 9 inches long, ¼ inch Diameter, Hardwood Handle.....
.....Per Dozen, $.....

No. 14—Morrill's Gauge Glass Cutters, 14 inches long, ¼ inch Diameter, Hardwood Handle.....
.....Per Dozen, ...

Packed—Half Dozen in a Box.

CIRCULAR GLASS CUTTERS

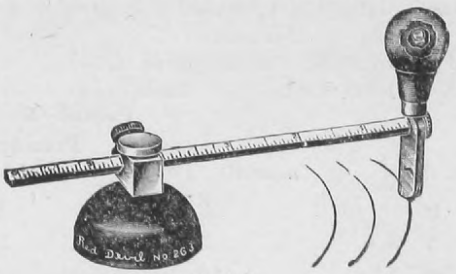


No. 033.

Adjustable Steel Head and Rod. Enameled Wood Base and Handle. Base has rubber cloth mat to prevent slipping.

No. 033—Circular Glass Cutters, cuts 2 to 20 inch circles .....Per Dozen, $5.00

Packed—Half Dozen in a Box.



No. 263.

Metal Base, non-slipping rubber cloth mat, Steel Rod graduated in inches by 16ths, renewable handhoned wheel. Handle at end of arm is hollow and contains two additional wheels.

No. 263—Garage Favorite, cuts 2 to 22 inch circles .....Per Dozen, $16.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WRAPPING PAPERS

Buhl Kraft—In Rolls.

Buhl Kraft Wrapping Paper

Light in weight and extra strong in texture. Very efficient and economical as compared to ordinary wrapping papers much heavier in weight.

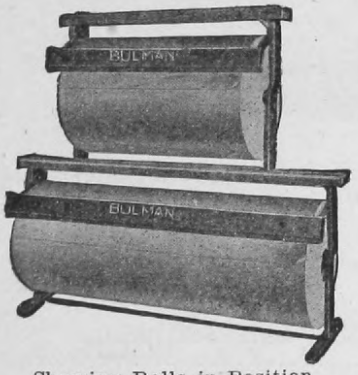
In Rolls—Basis of 24x36—30 Lbs.

Inches	12	15	18	20	24	30
Weight, per Roll, pounds	18	23	27	30	36	45
All Sizes				Per Pound, $		

In Rolls—Basis of 24x36—50 Lbs.

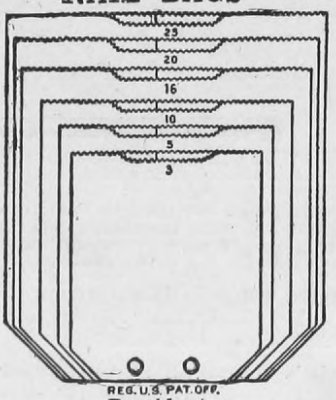
Inches	12	15	18	20	24	30
Weight, per Roll, pounds	18	23	27	30	36	45
All Sizes				Per Pound, $		

ROLL PAPER CUTTERS



Showing Rolls in Position.

NAIL BAGS



President.

"Bulman" Gravity Roll Paper Cutters

Reinforced Steel Construction with a Knife so designed and constructed that the thinnest or heaviest paper will roll under it freely and give a good clean cut the whole length of the roll. Top—Hardwood, beveled both ends and sides. Handsome Mahogany Four Coat Finish. Metal Parts—Heavy Steel Reinforced Black Enamel or Nickel Finish. Roller—Hardwood. When the Knife is raised it automatically locks itself so you can place roll from front or back. To release Knife pull forward. Note the **base strip** that prevents standards from spreading and breaking or dropping roll if bolts at top work loose. Cutters may be used separately or arranged in pyramids, any combination of sizes desired.

Width—Inches	9	12	15	18	20	24	30
No. A1J—Japanned Finish—Each					All Sizes, $		
No. A1N—Nickel Finish —Each					All Sizes,		

Packed—Each in an Individual Shipping Carton.

President—Brown Paper Nail Bags

Size, Nos.	Capacity, Pounds	Number in a Bale	Per 1000	Number in Pkg.	Per 1000
3	3	2000	$	250	$
5	5	2000		250	
10	10	1000		250	
16	16	1000		250	
20	20	1000		250	
25	25	1000		250	

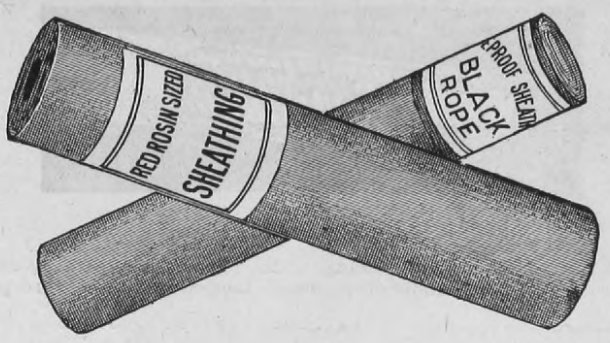
Note.—Original Bales contain 2,000 or 1,000 as listed above.

Golden Rod Grocer's Bags

No. ¼—Capacity, ¼ lb. In Bales of 12M....Per 1000 $..... In Pkgs. of 250, Per 1000, $.....

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BUILDING PAPERS AND FELTS



Buhl Extra Insulating and Sheathing Paper

This is our best paper, made for use where the highest grade is wanted. It is a Black, Odorless, Vermin, Moisture and Frost Proof Paper, heavier and stronger than ordinary grades, saturated and coated with Asphalt on both sides. It is free from Tar; is air, acid, alkali, dust and permanently waterproof; and will not deteriorate with age. Used for insulating, sheathing and lining walls, floors, packing cases, refrigerators and ice houses; also under all kinds of roofing.

Put up in rolls 36 inches wide, containing about 500 square feet, weight about 45 pounds.

Buhl Extra Insulating and Sheathing Paper.....Per Roll, $.....

Glacier Insulating and Sheathing Paper

Next to our Buhl Extra Paper this Glacier Insulating and Sheathing Paper ranks above all ordinary grades. It is coated with asphalt on both sides but is not saturated. It is free from Tar; is air, acid, alkali, dust and waterproof and will not deteriorate with age. It is used for the same purposes as Buhl Extra where a lower price is necessary.

Put up in rolls 36 inches wide, containing about 500 square feet Weight about 25 pounds.

Glacier Insulating and Sheathing Paper.....Per Roll, $.....

Merrimac Sheathing Paper

A Strong Black Paper, used for sheathing and lining walls, floors and insulating; also for case lining. It is high grade, very pliable and durable, odorless; air, dust and practically waterproof.

Put up in rolls 30 inches wide, containing about 500 square feet, weight about 15 pounds.

Merrimac Sheathing Paper.....Per Roll, $.....

Black Rope Sheathing Paper—Absolutely Waterproof

An extra strong, durable Paper of special quality, perfectly clean and odorless; does not crack or become stiff or brittle with age or cold; will withstand temporary weather exposure. Used for waterproof sheathing, lining, packing, and wrapping. Extensively used by automobile and machinery manufacturers for covering machines in transit on open cars.

Put up in rolls 36 inches wide, containing about 500 square feet, weight about 40 pounds per roll.

Black Rope Waterproof Sheathing Paper.....Per Roll, $.....

Red Rosin Sheathing Paper

A cheap grade of odorless Red Rosin Paper, used for Sheathing and Lining walls for use where low price is necessary.

Put up in rolls, 36 inches wide.

Red Rosin Sheathing	Square Feet in a Roll	Pounds Per Roll	Per Roll
No. 16	400	16	$.....
No. 20	500	20	.....
No. 30	500	30	.....
No. 40	500	40	.....

Nos. 16 and 20 are alike in thickness, differing only in size of rolls, and are used when a low price is necessary. Nos. 30 and 40 are of greater thickness and are used where better value is wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUILDING PAPERS AND FELTS

Fiberetto Sheathing Paper

Made entirely of Sulphite Stock. A strong, high grade white paper for sheathing and lining walls.
Put up in rolls 36 inches wide, containing about 400 square feet, weight about 16 pounds.

Fiberetto Sheathing Paper.....Per Roll, $.....

Buhl All Sulphite Sheathing Paper

A white paper of special strength and quality, for sheathing and lining.
Put up in rolls 36 inches wide, containing about 400 square feet, weight 14 to 16 pounds.

Buhl All Sulphite Sheating Paper.....Per Roll, $.....

White-Cap Sheathing Paper

The cheapest white paper of satisfactory quality, for sheathing and lining.
Put up in rolls 36 inches wide, containing about 400 square feet, weight 14 to 16 pounds.

White Cap Sheathing Paper.....Per Roll, $.....

Noxall Fibre Sheathing Paper

A grey, medium priced, 65% pure sulphite paper, for sheathing and lining walls.
Put up in rolls 36 inches wide, containing about 400 square feet, weight about 16 pounds.

Noxall Fibre Sheathing Paper.....Per Roll, $.....

Buhl Special Sheathing Paper

A popular priced grey fiber paper for sheathing and lining walls. It is dust-proof and odorless.
Put up in rolls 36 inches wide, containing about 400 square feet, weight about 16 pounds.

Buhl Special Sheathing Paper.....Per Roll, $.....

Wool Deadening Felt

Manufactured from selected wool stock. It is durable and one of the best and cheapest non-conductors for protection against frost, and deadening of sound between floors of buildings, dwellings, school houses, for refrigerators and in combination with our Asbestos Felting for covering steam and hot air surfaces.
Put up in rolls 36 inches wide, containing 50 square yards.

Economy—1 lb. per square yard, 50 lbs. in a roll. F. O. B. Detroit.....Per Roll, $.....

Buhl
- 1 lb. per square yard, 50 lbs. in a roll. F. O. B. Detroit.....Per Roll, ...
- 1½ lbs. per square yard, 75 lbs. in a roll. F. O. B. Detroit.....Per Roll, ...
- 2 lbs. per square yard, 100 lbs. in a roll. F. O. B. Detroit.....Per Roll, ...

Corrugated Carpet Lining

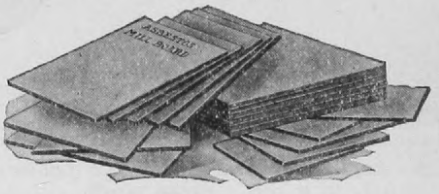
A high grade, dust-proof lining, made of good felt stock, sells better and lasts longer than the cheaper grades. The corrugations give it the effectiveness of a quilted lining.

Blue Corrugated—36 inches wide, 25 square yards in a roll, weight per roll 20 lbs.....Per Roll, $.....

Cedar Corrugated—36 inches wide, 50 square yards in a roll, weight per roll 30 to 35 lbs.....Per roll, ...

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BUILDING PAPERS AND FELTS



Blue Plaster Board

A special paper for use where extra thick heavy grade is wanted for sheathing and lining. Adapted for use in all kinds of buildings, and for lining cars subjected to extreme cold, also for attics and summer cottages where a heavy paper can take the place of wall board or plaster.

Put up in rolls 36 inches wide, containing 250 square feet. Weight about 20 pounds.

Blue Plaster Board.....Per Roll, $.....

Asbestos Felt or Paper

A white fireproof felt for sheathing and lining wherever an absolutely fireproof material is needed, such as covering hot air pipes and flues and fireproof partitions. Air, dust and damp-proof. Used also for lining walls of refrigerators and ice chests.

Nos. A10 to A16—Put up in rolls 36 inches wide, approximately 50 pounds in a roll. No. A33 in rolls 36 inches wide, approximately 100 pounds in a roll.

	Less than 1000 lbs., Per 100 lbs.	1000 lbs. or more, Per 100 lbs.
No. A10— 9/10 lb. per square yard; 10 lbs. per 100 square feet.....	$.....	.....
No. A12— 1 1/10 lbs. per square yard; 12 lbs. per 100 square feet.....	.....	.....
No. A14— 1 1/4 lbs. per square yard; 14 lbs. per 100 square feet.....	.....	.....
No. A16— 1 1/2 lbs. per square yard; 16 lbs. per 100 square feet..... 1/32 inch thick.	.....	.....
No. A33— 3 lbs. per square yard; 33 lbs. per 100 square feet..... 1/16 inch thick.	.....	.....

Asbestos Roll Board

Asbestos Roll Board is heavier than the Asbestos Felt and the same weight as the corresponding thickness of Asbestos Mill Board in Sheets. It is used for the same purpose as the Felt where a heavier and better protection is desired.

Put up in rolls 36 inches wide, weight about 100 pounds.

No. A55—5 lbs. per square yard; 55 lbs. per 100 square feet .....Per 100 lbs., $.....
3/32 inch thick, 60 lineal feet in a roll.

No. A75—6 3/4 lbs. per square yard; 75 lbs. per 100 square feet.....Per 100 lbs., ...
1/8 inch thick, about 44 lineal feet in a roll.

Asbestos Mill Board

Used for stove and oven linings, and other purposes where stiff, heavy, thick, fire-proof sheets are required. Unequalled for fire-proofing walls and rooms.

Made in sheets 42x48 inches, containing 14 square feet each and carried in stock in the following sizes.

	1/16	1/8	3/16	1/4
Approximate Thickness, inches.....				
Approximate Weight per sheet, pounds.....	4 1/2	8 1/2	13	17
Approximate Weight per Sq. Yd., pounds.....	3	6	9	12

Re-Crated for Country Shipments.....Per 100 Pounds, $.....

Not Crated, for Detroit Orders.....Per 100 Pounds, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUILDING PAPERS

Asphalt Saturated Felt

Used for sheathing, lining, packing, built-up roofing, and under slate and tile roofing. Also used for covering automobiles and machinery in transit. The 50-pound is also used in strips 6 and 7 inches wide for expansion joints in brick and concrete roads. This Felt being saturated with asphalt lasts much longer than Tarred Felt, as it does not dry out and become brittle or tear easily. The use of this material avoids the disagreeable odor of Tarred Felt.

No. 2—Asphalt Saturated Felt, 32 inches wide, weighing about 14 to 15 lbs. per 100 sq. ft., about 324 sq. ft. in a roll. **From stock**.....Per 100 lbs., $.....

Heavier weights shipped direct from factory only, as follows:
No. 1 about 22 to 23 pounds per 100 sq. ft., put up 250 sq. ft. in a roll.
Extra Heavy—Weighing 30 or 40 pounds per 100 sq. ft., put up 100 sq. ft. in a roll.
Extra Heavy—Weighing 50 pounds per 108 sq. ft., put up 108 sq. ft. in a roll.

Slaters' Felt

This is an Air and Water-proof Paper for use especially under slate and tile roofs. It is sometimes used for sheathing buildings, but it is not odorless. It will not swell or shrink from dampness, nor stick in the roll. Put up in rolls 36 inches wide, containing about 500 square feet, weight about 35 pounds.

Slaters' Felt ..... { F. O. B. Detroit.....Per Roll, $..... / From Mill .....Per Roll, ...

Tarred Felt

Unexcelled by any other brand for use in tar and gravelled roofing, and any other purposes for which it is intended. Used extensively for lining stables, poultry houses and other buildings and sheds, also for outside covering of camp and temporary buildings, as a protection against wind, weather and cold, where the smell of coal tar is not objectionable. Air and Water-proof. No. 1 is the heaviest and most serviceable. Put up in Rolls 32 inches wide, weight 50 to 60 pounds.

Nos.	Weight per 100 square feet Pounds	Square Feet in a Roll	F. O. B. Detroit Per 100 Pounds.	From Mill Per 100 Pounds.
1	20 to 25	200 to 250	$.....	$.....
2	About 15	300 to 350	.....	.....
3	About 12	400 to 500	.....	.....

ALTO TAR ROOFING

Alto is a low-priced temporary covering, made of two layers of felt, saturated and cemented together with coal tar. To obtain the best results give it one or two coats of Buhl Beaver Coating or Buhl Black Asphalt Coating, as soon as laid, which makes a weather surface and keeps the wear from the felt. Often used for damp-proof course in walls.

Trimmings: Charged extra; shipped only when ordered. We recommend the use of about 2 gallons of coating per square according to conditions, which allows for spreading ¼ gallon in the joint, and the balance for coating; 1½ lb. 1 inch galvanized Sherman nails per square if laid over smooth sheeting, or 2 lbs. 1½ inch galvanized Sherman nails per square if laid over wood shingles.

Size of Roll: 32 inches wide by 40 feet 6 inches long, containing 108 square feet to cover 100 square feet, charged as one square.

Weight: Per square without trimmings, 2 Ply 40 lbs., 3 Ply 60 lbs.

Price Per Square, Without Trimmings.

Ply	From Stock F. O. B. Detroit	If Shipped Direct From Mill	If Shipped Direct Freight
Two	$.....	$.....	$.....
*Three	.....	.....	.....

* **Note.—Three** Ply Not Stock—Shipped Direct from Mill only.

TIN ROOFING CAPS

1¼ inches in Diameter—Use 1 to 1½ pounds per square for nailing felt roofing.

Tin Roofing Caps.....	In Barrels of 300 to 400 lbs.	In Kegs of 50 lbs.	In Cases of 100 lbs. 10 lbs. in a Carton	In Cartons of 10 lbs.
Per Pound	$.....	$.....	$.....	$.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SMOOTH AND ROCK SURFACE ROOFINGS

General Description

Our Smooth Surface Asphalt Rubber and Rock Surface Roofings are unexcelled. They are our own brands, made of the best materials and marketed by our regular selling force, without any advertising expense, insuring our trade the best value at the lowest price consistent with the quality furnished. None of these brands contain any form of coal tar or cheap substitutes for high grade felt, saturation or surfacing. Therefore our brands are a protection against inferior, unsatisfactory roofing, as well as against high priced advertised brands.

ASPHALT RUBBER ROOFINGS

BUHL TIGER RUBBER ROOFING

Buhl Tiger Rubber Roofing is the highest grade Rubber Roofing made. It is one of our oldest established brands. The coating contains especially high priced materials, giving it a higher cost and greater wearing value than any other grade of smooth finished roofing.

Trimmings:—Galvanized Broad Head Nails about 1 inch long and one pint of liquid joint cement per square packed inside of each roll.

Size of Roll:—36 inches wide by 36 feet long, containing 108 square feet, to cover 100 square feet, charged as one square.

Weight:—Per Square, including trimmings, 1 Ply, 35 lbs; 2 Ply, 45 lbs; 3 Ply, 55 lbs.

Price Per Square, including Trimmings

Ply	From Stock F. O. B. Detroit	If Shipped Direct	
		From Mill	Freight
		F. O. B.....	.....
One	$.....	.....	.....
Two	.....	.....	.....
Three	.....	.....	.....

BUHL DETROIT RUBBER ROOFING

Buhl Detroit Rubber Roofing is a high grade easy seller, and a brand on which our dealers have a large trade. The felt is saturated and coated under a formula which gives exceptionally good weather protection at a low price.

Trimmings:—Broad Head nails about one inch long and one pint of liquid joint cement per square packed inside of each roll.

Size of Roll:—36 inches wide by 36 feet long, containing 108 square feet, to cover 100 square feet, charged as one square.

Weight:—Per Square, including trimmings, 1 Ply, 35 lbs; 2 Ply, 45 lbs; 3 Ply, 55 lbs.

Price Per Square, including Trimmings

Ply	From Stock F. O. B. Detroit	If Shipped Direct	
		From Mill	Freight
		F. O. B.....	.....
One	$.....	.....	.....
Two	.....	.....	.....
Three	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ASPHALT RUBBER ROOFING

BUHL "SAND-TOP"

Buhl Sand-Top Rubber Roofing: One side of this Roofing has a smooth rubber finish and the other side is surfaced with very fine Sand (not gravel). It can be laid either side up. This is a special Roofing for use only where a cheaper grade than our Detroit Rubber Roofing is wanted.

Trimmings. Broad Head Nails about one inch long and one pint of Liquid Joint Cement per square, packed inside of each roll.

Size of Roll. 36 inches wide by 36 ft. long, containing 108 sq. ft. to cover 100 sq. ft., charged as one square.

Weight. Per square, including Trimmings, 1 ply, 35 lbs., 2 ply, 45 lbs., 3 ply, 55 lbs.

Price Per Square, including Trimmings

	From Stock	If Shipped Direct From Mill,	Freight
Ply	F. O. B. Detroit	F. O. B.....	.....
One	$.....	.....	.....
Two	.....	.....	.....
Three	.....	.....	.....

BUHL "DECK-TIGHT" ROOFING

Buhl Deck-Tight Roofing consists of a real Rubber Roofing, reinforced and strengthened with a strong heavy canvas or duck, cemented firmly to the upper side, therefore, its upper side is Duck and its lower side mica surfaced Rubber Roofing. It is a Roofing and Floor covering combined, made to be walked on and is extremely durable under foot and under chairs. It is used for covering Porches and Gallery Floors, house and boat decks. The color of the upper or Duck side is practically white, but any desired color can be obtained by painting.

Trimmings. Galvanized Nails and Liquid Joint Cement, packed inside of each roll.

Size of Rolls. 32 inches wide by 40 ft. 6 in. long, containing 108 sq. ft. to cover 100 sq. ft., charged as one square.

Weight. Per square, including trimmings, 45 pounds.

Price Per Square, including Trimmings

	From Stock	If Shipped Direct From Mill,	Freight
	F. O. B. Detroit	F. O. B.....	.....
Buhl "Deck-Tight" Roofing	$.....	.....	.....

ROOFING DUCK OR CANVAS

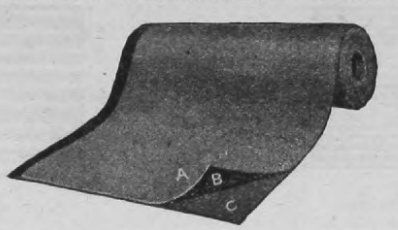
Plain Cotton Duck or Canvas, **not** waterproofed, saturated or coated, requires painting after being laid. For use on Porches, Decks, Roofs, etc.

Width—29 inches. Put up in Bolts containing about 50 lineal yards.

Single Filled	10 Oz.	12 Oz.	**Double** Filled	10 Oz.	12 Oz.
Per Lineal Yard.....	$.....	.....	Per Lineal Yard.....	$.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ASPHALT ROCK SURFACE ROLL ROOFING



Buhl Asphalt Rock Surface Roll Roofings. These Roofings give the longest service, most ornamental appearance and best fire resistance of all the medium priced roofings on the market. They also resist fumes and gases which injure other roofings. Their base (C) is the very best long-fibred asphalt saturated wool felt. Above this felt is spread a layer of natural mineral asphalt (B) thicker than the coating on so-called rubber roofings. Into this thick layer of asphalt is imbedded an ornamental weather and fire resisting rock surface (A).

	Rock Surfacing	Lap at Joint.	Approximate Weight per Square	Per Square with Trimmings
Gray Rock Roll Roofing.....	Crushed Feldspar	2 inches	75 to 80 lbs.	$.....
Green Rock Roll Roofing.....	Crushed Slate or Stone	2 inches	75 to 80 lbs.	.....
Red Rock Roll Roofing.....	Crushed Slate or Stone	2 inches	75 to 80 lbs.	.....
Superior Roll Roofing.....	Screened Gravel	3 inches	115 to 135 lbs.	.....

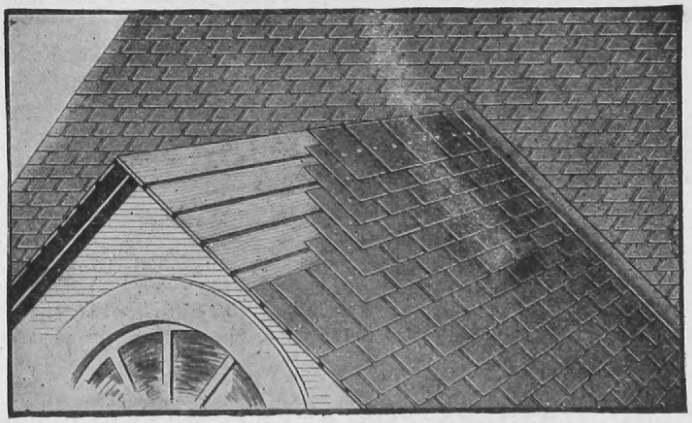
Trimmings. About one inch Galvanized Broad Head Nails and One Quart of liquid Asphalt Joint Cement per square packed inside of each roll. When used over wood shingles, 1¾ inch galvanized Broad Head Nails should be ordered extra.

Smooth Joint. The Invisible Lap is heavily coated with Asphalt at our factory which assists in cementing a smooth, tight joint. The Rock does not extend into the Joint.

Size of Roll—Gray Rock, 33 inches wide by 39 feet ½ inch long, containing about 108 square feet, to cover 100 square feet, charged as one square. **Green and Red** Rock are 32 inches wide by 40 feet 6 inches long, containing 108 square feet, to cover 100 square feet, charged as one square. **Superior,** 33 inches wide by 40 feet 4 inches long, containing 111 square feet, to cover 100 square feet, charged as one square.

Note.—Each of above roofings in use with laps properly made covers a width of exactly 30 inches, except Gray Rock covers 31 inches wide.

ASPHALT ROCK SURFACE SHINGLES



Asphalt Rock Surface Shingles. Our Asphalt Shingles are constructed of a thick asphalt-saturated wool felt base, with a deep layer of natural mineral asphalt above it, into which is imbedded a layer of crushed rock, making a durable fire-resisting roof of very attractive appearance.

Size and Quantity. Each Shingle is about 8x12¾ inches; 424 shingles are furnished as one square, to cover 100 square feet when laid one half inch apart, four inches to the weather.

Green—Asphalt Rock Surface Shingles.....Per Square (424 shingles), $.....

Red—Asphalt Rock Surface Shingles.....Per Square (424 shingles), ...

Color. Red or Green.

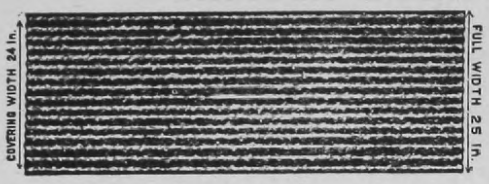
Packages. One fourth square in a package.

Weight. About 220 pounds to a square.

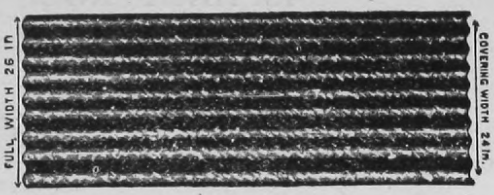
Trimmings. None are included in our price or shipments, unless specially ordered and charged extra. At request of several of our roofing customers we stock one inch, No. 10 Nails with 7/16 inch heads for laying asphalt shingles.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CORRUGATED STEEL ROOFING AND SIDING



Cut showing 1¼ inch Corrugations.



Cut showing 2½ inch Corrugations.

CORRUGATED STEEL ROOFING AND SIDING

Width of Corrugations, 1¼ and 2½ inches; **Covering** Width, 24 inches; **Full** Width, 1¼ inch 25 inches; 2½ inch 26 inches. Charged at full length and full width of sheet.

Number of Square Feet in a Sheet and Number of Sheets in One Square

Length of Sheet, Lineal Feet	6	7	8	9	10	11	12
Covering Size, 1¼ and 2½ in. Cor., Sq. Ft.	12	14	16	18	20	22	24
Full Size, 1¼ in. Cor., Sq. Ft. Size Charged	12.50	14.58	16.67	18.75	20.83	22.88	25.00
Sheets in One Square, 1¼ in. Cor. (No allowance for Laps)	8.00	6.86	6.00	5.33	4.80	4.37	4.00
Full Size, 2½ in. Cor. Sq. Ft. Size Charged	13.00	15.17	17.33	19.50	21.67	23.85	26.00
Sheets in One Square, 2½ in. Cor. (No allowance for Laps)	7.69	6.59	5.77	5.13	4.62	4.19	3.85

For tables showing full size and covering size of any number of corrugated sheets see pages 674 and 675.

Approximate Weight per Square in Pounds

Gauge No.	28	26	24	22	Gauge	29	28	26	24	22
1¼ inch Painted	71	85	113	141	**1¼ inch Galvanized**	81	88	102	130	158
2½ inch Painted	68	82	109	136	**2½ inch Galvanized**	77	84	98	125	151

"Painted" Per Square

Gauge No.	28	26	24	22
1¼ inch Cor.				
Less than 10 Sq., $				
10 Sqs. or more,				
2½ in. Cor.				
Less than 10 Sq.,				
10 Sqs. or more,				

"Galvanized" Per Square

Gauge No.	29	28	26	24	22
1¼ in. Cor.					
Less than 10 Sq., $					
10 Sqs. or more,					
2½ in. Cor.					
Less than 10 Sq.,					
10 Sqs. or more,					

Stock Sizes

Painted.—2½ inch Corrugations, No. 28 Gauge, 6, 7, 8, 9, 10 and 12 feet long.
Galvanized.—1¼ inch Corrugations, No. 29 "Standard Gauge" 8 feet long. 2½ inch Corrugations, No. 29 Gauge, 6, 7, 8, 10 and 12 feet long. 2½ inch Corrugations, Nos. 28, 26, 24 and 22 Gauges, 6, 8, 10 and 12 feet long.
Note.—We can ship other lengths and gauges from factory. Sheets 11 and 12 feet long take an **advance** of 10 cents per 100 lbs. over shorter lengths.

Estimate of Number of Square Feet Required to Cover 100 Sq. Ft. of Surface

With 2½ Inch Corrugated Material

End Lap, inches	1	2	3	4	5	6
Side Lap of One Corrugation	110	111	112	113	114	115
Side Lap of One and One-half Corrugations	116	117	118	119	120	121
Side Lap of Two Corrugations	123	124	125	126	127	128

With 1¼ Inch Corrugated Material

End Lap, inches	1	2	3	4	5	6
Side Lap of One Corrugation	107⅖	108⅗	109⁷⁄₁₀	110⁹⁄₁₀	112¹⁄₁₀	113⅓
Side Lap of One and One-half Corrugations	110⅕	111⅖	112⁷⁄₁₀	113⁹⁄₁₀	115¹⁄₁₀	116⅔
Side Lap of Two Corrugations	113³⁄₁₀	114½	115⅘	117	118¼	120⅜

Note—These tables are based on using 96 inch sheets; if longer or shorter lengths are used, there will be a slight variation from the above estimate.

LEAD WASHERS

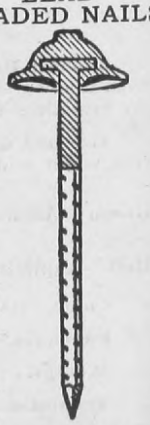
LEAD WASHERS FOR SHEET METAL ROOFING

These Washers help to make a water-tight joint, prevent rust below the nail head and also prevent the nail from cutting into the sheet. One pound contains 325 washers, which are sufficient for two squares. Used with ordinary head galvanized barbed roofing nails.

No. 1 Lead Washers { In 5 Pound Cartons.....Per Pound, $..... / In Less than 5 Pound Cartons.....Per Pound, ...

No. 1.

LEAD HEADED NAILS



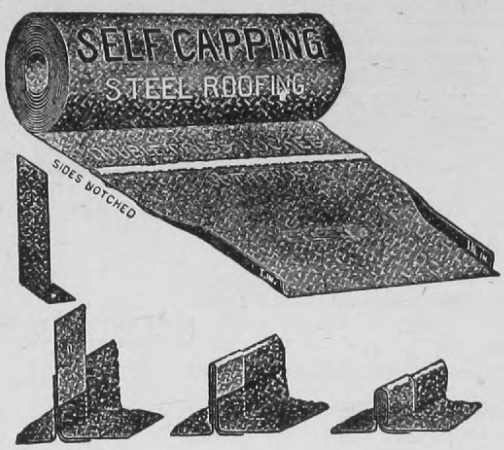
LEAD HEADED NAILS FOR SHEET METAL ROOFING

These Nails with Lead Heads protect the hole made in the iron and prevent the formation of rust. They are made of 10 Gauge, Bright Wire Barbed, are 2 inches long and have Lead Heads ½ inch in diameter. There are 53 of them in one pound and 1¼ pounds or 70 nails are sufficient for one square of roofing.

Filshie Lead Headed Nails—2 inch, 10 Gauge, Bright Barbed Wire. In 100 lb. Kegs. Per 100 Pounds, $..... In Small or Broken Keg Lots. Per Pound, $.....

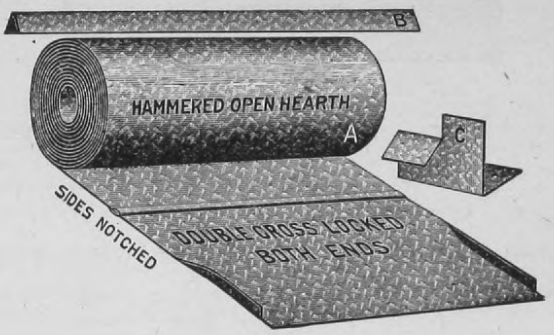
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SELF CAPPING ROLL ROOFING



ROLL AND CAP ROOFING

With Caps and Cleats



Self Capping Roll Steel Roofing, without Cleats

Double Cross Locked, Resquared, Notched Sides.

Rolls 26½ inches wide by 50 feet long charged as one square.

Stock:		Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 71 pounds per square.....Per Square, $.....		.....
Galvanized,	No. 29 "Standard Gauge," Approximate Weight 81 lbs. per square. Per Square, ...		.....

Note.—Each Square requires about 35 cleats. Cleats are shipped only when ordered, at an additional price of five cents per square.

Heavy Gauges from Factory only—See page 673.

Roll and Cap Steel Roofing, with Caps and Cleats

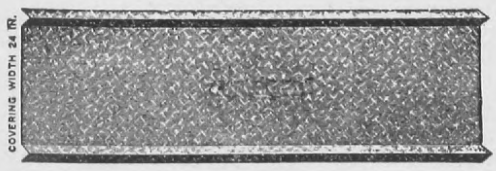
Double Cross Locked, Resquared, Notched Sides.

Rolls 26 inches wide by 50 feet long, with Caps and Cleats, charged as one square.

Stock:		Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 75 pounds per square.....Per Square, $.....		.....
Galvanized,	No 29 "Standard Gauge," Approximate Weight 85 lbs. per square..... .....Per Square,	.....	.....

Heavy Gauges from Factory only—See page 673.

TWO V-CRIMP ROOFING



Charged at Covering Width of 24 inches and full length of sheet.

Wood Sticks shipped **only** when ordered. Each Square requires 50 lineal feet of Wood Sticks.

Painted .....Per Square, $.....

Galvanized .....Per Square, ...

Direct—For Shipment Direct from Factory only.

Prices quoted on request.

PRESSED STANDING SEAM ROOFING

Charged at Covering Width of 24 inches and full length of sheet.

Furnished with Cleats.

Painted .....Per Square, $.....

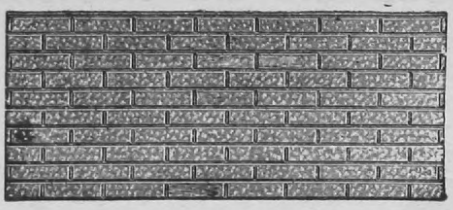
Galvanized .....Per Square, ...

Direct—For Shipment Direct from Factory only.

Prices quoted on request.

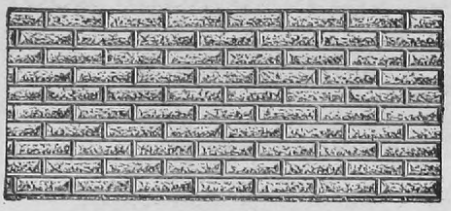
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"PLAIN" PRESSED BRICK SIDING



Size of each Brick 2⅝x8½ inches.

ROCK FACE BRICK SIDING



Size of each Brick 2⅝x8½ inches.

Plain Pressed Brick Steel Siding

Charged at full size of sheet, 28x60 inches. Covers nearly the size charged.
Each 28x60 inch sheet contains 11⅔ square feet; 8⅐ sheets make one square.

Stock			Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 64 pounds per square.	Per Square.....	$.....	.....
Galvanized,	No. 29 Gauge, Approximate Weight 72 pounds per square.	Per Square.....	.....	.....

Heavy Gauges From Factory only—See page 673.

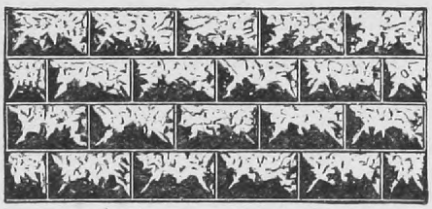
Rock Face Brick Steel Siding

Charged at full size of sheet, 28x60 inches.
Each 28x60 inch sheet contains 11⅔ square feet; 8⅐ sheets make one square.

Stock			Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 64 pounds per square.	Per Square.....	$.....	.....
Galvanized,	No. 29 Gauge, Approximate Weight 72 pounds per square.	Per Square.....	.....	.....

Heavy Gauges From Factory only—See page 673.

ROCK FACE STONE SIDING



Size of each Stone 7x12 inches.

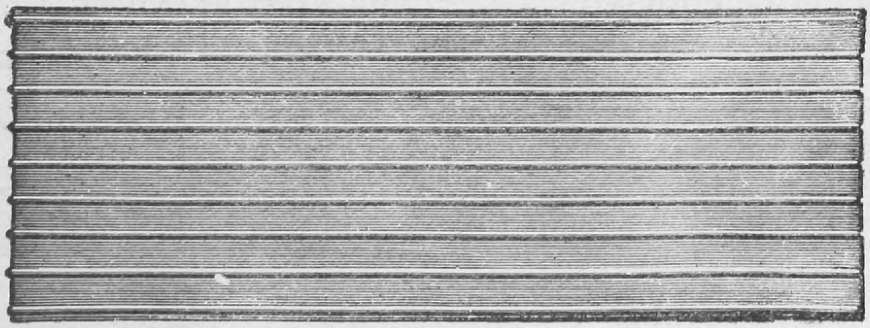
Rock Face Stone Steel Siding

Charged at full size of sheet, 28x60 inches. Covers nearly the size charged.
Each 28x60 inch sheet contains 11⅔ square feet; 8⅐ sheets make one square.

Stock			Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 64 pounds per square.	Per Square.....	$.....	.....
Galvanized,	No. 29 Gauge, Approximate Weight 72 pounds per square.	Per Square.....	.....	.....

Heavy Gauges From Factory only—See page 673.

BEADED CEILING AND SIDING



Beaded Ceiling and Siding

Charged at covering width of sheet, by full length; 24x96 inches.

Stock			Less than 10 Squares	10 Squares or more
Painted,	No. 28 Gauge, Approximate Weight 69 pounds per square.	Per Square.....	$.....	.....

Other Lengths and Heavy Gauges From Factory only—See page 673.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL ROOFING SIDING AND CEILING

"Base Price" Per Square for 2, 2½ and 3 inch Corrugated Sheets. For Stock See Pages 670 to 672

Gauge Nos.	29	28	27	26	24	22	20	18	16
Weight Per Sq..Ptd.	.....	68	75	82	109	136	163	216	270
Weight Per Sq..Galvd.	77	84	91	98	125	151	178	232	286
			For	Less	Than	10	Squares		
From Store.....Ptd.	$.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
From Mill.....Ptd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
			For	10	Squares	or More			
From Store.....Ptd.	$.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
From Mill.....Ptd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
			For	100	Squares	or More			
From Store.....Ptd.	$.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
From Mill.....Ptd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....
			For	Car	Load	Lots			
From Mill.....Ptd.	$.....	.....	.....	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....	.....	.....	.....

Extras—For Other Patterns, Add Extras Per Square to Prices for 2½ inch Corrugated Sheets as Follows:

Gauge	Nos.	29	28		27		26		24	
Add for other patterns	Kind	Galv.	Ptd.	Galv.	Ptd	Galv.	Ptd.	Galv.	Ptd.	Galv.
1¼ and ⅝ in. Corrugated.	Weight	81	71	88	78	95	85	102	113	130
	Extra	$0.33	.22	.33	.22	.32	.22	.32	.29	.40
2 V Crimp, without sticks	Weight	78	69	85	76	91	82	98	.....	.....
	Extra	.07	.06	.07	.06	.00	.00	.00	.....	.....
3 V Crimp, without Sticks.	Weight	79	70	86	77	93	84	100	.....	.....
	Extra	.19	.16	.18	.16	.18	.16	.19	.....	.....
Pressed Standing Seam, **without** Cleats.	Weight	80	71	87	78	94	85	101	.....	.....
	Extra	.23	.19	.23	.20	.23	.20	.24	.....	.....
Roll Roofing, double cross locked, notched, resquared 26½ in. by 50 ft. **without** cleats	Weight	81	71	88	78	95	85	102	.....	.....
	Extra	.45	.32	.46	.34	.47	.35	.47	.....	.....
Roll Roofing, double cross locked, notched, resquared 26½ in. by 50 ft. **with** cleats	Weight	82	72	89	79	96	86	103	.....	.....
	Extra	.55	.42	.56	.44	.57	.45	.57	.....	.....
Roll and Cap Roofing, double cross locked, **with** caps and cleats	Weight	85	75	93	83	100	90	108	.....	.....
	Extra	.97	.76	1.05	.85	1.07	.88	1.16	.....	.....
Plain Brick Siding	Weight	72	64	78	70	84	76	91	.....	.....
	Deduct	.26	.15	.31	.20	.....	.24	.....	.....	.....
Rock Face Brick Siding Rock Face Stone Siding	Weight	72	64	78	70	84	76	91	.....	.....
	Extra	.03	.11	.00	.09	.....	.06	.....	.....	.....
Beaded Ceiling or Siding	Weight	78	69	85	76	91	82	98	.....	.....
	Extra	.19	.16	.20	.17	.14	.12	.15	.....	.....
Weatherboard Siding	Weight	81	71	88	78	95	85	102	.....	.....
	Extra	.46	.32	.46	.34	.47	.35	.47	.....	.....
Ceiling Plates No. 4080	Weight	.....	65	.....	.....	.....	.....	.....	.....	.....
	Extra	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ceiling Plates No. 4100	Weight	.....	65	.....	.....	.....	.....	.....	.....	.....
	Extra	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cornice No. 3335.....Per Lineal Foot										

Additional Extras

Lengths: Sheets 11 and 12 feet long.....Per 100 lbs., $0.10
Wood Sticks for V-Crimp Roofing..Per 100 Lineal Feet, .25
Cleats: Painted or galvanized.....Per Square, .10

Curving Corrugated Sheets,
Single Curve .....Per 100 lbs., $0.25
Double Curve .....Per 100 lbs., .50
Corrugating Crosswise .....Per 100 lbs., .10

Note.—Above differentials are based on present market prices (March, 1918), and are subject to market changes without notice.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NUMBER OF SQUARES IN SHEETS OF 2½ INCH CORRUGATED ROOFING AND SIDING

In the following table the size at which corrugated sheets are **Charged** exceeds the Covering Size by the amount used in Side Laps, no allowance having been made for End Laps. For information regarding End Laps see table at bottom of Page 670. For Example: A job requiring 40 sheets, each 8 feet long, of 2½ inch corrugated material, if laid with a side lap of one corrugation covers 6.40 squares; whereas the stock used measures and is charged as 6.94 squares, which is the actual measurements of the stock used. Each sheet would cover 24 inches (2 feet) in width, but would be charged as 26 inches (2⅙ feet) in width.

Length, ft.....	6		7		8		9		10		12	
Number of Sheets	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size
1	.13	.12	.155	.14	.175	.16	.195	.18	.22	.20	.26	.24
2	.26	.24	.31	.28	.35	.32	.39	.36	.44	.40	.52	.48
3	.39	.36	.46	.42	.52	.48	.59	.54	.65	.60	.78	.72
4	.52	.48	.61	.56	.70	.64	.78	.72	.87	.80	1.04	.96
5	.65	.60	.76	.70	.87	.80	.98	.90	1.09	1.00	1.30	1.20
6	.78	.72	.91	.84	1.04	.96	1.17	1.08	1.30	1.20	1.56	1.44
7	.91	.84	1.07	.98	1.22	1.12	1.37	1.26	1.52	1.40	1.82	1.68
8	1.04	.96	1.22	1.12	1.39	1.28	1.56	1.44	1.74	1.60	2.08	1.92
9	1.17	1.08	1.37	1.26	1.56	1.44	1.76	1.62	1.95	1.80	2.34	2.16
10	1.30	1.20	1.52	1.40	1.74	1.60	1.95	1.80	2.17	2.00	2.60	2.40
11	1.43	1.32	1.67	1.54	1.91	1.76	2.15	1.98	2.39	2.20	2.86	2.64
12	1.56	1.44	1.82	1.68	2.08	1.92	2.34	2.16	2.60	2.40	3.12	2.88
13	1.69	1.56	1.98	1.82	2.26	2.08	2.54	2.34	2.82	2.60	3.38	3.12
14	1.82	1.68	2.13	1.96	2.43	2.24	2.73	2.52	3.04	2.80	3.64	3.36
15	1.95	1.80	2.28	2.10	2.60	2.40	2.93	2.70	3.25	3.00	3.90	3.60
16	2.08	1.92	2.43	2.24	2.78	2.56	3.12	2.88	3.47	3.20	4.16	3.84
17	2.21	2.04	2.58	2.38	2.95	2.72	3.32	3.06	3.69	3.40	4.42	4.08
18	2.34	2.16	2.73	2.52	3.12	2.88	3.51	3.24	3.90	3.60	4.68	4.32
19	2.47	2.28	2.89	2.66	3.30	3.04	3.71	3.42	4.12	3.80	4.94	4.56
20	2.60	2.40	3.04	2.80	3.47	3.20	3.90	3.60	4.34	4.00	5.20	4.80
21	2.73	2.52	3.19	2.94	3.64	3.36	4.10	3.78	4.55	4.20	5.46	5.04
22	2.86	2.64	3.34	3.08	3.82	3.52	4.29	3.96	4.77	4.40	5.72	5.28
23	2.99	2.76	3.49	3.22	3.99	3.68	4.49	4.14	4.99	4.60	5.98	5.52
24	3.12	2.88	3.64	3.36	4.16	3.84	4.68	4.32	5.20	4.80	6.24	5.76
25	3.25	3.00	3.79	3.50	4.34	4.00	4.88	4.50	5.42	5.00	6.50	6.00
26	3.38	3.12	3.95	3.64	4.51	4.16	5.07	4.68	5.64	5.20	6.76	6.24
27	3.51	3.24	4.10	3.78	4.68	4.32	5.27	4.86	5.85	5.40	7.02	6.48
28	3.64	3.36	4.25	3.92	4.86	4.48	5.46	5.04	6.07	5.60	7.28	6.72
29	3.77	3.48	4.40	4.06	5.03	4.64	5.66	5.22	6.29	5.80	7.54	6.96
30	3.90	3.60	4.55	4.20	5.20	4.80	5.85	5.40	6.50	6.00	7.80	7.20
31	4.03	3.72	4.70	4.34	5.38	4.96	6.05	5.58	6.72	6.20	8.06	7.44
32	4.16	3.84	4.86	4.48	5.55	5.12	6.24	5.76	6.94	6.40	8.32	7.68
33	4.29	3.96	5.01	4.62	5.72	5.28	6.44	5.94	7.15	6.60	8.58	7.92
34	4.42	4.08	5.16	4.76	5.90	5.44	6.63	6.12	7.37	6.80	8.84	8.16
35	4.55	4.20	5.31	4.90	6.07	5.60	6.83	6.30	7.59	7.00	9.10	8.40
36	4.68	4.32	5.46	5.04	6.24	5.76	7.02	6.48	7.80	7.20	9.36	8.64
37	4.81	4.44	5.62	5.18	6.42	5.92	7.22	6.66	8.02	7.40	9.62	8.88
38	4.94	4.56	5.77	5.32	6.59	6.08	7.41	6.84	8.24	7.60	9.88	9.12
39	5.07	4.68	5.92	5.46	6.76	6.24	7.61	7.02	8.45	7.80	10.14	9.36
40	5.20	4.80	6.07	5.60	6.94	6.40	7.80	7.20	8.67	8.00	10.40	9.60
41	5.33	4.92	6.22	5.74	7.11	6.56	8.00	7.38	8.89	8.20	10.66	9.84
42	5.46	5.04	6.37	5.88	7.28	6.72	8.19	7.56	9.10	8.40	10.92	10.08
43	5.59	5.16	6.53	6.02	7.46	6.88	8.39	7.74	9.32	8.60	11.18	10.32
44	5.72	5.28	6.68	6.16	7.63	7.04	8.58	7.92	9.54	8.80	11.44	10.56
45	5.85	5.40	6.83	6.30	7.80	7.20	8.78	8.10	9.75	9.00	11.70	10.80
46	5.98	5.52	6.98	6.44	7.98	7.36	8.97	8.28	9.97	9.20	11.96	11.04
47	6.11	5.64	7.13	6.58	8.15	7.52	9.17	8.46	10.19	9.40	12.22	11.28
48	6.24	5.76	7.28	6.72	8.32	7.68	9.36	8.64	10.40	9.60	12.48	11.52
49	6.37	5.88	7.44	6.86	8.50	7.84	9.56	8.82	10.62	9.80	12.74	11.76
50	6.50	6.00	7.59	7.00	8.67	8.00	9.75	9.00	10.84	10.00	13.00	12.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NUMBER OF SQUARES IN SHEETS OF 2½ INCH CORRUGATED ROOFING AND SIDING

Length Ft.	6		7		8		9		10		12	
Number of Sheets	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size	Charged as	Covering Size
51 ...	6.63	6.12	7.74	7.14	8.84	8.16	9.95	9.18	11.05	10.20	13.26	12.24
52 ...	6.76	6.24	7.89	7.28	9.02	8.32	10.14	9.36	11.27	10.40	13.52	12.48
53 ...	6.89	6.36	8.04	7.42	9.19	8.48	10.34	9.54	11.49	10.60	13.78	12.72
54 ...	7.02	6.48	8.19	7.56	9.36	8.64	10.53	9.72	11.70	10.80	14.04	12.96
55 ...	7.15	6.60	8.35	7.70	9.54	8.80	10.73	9.90	11.92	11.00	14.30	13.20
56 ...	7.28	6.72	8.50	7.84	9.71	8.96	10.92	10.08	12.14	11.20	14.56	13.44
57 ...	7.41	6.84	8.65	7.98	9.88	9.12	11.12	10.26	12.35	11.40	14.82	13.68
58 ...	7.54	6.96	8.80	8.12	10.06	9.28	11.31	10.44	12.57	11.60	15.08	13.92
59 ...	7.67	7.08	8.95	8.26	10.23	9.44	11.51	10.62	12.79	11.80	15.34	14.16
60 ...	7.80	7.20	9.10	8.40	10.40	9.60	11.70	10.80	13.00	12.00	15.60	14.40
61 ...	7.93	7.32	9.26	8.54	10.58	9.76	11.90	10.98	13.22	12.20	15.86	14.64
62 ...	8.06	7.44	9.41	8.68	10.75	9.92	12.09	11.16	13.44	12.40	16.12	14.88
63 ...	8.19	7.56	9.56	8.82	10.92	10.08	12.29	11.34	13.65	12.60	16.38	15.12
64 ...	8.32	7.68	9.71	8.96	11.10	10.24	12.48	11.52	13.87	12.80	16.64	15.36
65 ...	8.45	7.80	9.86	9.10	11.27	10.40	12.68	11.70	14.09	13.00	16.90	15.60
66 ...	8.58	7.92	10.01	9.24	11.44	10.56	12.87	11.88	14.30	13.20	17.16	15.84
67 ...	8.71	8.04	10.17	9.38	11.62	10.72	13.07	12.06	14.52	13.40	17.42	16.08
68 ...	8.84	8.16	10.32	9.52	11.79	10.88	13.26	12.24	14.74	13.60	17.68	16.32
69 ...	8.97	8.28	10.47	9.66	11.96	11.04	13.46	12.42	14.95	13.80	17.94	16.56
70 ...	9.10	8.40	10.62	9.80	12.14	11.20	13.65	12.60	15.17	14.00	18.20	16.80
71 ...	9.23	8.52	10.77	9.94	12.31	11.36	13.85	12.78	15.39	14.20	18.46	17.04
72 ...	9.36	8.64	10.92	10.08	12.48	11.52	14.04	12.96	15.60	14.40	18.72	17.28
73 ...	9.49	8.76	11.08	10.22	12.66	11.68	14.24	13.14	15.82	14.60	18.98	17.52
74 ...	9.62	8.88	11.23	10.36	12.83	11.84	14.43	13.32	16.04	14.80	19.24	17.76
75 ...	9.75	9.00	11.38	10.50	13.00	12.00	14.63	13.50	16.25	15.00	19.50	18.00
76 ...	9.88	9.12	11.53	10.64	13.18	12.16	14.82	13.68	16.47	15.20	19.76	18.24
77 ...	10.01	9.24	11.68	10.78	13.35	12.32	15.02	13.86	16.69	15.40	20.02	18.48
78 ...	10.14	9.36	11.83	10.92	13.52	12.48	15.21	14.04	16.90	15.60	20.28	18.72
79 ...	10.27	9.48	11.99	11.06	13.70	12.64	15.41	14.22	17.12	15.80	20.54	18.96
80 ...	10.40	9.60	12.14	11.20	13.87	12.80	15.60	14.40	17.34	16.00	20.80	19.20
81 ...	10.53	9.72	12.29	11.34	14.04	12.96	15.80	14.58	17.55	16.20	21.06	19.44
82 ...	10.66	9.84	12.44	11.48	14.22	13.12	15.99	14.76	17.77	16.40	21.32	19.68
83 ...	10.79	9.96	12.59	11.62	14.39	13.28	16.19	14.94	17.99	16.60	21.58	19.92
84 ...	10.92	10.08	12.74	11.76	14.56	13.44	16.38	15.12	18.20	16.80	21.84	20.16
85 ...	11.05	10.20	12.90	11.90	14.74	13.60	16.58	15.30	18.42	17.00	22.10	20.40
86 ...	11.18	10.32	13.05	12.04	14.91	13.76	16.77	15.48	18.64	17.20	22.36	20.64
87 ...	11.31	10.44	13.20	12.18	15.08	13.92	16.97	15.66	18.85	17.40	22.62	20.88
88 ...	11.44	10.56	13.35	12.32	15.26	14.08	17.16	15.84	19.07	17.60	22.88	21.12
89 ...	11.57	10.68	13.50	12.46	15.43	14.24	17.36	16.02	19.29	17.80	23.14	21.36
90 ...	11.70	10.80	13.65	12.60	15.60	14.40	17.55	16.20	19.50	18.00	23.40	21.60
91 ...	11.83	10.92	13.81	12.74	15.78	14.56	17.75	16.38	19.72	18.20	23.66	21.84
92 ...	11.96	11.04	13.96	12.88	15.95	14.72	17.94	16.56	19.94	18.40	23.92	22.08
93 ...	12.09	11.16	14.11	13.02	16.12	14.88	18.14	16.74	20.15	18.60	24.18	22.32
94 ...	12.22	11.28	14.26	13.16	16.30	15.04	18.33	16.92	20.37	18.80	24.44	22.56
95 ...	12.35	11.40	14.41	13.30	16.47	15.20	18.53	17.10	20.59	19.00	24.70	22.80
96 ...	12.48	11.52	14.56	13.44	16.64	15.36	18.72	17.28	20.80	19.20	24.96	23.04
97 ...	12.61	11.64	14.72	13.58	16.82	15.52	18.92	17.46	21.02	19.40	25.22	23.28
98 ...	12.74	11.76	14.87	13.72	16.99	15.68	19.11	17.64	21.24	19.60	25.48	23.52
99 ...	12.87	11.88	15.02	13.86	17.16	15.84	19.31	17.82	21.45	19.80	25.74	23.76
100 ...	13.00	12.00	15.17	14.00	17.34	16.00	19.50	18.00	21.67	20.00	26.00	24.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"ARMCO" AMERICAN INGOT IRON RUST-RESISTING ROOFING

The trade mark ARMCO carries the assurance that iron bearing that mark is manufactured by The American Rolling Mill Company with the skill, intelligence and fidelity associated with its products, and hence can be depended upon to possess in the highest degree the merit claimed for it.

Read Carefully

Everyone using Black or Galvanized Plates, Sheets, Metal Roofing, Conductor Pipe, Eaves Trough or Corrugated Metal Culverts should know all about "Armco" American Ingot Iron Rust-Resisting Sheets.

The trade mark ARMCO carries the assurance that iron bearing that mark is manufactured by The American Rolling Mill Company with the skill, intelligence and fidelity associated with its products, and hence can be depended upon to possess in the highest degree the merit claimed for it.

None Genuine Without This Brand

We All Know

that the old-fashioned Iron Nails, Metal Roofs and Iron Wire for Fences gave better service and resisted corrosion so much better than the present day article that there is no comparison.

Why?

Because old-fashioned Iron was free from impurities.

It Was a Pure Metal

An old-fashioned Iron Roof did service on a building in Pittsburg for forty years, and when it was removed was found to be as good as new.

This metal was 99.9 per cent pure and did not rust.

Compare that with "Armco" American Ingot Iron Rust-Resisting Sheets, which are 99.94 per cent Pure.

We absolutely guarantee "Armco" American Ingot Iron to be

The Purest Iron Manufactured

in this country or abroad. It is equal to the best grade of old-fashioned Iron that always gave satisfaction and resisted corrosion.

A Corrosion Test

on "Armco" American Ingot Iron and Genuine Charcoal Iron gave the following results, samples of each submerged in sulphuric acid:

"Armco" American Ingot Iron lost..00.78 per cent
Genuine Charcoal Iron lost.....45.08 per cent

In this acid test Genuine Charcoal Iron corroded 60 times as fast as "Armco" American Ingot Iron.

"Armco" American Ingot Iron

has been endorsed by the most prominent chemists in the country. We will gladly furnish names to those interested.

It has been endorsed and specified by the United States Government.

A large government order for Corrugated Metal Culverts made from "Armco" American Ingot Iron has just been shipped to Panama.

Corrosion of Iron and Steel

Read Bulletin 30, on the Corrosion of Iron and Steel, by Dr. A. S. Cushman, of the U. S. Department of Agriculture.

This Bulletin states the purer the iron the less likely are the electrolytic effects to become serious. The truth of this statement is demonstrated in the following test:

A comparative corrosion test between "Armco" American Iron and the best grade of Steel was made in accordance with the specifications of Committee "U," American Society for testing material in this test.

"Armco" American Ingot Iron lost..00.78 per cent.
Best Grade Steel lost.....62.48 per cent.

This accelerated acid test shows that the best grade of Steel will corrode 80 times as fast as "Armco" American Ingot Iron.

Why buy the so-called Genuine Charcoal Iron when "Armco" American Ingot Iron is superior and can be obtained for less money.

We solicit your inquiries and will be glad to furnish samples, prices, results of test and full information regarding "Armco" American Ingot Iron Rust-Resisting Sheets.

LENGTHS—Stock lengths of all forms are, 60, 72, 84, 96, 108, 120 and 144 inches. Flat Sheet extras for Black and Galvanized will apply on lengths under 60 inches down to 36 inches in addition to the forming charge 5c mentioned in the caption "Forming."

CORRUGATED and other styles of Roofing in 12-foot lengths, 10c per square extra. 2½-inch Corrugated Sheets are 28 inches wide in flat—26 inches after forming, approximately 24 inches covering width, both edges down. 1¼-inch Corrugated are 28 inches in flat, 25 inches wide after forming. 24 inches covering width, both edges down. A flat sheet 30 inches wide will be 27½ inches when 2½ inches corrugated, giving approximately 24 inches covering width, one edge up and one down. Width after corrugating is charged for. Odd sizes for immediate shipment can be cut from stock size, charging for full size sheet.

PRICES AND EXTRAS

For Prices on Formed Products and Extras in detail, see following page.

For Flat sheets see page 17.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"ARMCO" AMERICAN INGOT IRON ROOFING, SIDING AND CEILING

"Base Price" Per Square for 2, 2½ and 3 Inch Corrugated Sheets

Gauge Nos.	28	27	26	24	22	20
Weight Per Square...Ptd.	.....	.....	82	109	136	163
Weight Per Square...Galvd.	84	91	98	125	151	178
For Less Than 10 Squares						
From Store.....Ptd.	$.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....
From Mill.....Ptd.	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....
For 10 Squares or More						
From Store.....Ptd.	$.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....
From Mill.....Ptd.	.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....
For Car Load Lots						
From Mill.....Ptd.	$.....	.....	.....	.....	.....	.....
Galvd.	.....	.....	.....	.....	.....	.....

"Extras"—For Other Patterns, Add Extras Per Square to Above Prices, as Follows:

Gauge ..... / Add for other patterns	Nos.	28	27	26		24		22		20	
		Galv.	Galv.	Ptd.	Galv.	Ptd.	Galv.	Ptd.	Galv.	Ptd.	Galv.
1¼ and ⅝ in. Corrugated	Weight	88	95	85	102	113	130	141	158	169	186
	Extra	$0.40	.40	.25	.40	.35	.50	.45	.75	.50	.75
2 V Crimp, without sticks	Weight	85	91	82	98	109	125	136	152	.....	.....
	Extra	.10	.10	.00	.00	.00	.00	.00	.15	.....	.....
3 V Crimp, without sticks	Weight	86	93	84	100	111	128	139	155	.....	.....
	Extra	.20	.20	.20	.20	.20	.30	.30	.50	.....	.....
Pressed Standing Seam, **without** cleats	Weight	86	93	84	100	111	128	.....	.....	.....	.....
	Extra	.25	.25	.25	.25	.25	.40	.....	.....	.....	.....
Roll Roofing, double cross locked, notched, resquared, 26½ in. by 50 ft., **without** cleats	Weight	88	95	85	102	113	130	.....	.....	.....	.....
	Extra	.55	.55	.40	.55	.50	.65	.....	.....	.....	.....
Roll Roofing, double cross locked, notched, resquared, 26½ in. by 50 ft., **with** cleats	Weight	89	96	86	103	114	131	.....	.....	.....	.....
	Extra	.65	.65	.50	.65	.60	.75	.....	.....	.....	.....
Roll and Cap Roofing, double cross locked, **with** caps and cleats	Weight	93	100	90	108	120	137	.....	.....	.....	.....
	Extra	1.20	1.25	.80	1.35	1.05	1.60	.....	.....	.....	.....
Plain Brick Siding	Weight	78	84	76	91	.....	.....	.....	.....	.....	.....
	Deduct	.40	.50	.35	.45	.....	.....	.....	.....	.....	.....
Rock Face Brick Siding, or Rock Face Stone Siding	Weight	78	84	76	91	.....	.....	.....	.....	.....	.....
	Deduct	.10	.15	.30	.10	.....	.....	.....	.....	.....	.....
Beaded Ceiling or Siding	Weight	85	91	82	98	109	125	.....	.....	.....	.....
	Extra	.20	.15	.10	.15	.15	.20	.....	.....	.....	.....
Weatherboard Siding	Weight	88	95	85	102	114	130	.....	.....	.....	.....
	Extra	.55	.55	.40	.55	.60	.70	.....	.....	.....	.....

Additional Extras

Lengths, Sheets 11 or 12 feet long.....Per 100 lbs., $0.10
Other special lengths, price named on application.

Wood Sticks for V-Crimp Roofing..Per 100 Lineal Ft., .25

Cleats: Painted or galvanized.....Per Square, .10

Curving: Corrugated Sheets, all gauges, Single Curve $0.25; Double Curve.....Per 100 lbs., $0.50

Corrugating Crosswise .....Per 100 lbs., .10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POPULAR PRICE STEEL CEILINGS

For Stores, Garages, Storage Rooms, Basements and Lofts
Also very appropriate for Sidewall finishes

The plates have a covering area of 24x96 inches, and the end lap of the plates will center on joists or beams set 12 or 16 inches on center.

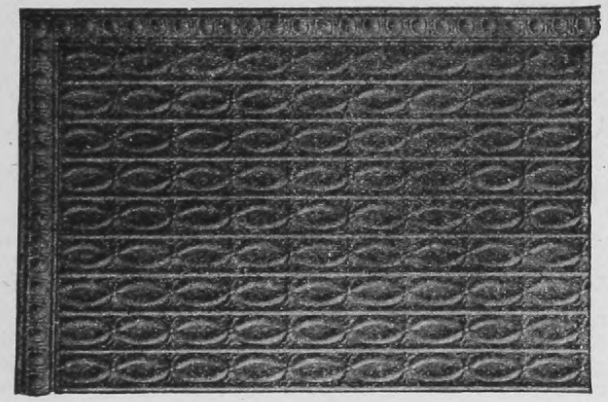
The beads or ribs running lengthwise are of a size to stiffen the plate sufficiently for nailing to joists, but while this application is satisfactory to many, it must be admitted that it is most satisfactory to use wood furring strips.

If wood strips are used the preferred size is ⅞x1¼ inches. Nail strips in position 12 inches on centers crosswise the joists and set in headers or cross furring 96 inches on centers, or under the end lap of plates, which enables you to nail all laps at intervals of 6 inches, this being sufficient to make a perfectly tight piece of work.

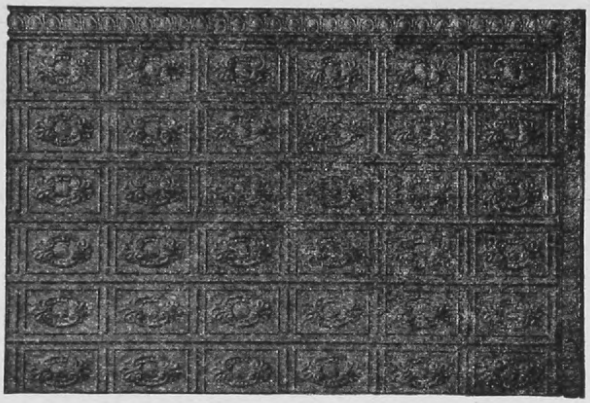
When applied over wood sheathing no wood furring strips are required.

These Ceiling and Sidewall Plates are painted one good coat of grey paint both sides, securely packed in bundles and shipped without ceiling nails. They can be applied with any common flat-headed nails.

No mitres or wood brackets are male for Cornice No. 4335, as same can be easily cut and fit to angle desired by any ordinary mechanic.



No. 4100 DUBLIN SCROLL DESIGN
Showing Field Plate with No. 4335 Cornice



No. 4080 PARISIAN SCROLL DESIGN
Showing Field Plate with No. 4335 Cornice

No. 4100—Dublin Scroll Design Field Plates, 24 x 96 inches, covering measure (16 square feet per sheet, 6¼ sheets equal one square).....Per Square, $.....

No. 4080—Parisian Scroll Design Field Plates, 24 x 96 inches, covering measure (16 square feet per sheet, 6¼ sheets equal one square).....Per Square, ...

No. 4335. Cornice.

No. 4335—Cornice, Depth 3 inches, Projection 3 inches, Length 48 inches.....Per Lineal Foot, $.....

Perfect Art METAL CEILINGS

Perfect Art METAL CEILINGS

"PERFECT ART" METAL CEILINGS

Described and Illustrated on Pages 679 to 682.

Special and Important Notices

Instructions for Taking Measurements.—Great care should be observed when taking measurements. See that they are accurate and show location and size of all obstructions, such as stairways and elevators. State whether they are open or closed and whether cornice can extend around same. Also give size and location of beams, chimneys, pilasters, etc. Give measurements from point to point, and see that these measurements **equal the total lengths or width of the room.** Also state over what the metal is to be applied. whether over joists, plaster or wood sheathing. ALWAYS NOTE WHICH WAY THE JOISTS RUN. When ordering Metal Ceiling for a store be sure to advise what depth Cornice can be used over front door and show windows. Generally only a small cornice or flat mould can be used at front.

Where Ceilings are ordered by diagram, we furnish working plans showing the location of each and every piece.

How to Figure Square Feet.—To obtain the number of square feet in a room, proceed as follows: Add twice the depth of Cornice on Walls to the total length and width of the room and multiply the dimensions thus obtained. Make no deductions for space not to be covered, containing less than 75 square feet.

Furring Strips.—To apply our Metal Ceilings, it is not necessary to remove old plaster, as wood strips (⅞x1¼") can be nailed directly over the plaster and then the metal nailed to the strips. Wood joists are treated in the same manner, by nailing the wood strips directly to the joists.

Wood furring strips are never included in quotations nor in orders unless special mention is made by the customer and ourselves. In most cases the customer can purchase the strips in his own town, thereby saving freight charges. Should wood strips be furnished in connection with metal Ceiling, the amount required is estimated on the basis of erecting strips, 24 inches on centers, with cross-strips or headers 24 inches apart.

What Our Prices Include.—Quotations and list prices are for the material painted one good priming coat on both sides, and include wood brackets for Cornice and Moulding; also the special cone-head nails for applying the metal, except patterns Nos. 3000 and 5045. which can be applied with common flat-headed nails, which we do not furnish.

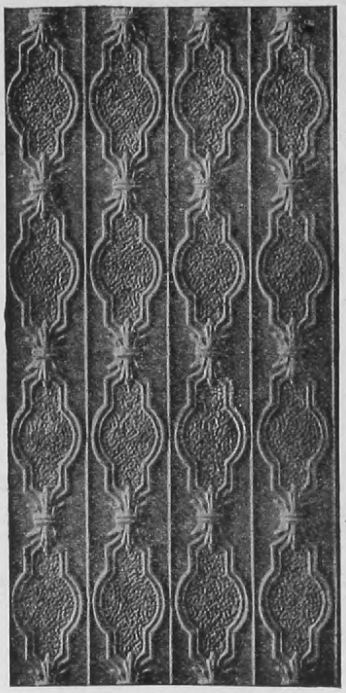
All shipments are carefully packed and securely crated so that they should reach destination in good condition.

Metal Ceiling when crated for shipment, weighs about 65 pounds per square (100 square feet), and is shipped under fourth class.

Note.—Discounts, and Special Catalogue showing additional Ceiling and Side Wall designs will be sent on request. The following designs, however, are those most frequently chosen.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

CEILING AND WALL PLATES

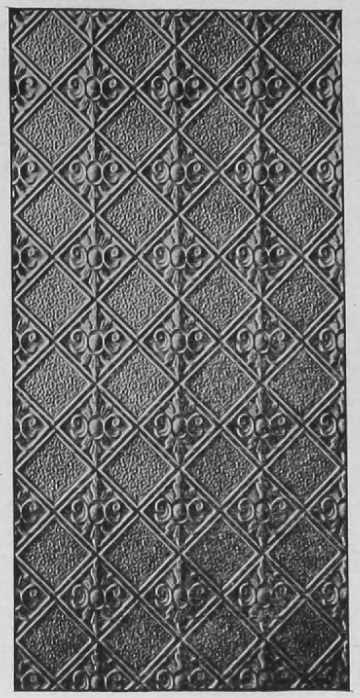


No. 3000.

No. 3000—Ceiling or Wall Plate, 24x96 and 24x72 inches . . . . . .Per Square Foot, $0.07½

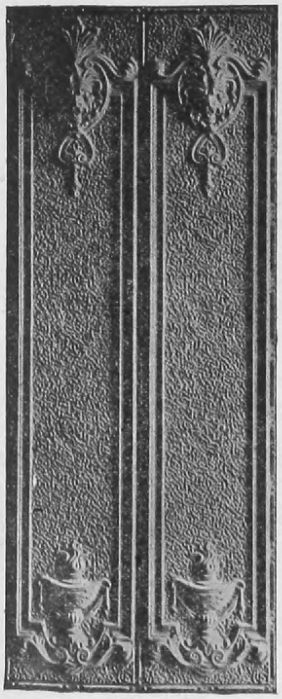
No. 6044.

No. No. 6044—Ceiling or Wall Plate, 24x96 and 24x72 inches . . . . . .Per Square Foot, $0.07½



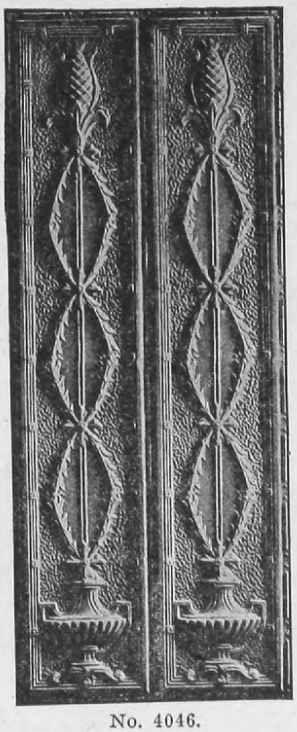
No. 3045.

No. 3045 — Ceiling or Wall Plate, 24x96 and 24x72 inches..Per Square Foot, $0.08



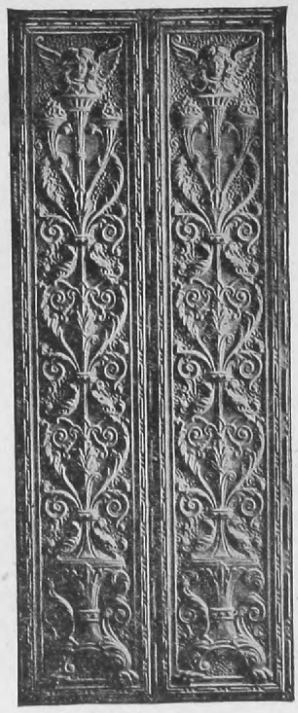
No. 3046.

No. 3046—One Piece **Wall** Plate, 24x48, 60, 72 or 84 inches. .Per Square Foot, $0.11



No. 4046.

No. 4046—One Piece **Wall** Plate, 24x48, 60, 72 or 84 inches...Per Square Foot, $0.11



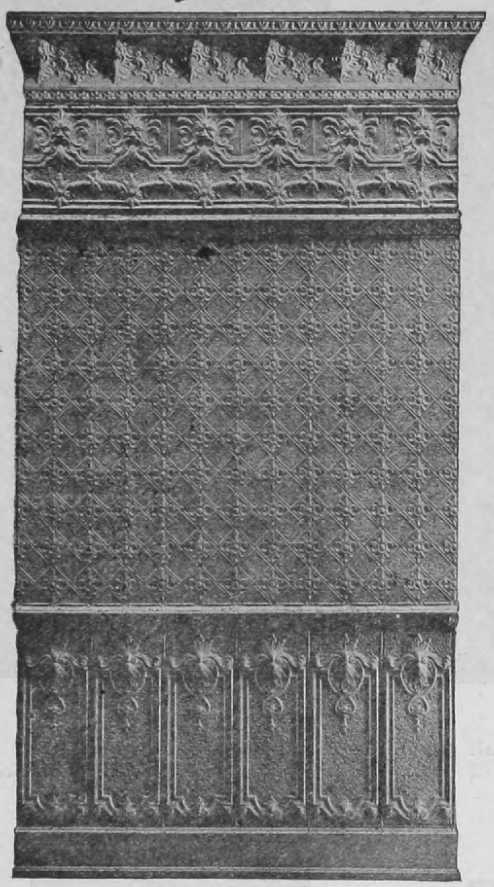
No. 5046.

No. 5046—One Piece **Wall** Plate, 24x60, 72 or 84 inches...Per Square Foot, $0.11

Note.—The above items are **not** carried in stock but can be furnished promptly from factory.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

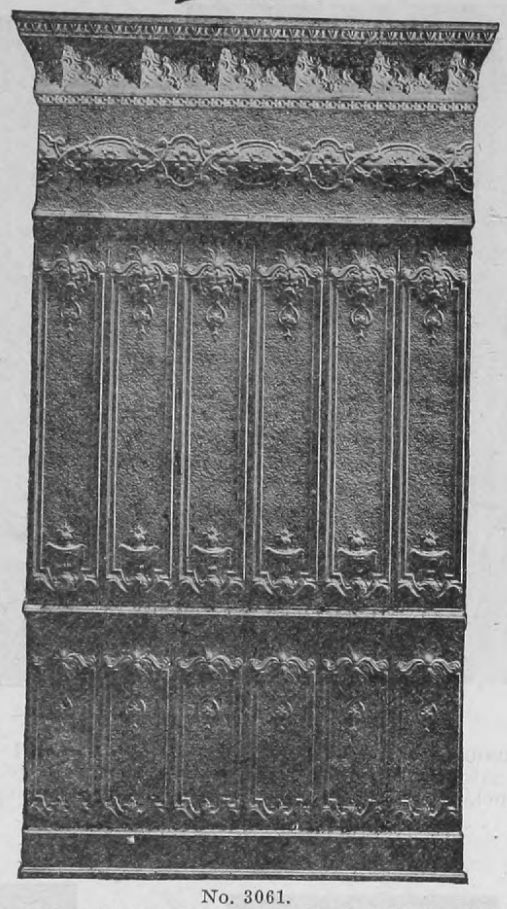
METAL WALL DESIGNS.



No. 3060.

Composed of Wainscot No. 3050, Chair Rail No. 3025, Wall Plate No. 3045, Foot Mould No. 3025 and Frieze No. 3014. Cornice No. 3034 shall be considered as part of the Ceiling.

No. 3060—Wall Design.....Per Square, $9.00

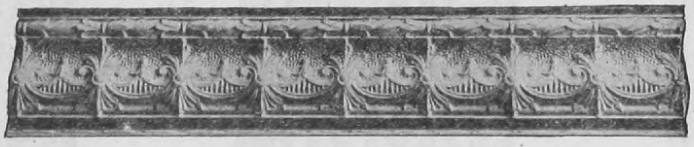


No. 3061.

Composed of Wainscot No. 3050, Chair Rail No. 3025, Wall Plate No. 3046, Foot Mould No. 3025 and Frieze No. 3040. Cornice No. 3034 shall be considered as part of the Ceiling.

No. 3061—Wall Design.....Per Square, $11.00

CORNICES



No. 3032.

No. 3032—Cornice, Depth 7 inches, Projection 6 inches, Length 48 inches.....Per Lineal Foot, $0.10

Miters, Inside and Outside..... Each, .60

No. 3033.

No. 3033—Cornice, Depth 9¼ inches, Projection 9 inches, Length 48 inches.....Per Lineal Foot, $0.15½

Miters, Inside and Outside.....Each, .75

No. 4033.

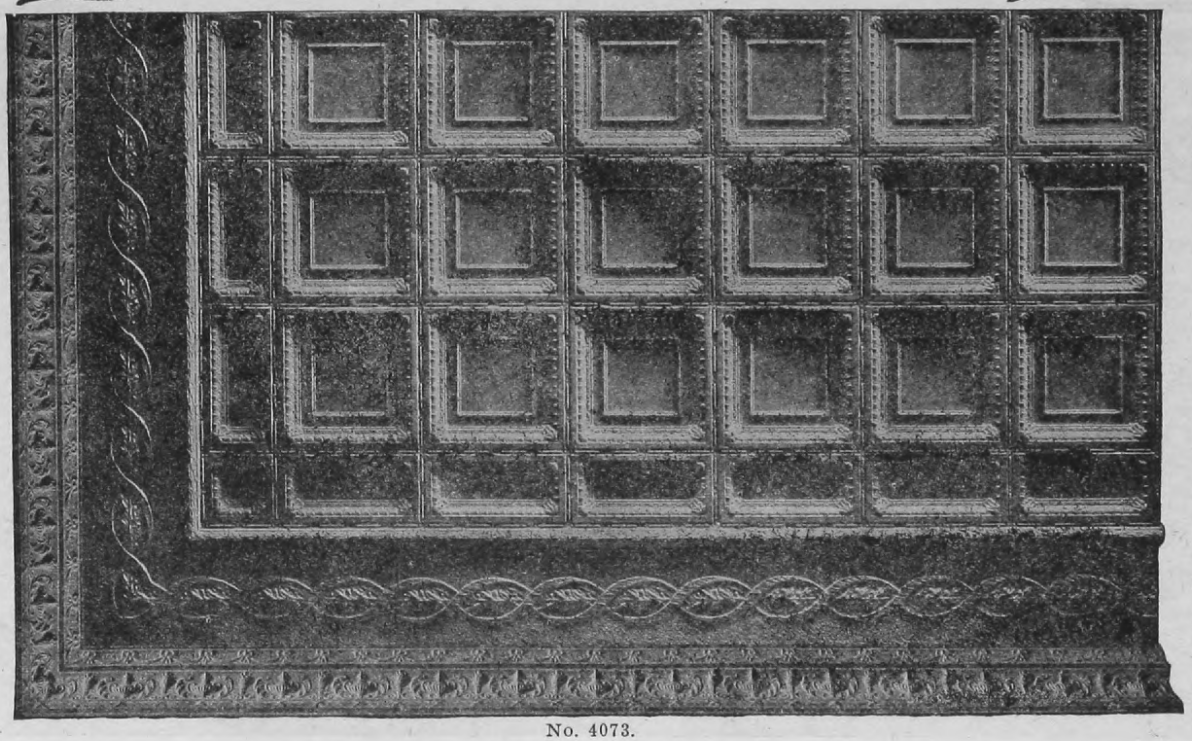
No. 4033—Cornice, Depth 9¼ inches, Projection 9 inches, Length 48 inches.....Per Lineal Foot, $0.15½

Miters, Inside and Outside.....Each, .75

Note—The above items are not carried in stock but can be furnished promptly from factory.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

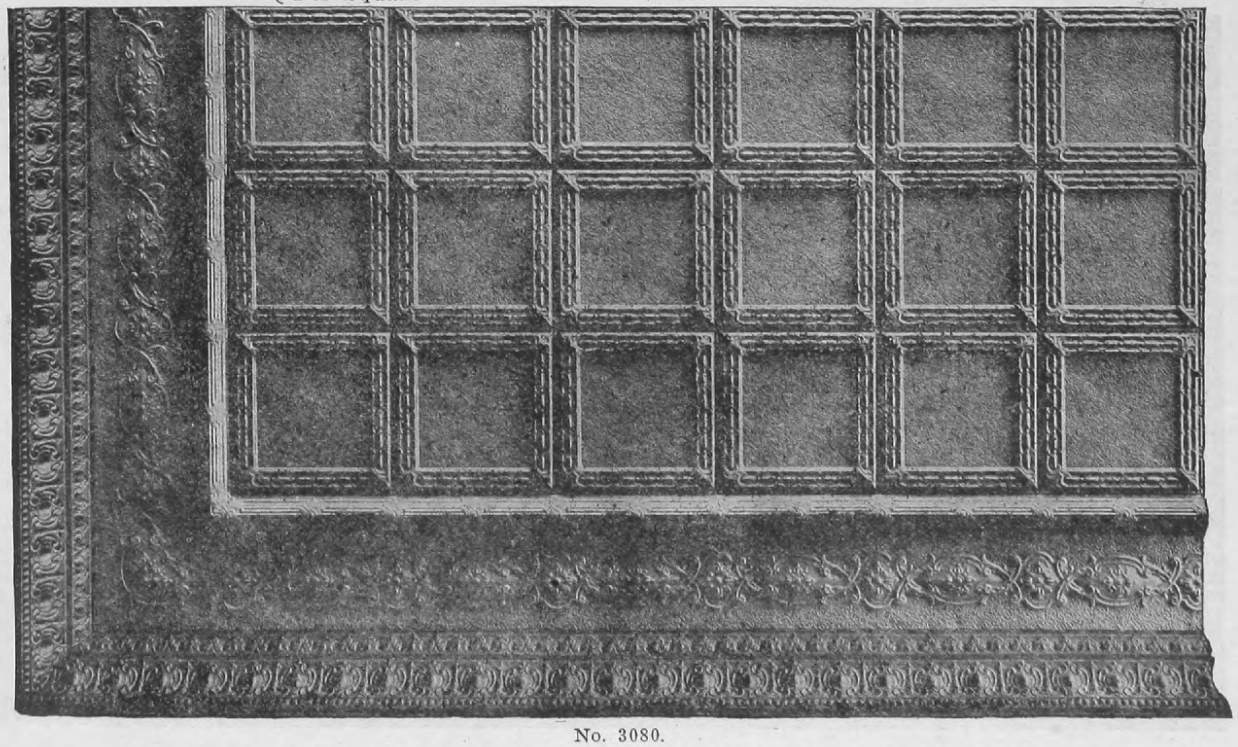
METAL CEILINGS



No. 4073.

Composed of Cornice No. 4033, Filler No. 4040, Moulding No. 4020 and Field Plate No. 4007. ⅞x1¼ inch Wood Furring Strips are necessary for applying this ceiling.

No. 4073—Colonial Design	For Rooms of.....	5 Squares or Less	5 to 12 Squares	12 Squares or More
	Per Square	$10.25	9.75	9.25



No. 3080.

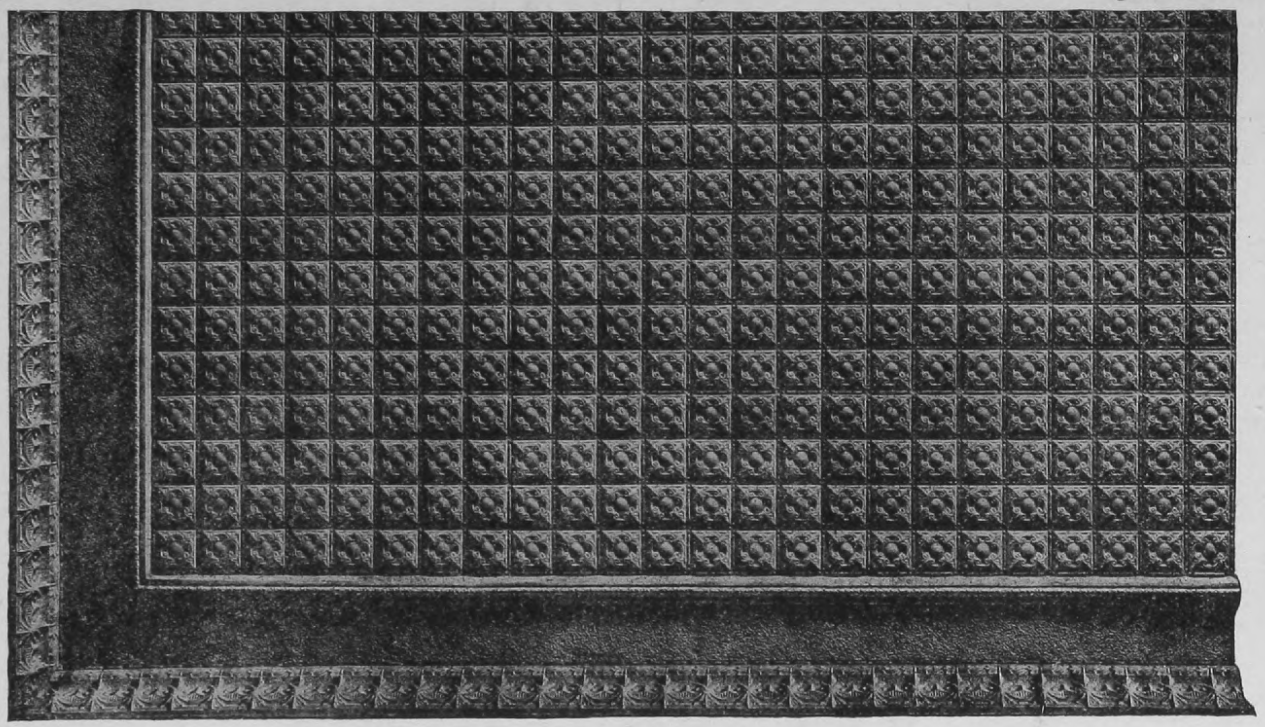
Composed of Cornice No. 3033, Filler No. 3040, Moulding No. 3022 and Field Plate No. 3007.

No. 3080—Louis XIV Design	For Rooms of.....	5 Squares or Less	5 to 12 Squares	12 Squares or More
	Per Square	$10.25	9.75	9.25

Note.—The above items are not carried in stock but can be furnished promptly from factory.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

METAL CEILINGS



No. 3065.

Composed of Cornice No. 3032, Filler No. 6041 and Field Plate No. 3009.

No. 3065—Louis XIV Design	For Rooms of.....	5 Squares or Less	5 to 12 Squares	12 Squares or More
	Per Square	$10.00	9.25	8.75

No. 5066.

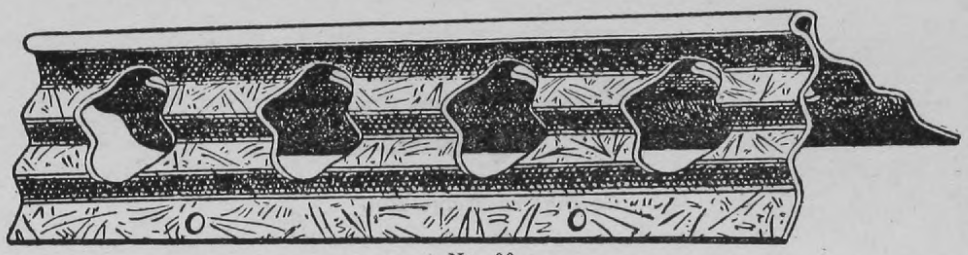
Composed of Cornice No. 3032, Moulded Filler No. 4041,and Field Plate No. 5008.

No. 5066—Italian Renaissance Design	For Rooms of	5 Squares or Less	5 to 12 Squares	12 Squares or More
	Per Square..	$10.00	9.25	8.75

Note.—The above items are not carried in stock but can be furnished promptly from factory.

Digitized by Google UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

METAL CORNER BEADS



No. 00.

Galvanized Crimped Corner Bead, superior to any competing article of its kind; for architects' and contractors' use; fully protects the corner.

Length, feet	6	8	9	10
Feet in a Bundle	60	80	90	100
Feet in a Crate	240	240	270	300

No. 00—Metal Corner Bead, 26 Gauge, Galvanized, Stock Lengths .....Per Foot, $.....

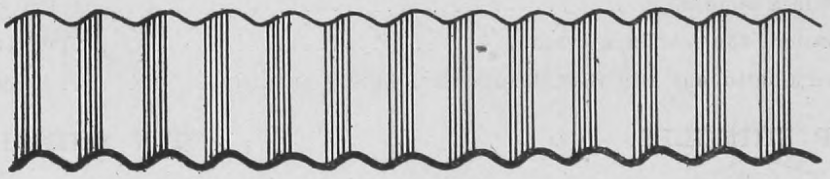
EXPANDED CUP STEEL LATHING

Buhl Expanded Cup Self Furring Steel Lathing is without doubt the nearest to perfection and works the best for all purposes of any Metal Lathing on the market. The Mortar does not hang on a sharp cutting or Knife Edge, thus cutting your clinches, in either side-wall or ceiling, but rests on a beveled edge in each case, and even where applied to Sheathing you get a perfect Key without Furring Strips, and your lath will be thoroughly imbedded in the mortar or other material used. If used over board sheathing, first apply waterproof paper.

The size of sheets are 18 inches wide, by 96 inches in length, 12 square feet or 1⅓ square yards per sheet and are packed for shipment in bundles of 15 sheets each, containing 20 square yards to the bundle. Heavy Gauge and Galvanized Lath shipped direct from Factory.

Buhl Expanded "Cup Steel Lathing," No. 27 Gauge, Painted.....Per Square Yard, $.....

WALL TIES



Nos. 6 and 7.

Corrugated Galvanized Wall Ties, ⅞ inch wide.

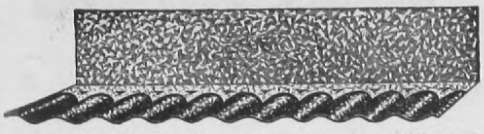
No. 6—Short, 6 inch, with nail holes for veneer work.....Per 1,000, $.....

No. 7—Long, 7 inch, for solid brick walls, standard.....Per 1,000, ...

Packed—One Thousand in a Wooden Box.

END AND SIDE WALL FLASHING

END WALL FLASHING

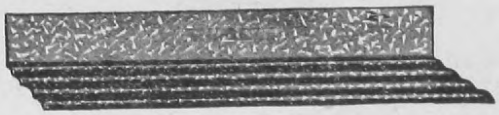


Corrugated End Wall Flashing, 2½ inch Corrugations.

Charged at full length, 26 inches; **Covers,** 24 inches.

Galvanized, No. 29 Gauge Steel.....
.....Per Lineal Foot, $.....

SIDE WALL FLASHING



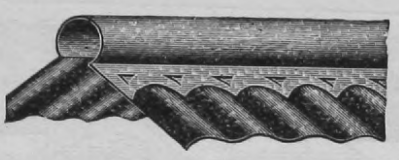
Corrugated Side Wall Flashing, 2½ inch Corrugations.

Charged at full length of Sheet.

Galvanized, No. 29 Gauge Steel.....
.....Per Lineal Foot, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CORRUGATED RIDGE ROLL



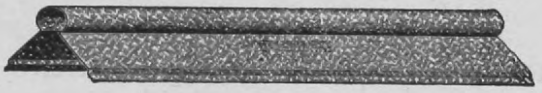
Corrugated Ridge Roll

Charged at full length, 26 inches; **Covers,** 24 inches.

Painted No. 28 Gauge Steel, 2½ inch Corrugations.....Per Lineal Foot, $.....

Galvanized, No. 29 Gauge Steel, 2½ inch Corrugations.....Per Lineal Foot, ...

PLAIN RIDGE ROLL



Plain Ridge Roll

Double Flanged, made of best quality Galvanized Steel, in 10-foot lengths without cross-seams, with nailing flange.

Galvanized, No. 29 Gauge.....	Diameter of Roll, inches.....	1¼	1½	2	3
	Girth, inches.....	7	8	10	14
	Per Lineal Foot.....	$0.14	.16	.19	.28

Stock, Wired, 100 feet in a bundle.....% **Factory Shipments,** Crated, 250 feet in a crate.....%

Heavy Gauges from Factory only. Quotations on request.

Note.—"We do not guarantee the exact dimensions of Ridge Roll aside from the Girth, as it is not possible to have the diameter of the Roll or the width of Apron always exactly alike. It is best to order by the larger dimension or Girth only, instead of ordering the diameter of Roll. The diameter of Roll however, will be approximately as shown above.

HIP SHINGLES AND HIP SHINGLE STARTERS

No. 4695.

No. 04695.

No. 4695—Galvanized Continuous Hip Shingles in lengths of 10 feet.

Stock, Wired, 100 feet in a bundle.....Per 100 Feet, $.....

Factory Shipments, Crated, 250 feet in a crate.....Per 100 Feet, $.....

No. 04695—Galvanized Continuous Hip Shingle Starters, in any quantity.....Per Dozen, $.....

HIP SHINGLES

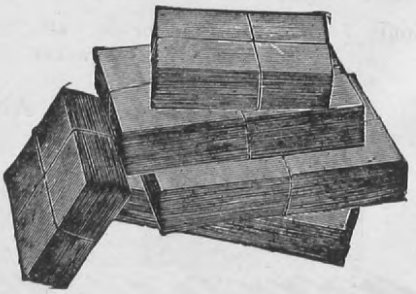
No. 149.

Especially designed for covering straight or curved hips, makes a neat ornamental job. 4x9 inches, cheaper than smaller sizes considering its covering capacity.

	Less than 250	250 or More
No. 49—Painted.....Per 100, $.....	.....	
No. 149—Galvanized...Per 100,	.....	.....

Packed—250 in a Crate.

TIN SHINGLES



Tin Shingles or Flashings, size 5x7 inches.

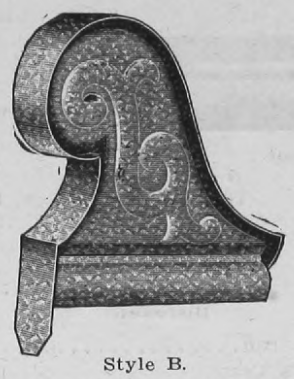
Painted both sides.....Per 100, $.....

Not Painted .....Per 100, ...

Packed—One Hundred in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"LITTLE BEAUTY" FINIALS



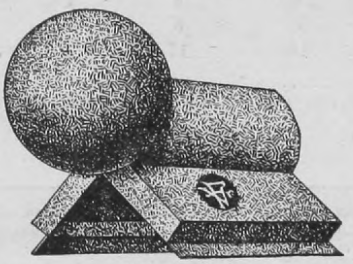
Style B.

Style C.

Made of Galvanized Steel, will fit either 1½ or 2 inch ridge roll so snugly that soldering is not required. A metal tongue extends down from the base in front, covering the end of the roll, and through which a nail can be driven into the facia board. Height 9 inches, Length at Base 10 inches.

Little Beauty Finials	**Style**	**B**	**C**
	Per Dozen	$4.00	4.50

ORNAMENTAL GLOBE FINIALS

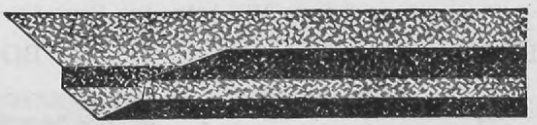


Style F-V.

Made of Galvanized Steel with Zinc Balls mounted as shown.

Diameter of Roll, inches	1¼	1½	2
F-V Globe Finials, Per Dozen,	$4.00	4.00	5.00

GALVANIZED FORMED VALLEY



Formed with breaks near center of apron, to prevent water from backing up over edges and as a shingle guide, thus saving the trouble of striking a line. Made of best quality Galvanized Steel in 10 foot lengths, without cross seams.

Galvanized Formed Valley, No. 29 "Standard Gauge"	Girth, inches	12	14
	Per Foot	$0.15	.17½

Crated—250 feet in a Crate.
Heavy Gauges from Factory only. See page 693.

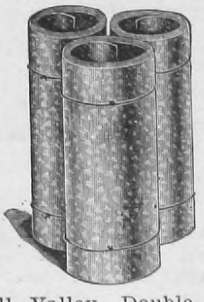
TIN ROLL VALLEY

I. C. Tin Roll Valley, Single Cross Locked and Soldered, **Painted** both sides.

Inches	10	14
Per 100 Lineal Feet.... $	.....	.....

Put up in Rolls of 50 Lineal Feet.

GALVANIZED ROLL VALLEY



Galvanized Roll Valley, Double Cross Locked **unless** otherwise ordered. **Not** Painted.

Inches	10	14
Per 100 Lineal Feet.... $	.....	.....

Put up in Rolls of 50 Lineal Feet.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

GALVANIZED EAVE TROUGH

SINGLE BEAD

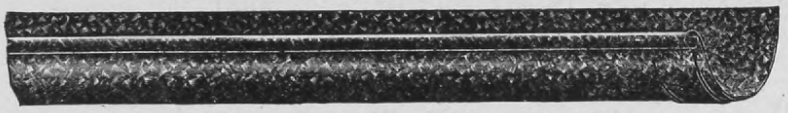
Lap Joint, Single Bead. Price Per Foot.

Inches	3	3½	4	4½	5	6	7	8
Girth ..... Inches,	6	7	8	9	10	12	14	16
Steel, No. 29 Gauge	$0.13	.14	.16	.18	.19	.23	.27	.31
Steel, No. 26 Gauge	.....	.....	.....	.....	.25	.....	.....	.....
"Armco" Ingot Iron, 28 Gauge,	.....	.....	.....	.....	.21	.....	.....	.....

Discount. **Discount.**

Steel ..... % **"Armco" Ingot Iron** ..... %

Package—In 10 Foot Lengths, 250 Feet in a Crate.



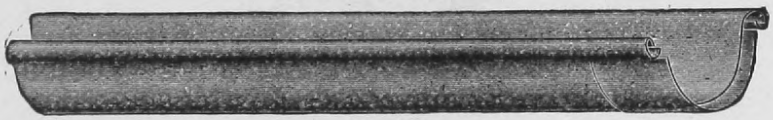
Slip Joint, Single Bead. Price Per Foot.

Inches	3	3½	4	4½	5	6	7	8
Girth ..... Inches,	6	7	8	9	10	12	14	16
Steel, No. 29 Gauge	$0.14	.15	.17	.19	.20	.25	.29	.33

Discount ..... %

Package—In 10 Foot Lengths, 250 Feet in a Crate.

DOUBLE BEAD



Slip Joint, Single Bead. Price Per Foot.

Inches	3	3½	4	4½	5	6	7	8
Steel, No. 29 Gauge	$0.19	.20	.22	.24	.25	.30	.34	.38

Discount ..... %

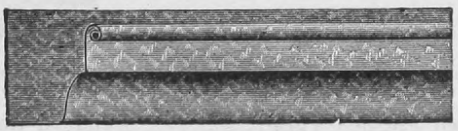
Package—In 10 Foot Lengths, 250 Feet in a Crate.

Heavy Gauges from Mill only—See Page 692.

ROOF GUTTERS

Style "B."

BOX GUTTERS



Style "G."

Galvanized "Shingle" or "Roof" Gutters

Style B—Girth, inches		10	14
Depth, inches		2½	3
Pitch		¼	¼
Steel, No. 29 Gauge	Per Foot,	$0.25	.35

Discount ..... %

Package—In 10 Foot Lengths, 250 Feet in a Crate.

Galvanized "Ogee" Box Gutters

Style G.

Style G—Girth, inches	10	12	14
Width at Top, inches	3	3½	4¼
Depth at Front, inches	3	3¾	4½
Depth at Back, inches	3½	4¼	5
Steel, No. 29 Gauge ..... Per Foot,	$0.25	.30	.35

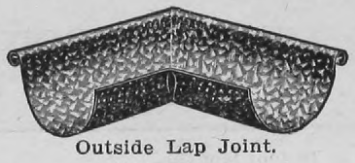
Discount ..... %

Package—In 10 Foot Lengths, 250 Feet in a Crate.

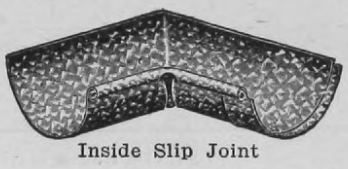
Heavy Gauges from Mill only—See Page 693.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

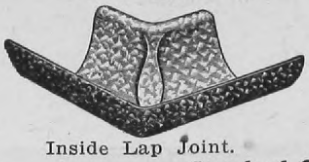
EAVE TROUGH MITERS



Outside Lap Joint.



Inside Slip Joint



Inside Lap Joint.

Outside Slip Joint.

Standard Gauge Galvanized "Steel" and "Armco" Iron

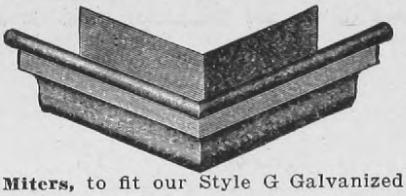
Inches		3½	4	4½	5	6
Lap Joint Single Bead	**No. 10**—Outside Miters ..... Per Dozen,	$3.25	3.50	4.00	4.00	5.00
	No. 15—Inside Miters ..... Per Dozen,					
Slip Joint Single Bead	**No. 20**—Outside Right Hand Miters.. Per Dozen,	4.25	4.50	5.00	5.00	6.00
	No. 25—Inside Right Hand Miters.. Per Dozen,					
	No. 30—Outside Left Hand Miters.. Per Dozen,					
	No. 35—Inside Left Hand Miters.. Per Dozen,					
Slip Joint Double Bead	**No. 40**—Outside Right Hand Miters.. Per Dozen,	5.25	5.50	6.00	6.00	7.00
	No. 45—Inside Right Hand Miters.. Per Dozen,					
	No. 50—Outside Left Hand Miters.. Per Dozen,					
	No. 55—Inside Left Hand Miters.. Per Dozen,					

Discount .....%

"Armco" Ingot Iron **Lap Joint, Single Bead**—5 inch only ..... Per Dozen, $4.00

Discount .....%

OGEE EAVE TROUGH MITERS



Eave Trough Miters, to fit our Style G Galvanized Box Gutters.

Standard Gauge Galvanized "Steel"

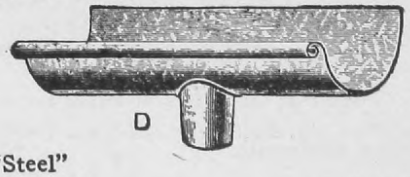
Girth ..... Inches,	10	12	14
Width ..... Inches,	3	3½	4¼
Depth ..... Inches,	3	3⅝	4½
Outside Ogee Miters ..... Per Dozen,	$6.00	7.20	8.40
Inside Ogee Miters ..... Per Dozen,	6.00	7.20	8.40

Discount .....%

EAVE TROUGH END PIECES, OUTLETS AND CAPS

B

C



D

Standard Gauge Galvanized "Steel"

Price Per Dozen. Length of End Pieces, 12 inches. **Price Per Dozen**

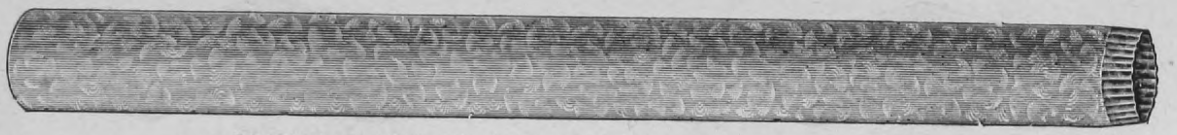
Style "B"		Size Trough Inches	Style "C" End Caps Only	Size Trough Inches	Style "D" End Pieces "Only" With Outlet		Size Trough Inches	Style "E" End Pieces "Complete" Including C and D	
Diam. Inches.	Outlets or Drops Only				Single Bead	Double Bead		Single Bead	Double Bead
2″	$0.80	3½″	$1.30	3½″	$2.50	$3.10	3½	$3.80	$4.40
3″	1.00	4″	1.50	4″	2.70	3.30	4	4.20	4.80
4″	1.20	4½″	1.60	4½″	3.00	3.60	4½	4.60	5.20
5″	1.30	5″	1.60	5″	3.00	3.60	5	4.60	5.20
6″	1.60	6″	1.90	6″	3.60	4.30	6	5.50	6.20
.....	.....	7″	2.30	7″	4.00	4.75	7	6.30	7.05

Discount .....%

Note.—End Pieces Complete are furnished with Outlets and Slip Joint End Caps. The End Piece has no slip joint and can be used either right or left hand by reversing the end cap. Outlets on end pieces are **double seamed** on, **not** soldered. End Pieces are equipped with outlets as follows: 3½ inch, 2 inch outlet; 4, 4½ and 5 inch, 3 inch outlet; and the 6 inch with 4 inch outlet.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GALVANIZED CONDUCTOR PIPE



PLAIN Round Galvanized Conductor Pipe. Made in 10 foot lengths.

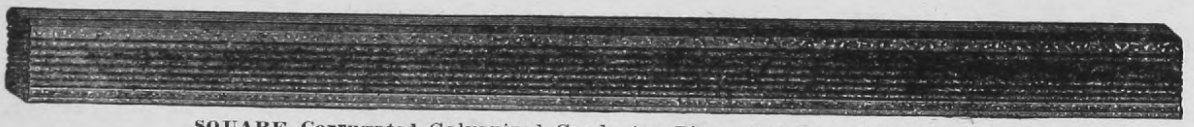
Inches	2	3	4	5
Steel, No. 29 Gauge.....Per Foot,	$0.13	.15	.20	.25

Note.—For Discounts See Below.

ROUND Corrugated Galvanized Conductor Pipe. Made in 10 foot lengths.

Inches	2	3	4	5	6
Steel, No. 29 Gauge.....Per Foot,	$0.13	.15	.20	.25	.30
Steel, No. 26 Gauge.....Per Foot,	.....	.21	.28	.34	.40
"Armco" Ingot Iron, No. 28 Gauge, Per Foot,	.15	.17	.23	.....	.....

Note.—For Discounts See Below.



SQUARE Corrugated Galvanized Conductor Pipe. Made in 10 foot lengths.

Inches	2	3	4	5
Exact Size in inches.....	1¾ x 2¼	2⅜ x 3¼	2¾ x 4¼	3¾ x 5
Steel, No. 29 Gauge.....Per Foot,	$0.15	.17	.22	.27
Steel, No. 26 Gauge.....Per Foot,	.....	.23	.30	.36
"Armco" Ingot Iron, No. 28 Gauge.....Per Foot,	.17	.19	.25	.....

"Discounts" on Plain Round, Round Corrugated and Square Corrugated Conductor Pipe

Loose	Steel	%
	"Armco" Ingot Iron	%
Crated, Nested	Steel	%
	"Armco" Ingot Iron	%
Crated, **Not** Nested	Steel	%
	"Armco" Ingot Iron	%

Note—When Crated less than 250 feet **Extra** for Crate..... Each, $.....

All shipments from stock are Loose, **Not** Crated, unless ordered Crated, except when Transportation Company requires Crated Shipments.

All shipments from Mill are Crated F. O. B.....

Polygon Galvanized **"Armco"** Ingot Iron Conductor Pipe. Made in 10 foot lengths.

The peculiar spiral construction of this conductor pipe, obtained by twisting, together with its Polygon Scalloped Form, produces the best and strongest pipe now on the market. Ice forming on it will not burst joints and seams as it descends gradually without injury to the pipe. All allowances are made for necessary expansion and contraction.

Inches	2	3	4
"Armco" Ingot Iron, No. 28 Gauge.....Per Foot,	$0.17	.19	.26

Discount.

Loose ..... % | Crated, Nested ..... % | Crated, **Not** Nested..... %

Heavy Gauge Conductor Pipe from Mill only—See Page 692.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GALVANIZED CONDUCTOR ELBOWS

The Ferdinand Dieckmann Co.

PLAIN ROUND

Angle, Degrees, 45 — No. 1.

No. 2. 60

No. 3. 75

No. 4. 90

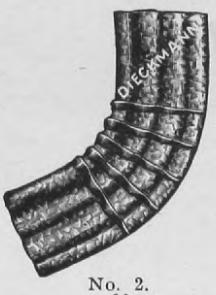
Plain Round ..... Inches,	2	3	4	5
Angle No. 1 ..... Crimps,	3	4	4	5
Angle No. 2 ..... Crimps,	4	5	6	6
Angle No. 3 ..... Crimps,	5	6	7	8
Angle No. 4 ..... Crimps,	6	7	8	9
Steel, No. 29 Gauge ..... Per Dozen.	$3.60	4.32	7.20	15.00
"Armco" Ingot Iron, No. 28 Gauge ..... Per Dozen,	4.80	5.76	9.00	17.40

Discount.

Steel ..... % "Armco" Ingot Iron ..... %

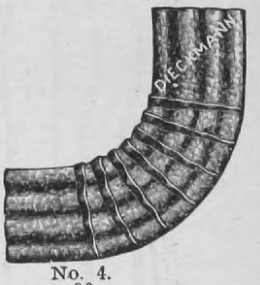
ROUND CORRUGATED

Angle, Degrees, 45 — No. 1.



No. 2. 60

No. 3. 75



No. 4. 90

Round Corrugated ..... Inches,	2	3	4	5	6
Angle No. 1 ..... Crimps,	4	4	4	5	5
Angle No. 2 ..... Crimps,	5	5	6	6	7
Angle No. 3 ..... Crimps,	6	6	7	8	9
Angle No. 4 ..... Crimps,	7	7	8	9	10
Steel, No. 29 Gauge ..... Per Dozen.	$3.60	4.32	7.20	15.00	18.00
Steel, No. 26 Gauge, Nos. 2 and 3 only ..... Per Dozen.	.....	4.32	7.20	15.00	18.00
"Armco" Ingot Iron, No. 28 Gauge ..... Per Dozen,	4.80	5.76	9.00	.....	.....

Discount.

Steel—29 Ga. ..... % 26 Ga. ..... % "Armco" Ingot Iron—28 Ga. ..... %

SQUARE CORRUGATED—Style "A"

Regular Curve, forward or backward, to or from the wall.

Angle, Degrees, 60 — No. 2.

No. 3. 75

Inches	2	3	4	5
Exact Size, Inches	1¾x2¼	2⅜x3¼	2¾x4¼	3¾x5
Angle No. 2—Crimps.	4	4	5	5
Angle No. 3—Crimps.	5	5	6	6
Steel, No. 29 Ga.....	$4.80	6.00	7.80	12.00
Steel, No. 26 Ga.....	....	6.00	7.80	12.00
Armco Iron, 28 Ga....	7.20	8.40	10.80	....

Style "A"—Per Dozen

SQUARE CORRUGATED—Style "B"

Side Curve, along the wall.

Angle, Degrees, 60 — No. 2.

No. 3. 75

Inches	2	3	4	5
Exact Size, Inches	1¾x2¼	2⅜x3¼	2¾x4¼	3¾x5
Angle No. 2—Crimps.	5	5	6	7
Angle No. 3—Crimps.	6	7	8	9
Steel, No. 29 Ga.....	$4.80	6.00	7.80	12.00
Steel, No. 26 Ga.....	....	6.00	7.80	12.00
Armco Iron, 28 Ga....	7.20	8.40	10.80	....

Style "B"—Per Dozen

Discounts.

Steel—No. 29 Ga. ..... % Steel—No. 26 Ga. ..... % Armco Iron—28 Ga. ..... %

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

POLYGON CONDUCTOR ELBOWS

The Ferdinand Dieckmann Co.

Angle, Degrees, No. 2. 60.

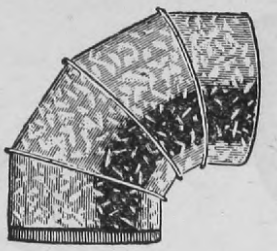
No. 3. 75

Polygon Flat Crimp Galvanized **"Armco"** Ingot Iron Conductor Elbows. Fit and match Polygon Pipe perfectly.

Inches	2	3	4
No. 28 Gauge, Per Dozen	$7.20	8.40	10.80

ADJUSTABLE ELBOWS

Galvanized Steel

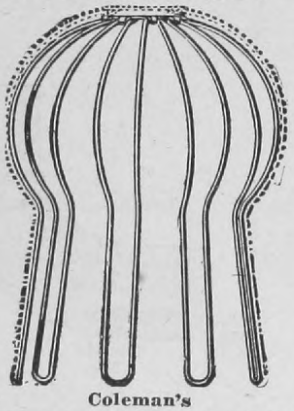


Standard Gauge.

Galvanized Steel can be adjusted to any angle between a straight line and a right angle.

Inches	2	3	4
Per Dozen	$2.40	3.60	4.80

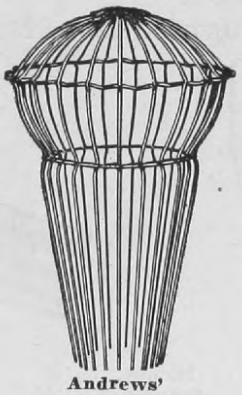
SPOUT GUARDS



Coleman's
Galvanized Wire, Adjustable.

No.	1	2
Fit Pipe, inches,	2, 3 and 4	5 and 6
Per Dozen	$1.40	3.00

CONDUCTOR STRAINERS



Andrews'
Galvanized Wire.

No.	12	13	14	15	16
Inches	2	3	4	5	6
Per Dozen	$1.50	2.00	3.00	5.00	6.00

RAIN WATER CUT-OFFS

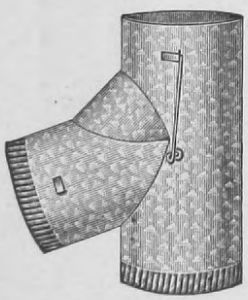
Young's.
Round Corrugated.
Galvanized, with Strainer.

Inches	3	4
Per Dozen	$12.00	13.50

Packed—One Dozen in a Crate.

RAIN WATER CUT-OFFS

CENTENNIAL—A



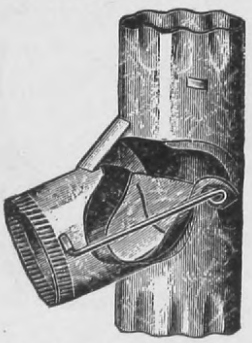
"Style A"—Plain Round
Galvanized—.....%

Inches	2	3	4
Per Dozen	$8.75	10.00	13.75

The only Single Cut-off made to fit Plain Round and Round Corrugated Pipe and which can be used without extra Pipe or Elbows. Strong and Durable. **Assorted** Right and Left Hand.

Packed—One Dozen in a Crate.

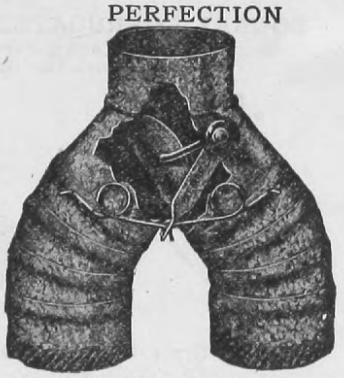
CENTENNIAL—B



"Style B"—Round Corrugated
Galvanized—.....%

Inches	2	3	4
Per Dozen	$10.00	11.00	15.00

PERFECTION



"Perfection"—Round Corrugated
Galvanized—.....%

Inches	2	3	4
Per Dozen	$7.00	8.00	11.00

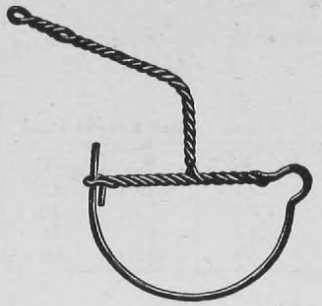
A One-Piece Corrugated Cut-off. All connections are interlocked and Re-galvanized after assembling.

Packed—One Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EAVE TROUGH HANGERS

EUREKA



Eureka Galvanized Wire Eave Trough Hangers.

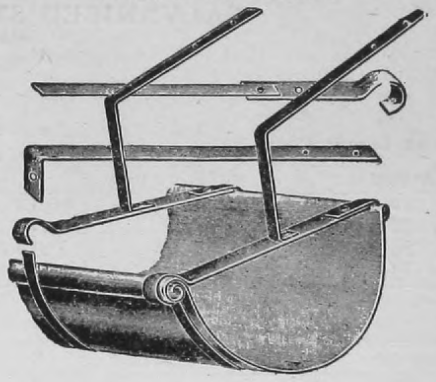
Per Gross

Inches	3	3½	4	4½
No. 21—Single Bead	$2.75	2.75	2.75	3.00
No. 22—Double Bead	3.00	3.00	3.00	3.25

Inches	5	6	7	8
No. 31—Single Bead	$3.00	3.50	4.00	4.50
No. 32—Double Bead	3.25	3.75	4.25	4.75

Packed—One Gross in a Box.

BAKER PATTERN



Baker Pattern Eave Trough Hangers.

Inches	3½	4	4½	5	6
No. 41—Single Bead, Per Gross,	$5.30	5.30	5.50	5.50	7.00
No. 42—Double Bead, Per Gross,	5.30	5.30	5.50	5.50	7.00

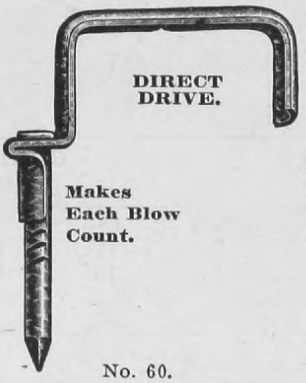
Packed—One Gross in a Box.

CONDUCTOR PIPE HOOKS

Direct Drive—Wrought Steel.

No. 50

No. 55.



No. 60.

No. 65

Single Round, for Wood. **Single Round, for Brick.** **Single Square, for Wood.** **Single Square, for Brick.**

Two Pieces, Electric Welded and Galvanized

Round—Per 100.

Inches	2	2½	3	4	5	6
No. 50—For Wood	$1.50	2.00	2.50	3.50	5.00	6.00
No. 55—For Brick	1.75	2.25	2.75	4.25	6.00	7.50

Packed—2 to 4 inch 100; 5 and 6 inch 50 in a Box.

Square—Per 100.

Inches	2	2½	3	4	5	6
No. 60—For Wood	$1.50	2.00	2.50	3.50	5.00	6.00
No. 65—For Brick	$1.75	2.25	2.75	4.25	6.00	7.50

Packed—2 to 4 inch 100; 5 and 6 inch 50 in a Box.

Note.—For 2 inch Plain Round Pipe order 2 inch Round Conductor Hooks.
For 2 inch **Round Corrugated** Pipe order 2½ inch Round Conductor Hooks.
For 2 inch **Square Corrugated** Pipe order 2½ inch **Square** Conductor Hooks.

WROUGHT CONDUCTOR HOOKS

Galvanized

Forged in one piece, without weld. Extra strong and properly proportioned.

Round, for Wood and Brick.

Per 100.

Inches	2	3	4	5	6
No. 75—For Brick	$12.00	15.00	22.00	24.00	26.00

Packed—25 in a Box.

Square, for Brick.

Per 100.

Inches	2	3	4	5	6
No. 85—For Brick	$12.00	15.00	22.00	24.00	26.00

Packed—25 in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EAVE TROUGH, CONDUCTOR PIPE AND ACCESSORIES

Including Heavy Gauges and Special Sizes

GALVANIZED STEEL AND "ARMCO" AMERICAN INGOT IRON

Standard List Prices, Revised August 15, 1912.

Please note that in Steel standard gauge is No. 29 while in "Armco" Ingot Iron standard gauge is No. 28, same being lightest gauges on each.

EAVE TROUGH

Per Lineal Foot. — Single Bead—Lap Joint — **Per Lineal Foot.**

Gauge	Size, inches	3	3½	4	4½	5	6	7	8	9	10
29		$0.13	.14	.16	.18	.19	.23	.27	.31	.36	.40
28		.15	.16	.18	.20	.21	.25	.30	.34	.38	.42
26		.19	.20	.22	.24	.25	.30	.35	.40	.45	.50
24		..	..	.28	.30	.31	.37	.44	.50	.56	.62

Single Bead—Slip Joint

Gauge	Size, inches	3	3½	4	4½	5	6	7	8	9	10
29		$0.14	.15	.17	.19	.20	.25	.29	.33	.38	.42
28		.16	.17	.19	.21	.22	.27	.32	.36	.40	.44
26		.20	.21	.23	.25	.26	.32	.37	.42	.47	.52
24		..	..	.29	.31	.32	.39	.46	.52	.58	.64

Double Bead—Lap Joint

Gauge	Size, inches	3	3½	4	4½	5	6	7	8	9	10
29		$0.18	.19	.21	.23	.24	.28	.32	.36	.41	.45
28		.20	.21	.23	.25	.26	.30	.35	.39	.43	.47
26		.24	.25	.27	.29	.30	.35	.40	.45	.50	.55
24		..	..	.33	.35	.36	.42	.49	.55	.61	.67

Double Bead—Slip Joint

Gauge	Size, inches	3	3½	4	4½	5	6	7	8	9	10
29		$0.19	.20	.22	.24	.25	.30	.34	.38	.43	.47
28		.21	.22	.24	.26	.27	.32	.37	.41	.45	.49
26		.25	.26	.28	.30	.31	.37	.42	.47	.52	.57
24		..	..	.34	.36	.37	.44	.51	.57	.63	.69

CONDUCTOR PIPE

Per Lineal Foot. — Plain Round — **Per Lineal Foot.**

Gauge	Size, inches	1½	2	2½	3	3½	4	5	6
29		$0.11	.13	.14	.15	.18	.20	.25	.30
28		.13	.15	.16	.17	.20	.23	.28	.33
26		..	.19	.20	.21	.24	.28	.34	.40
24		..	..	..	.27	.31	.35	.44	.52

Round Corrugated

Gauge	Size, in.	2	3	4	5	6
29		$0.13	.15	.20	.25	.30
28		.15	.17	.23	.28	.33
26		.19	.21	.28	.34	.40
24		..	.27	.35	.44	.52

Square Corrugated

Gauge	Size, in.	2	3	4	5
29		$0.15	.17	.22	.27
28		.17	.19	.25	.30
26		.21	.23	.30	.36
24		..	.29	.37	.46

Note.—2 inch Square equals 1¾x2¼, 3 inch equals 2⅜x3¼, 4 inch equals 2¾x4¼, and 5 inch equals 3¾x5 inches.

Polygon—"Armco" Ingot Iron Only

Gauge	Size, inches	2	3	4	5	6
28		$0.17	.18	.26	.31	.36
26		.21	.23	.31	.37	.43
24		.27	.29	.39	.47	.56

COLD ROLLED COPPER CONDUCTOR PIPE

Per Lineal Foot. — Plain Round and Round Corrugated — **Per Lineal Foot.**

Size, inches	1½ & 2	2½ & 3	3½ & 4	4½ & 5	6
14 oz.	$0.40	.50	.65	.85	1.00
16 oz.	.43	.54	.70	.92	1.08
20 oz.	.54	.67	.88	1.15	1.35

Polygon

Size, inches	2	3	4	5	6
14 oz.	$0.45	.56	.72	.93	1.10
16 oz.	.48	.60	.77	1.00	1.18
20 oz.	.60	.75	.96	1.25	1.48

Square Corrugated

Size, inches	2	3	4	5
14 oz.	$0.42	.52	.67	.87
16 oz.	.45	.56	.72	.94
20 oz.	.56	.70	.90	1.18

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GALVANIZED EAVE TROUGH, CONDUCTOR PIPE AND ACCESSORIES

(Continued)

PLAIN RIDGE ROLL

Per Lineal Foot. — Per Lineal Foot.

Gauge—Roll, inches	1	1¼	1½	2	2	3
Girth, inches	6	7	8	10	12	14
29	$0.13	.14	.16	.19	.23	.28
28	.15	.16	.18	.21	.25	.30
26	.19	.20	.22	.25	.29	.34
24	.25	.26	.28	.31	.35	.40

FORMED VALLEY

Gauge — Girth, inches	10	12	14	16	20	24	28	30
29	$0.12½	.15	.17½	.20	.25	.30	.35	.37
28	.14½	.17	.19½	.22	.27	.32	.37	.39
26	.18½	.21	.23½	.26	.31	.36	.41	.43
24	.24½	.27	.29½	.32	.37	.42	.47	.49

O. G. BOX AND ROOF GUTTER

Styles A, B, C, D, E, F, G and H.

Ga.-Girth in.	8	10	12	14	15	16	18	20	22	24	26	28	30
29	$0.20	.25	.30	.35	.37	.40	.45	.50	.55	.60	.65	.70	.75
28	.22	.27	.32	.37	.39	.44	49	.54	.59	.64	.69	.74	.79
26	.26	.31	.36	.41	.43	.52	.57	.62	.67	.72	.77	.82	.87
24	.44	.49	.54	.59	.61	.64	.69	.74	.79	.84	.89	.94	.99

Style J.

Ga.—Girth in.	10	12	14	15	16	18	20	22	24	26	28	30
29	$0.30	.36	.42	.45	.48	.54	.60	.66	.72	.78	.84	.90
28	.32	.38	.44	.47	.52	.56	.64	.70	.76	.82	.88	.94
26	.36	.42	.48	.51	.60	.66	.72	.78	.84	.90	.96	1.02
24	.54	.60	.66	.69	.72	.78	.84	.90	.96	1.02	1.08	1.14

Intermediate Girths take list of next higher Girth. Wider than 30 inches add proportionately to list.

EAVE TROUGH MITERS

Price Per Dozen. — Price Per Dozen.

Single Bead—Lap Joint

Gauge — Size, inches	3½	4	4½	5	6	7	8
Standard	$3.25	3.50	4.00	4.00	5.00	6.50	8.00
26	4.00	4.25	4.75	4.75	6.00	8.00	9.50
24	4.75	5.50	6.50	6.50	7.50	9.00	11.00

Single Bead—Slip Joint

Gauge — Size, inches	3½	4	4½	5	6	7	8
Standard	$4.25	4.50	5.00	5.00	6.00	7.50	9.00
26	5.00	5.25	5.75	5.75	7.00	9.00	10.50
24	5.75	6.50	7.50	7.50	8.50	10.00	12.00

Double Bead—Lap Joint

Gauge — Size, inches	3½	4	4½	5	6	7	8
Standard	$4.25	4.50	5.00	5.00	6.00	7.50	9.00
26	5.00	5.25	5.75	5.75	7.00	9.00	10.50
24	5.75	6.50	7.50	7.50	8.50	10.00	12.00

Double Bead—Slip Joint

Gauge — Size, inches	3½	4	4½	5	6	7	8
Standard	$5.25	5.50	6.00	6.00	7.00	8.50	10.00
26	6.00	6.25	6.75	6.75	8.00	10.00	11.50
24	6.75	7.50	8.50	8.50	9.50	11.00	13.00

ELBOWS AND SHOES

Price Per Dozen. — Price Per Dozen.

Plain Round and Round Corrugated

Size, inches	Galvanized Steel		Galvanized "Armco" Ingot Iron		14 oz. Copper		16 oz. Copper	
	Elbows	Shoes	Elbows	Shoes	Elbows No. 0-1-2-3	Shoes and No. 4 Elbows	Elbows No. 0-1-2-3	Shoes and No. 4 Elbows
2	$3.60	4.80	4.80	6.00	8.40	9.00	9.00	10.20
2½	4.32	5.76	5.76	7.20	10.80	12.00	12.00	13.20
3	4.32	5.76	5.76	7.20	10.80	12.00	12.00	13.20
4	7.20	9.00	9.00	10.80	16.20	18.00	18.00	19.80
5	15.00	18.00	17.40	19.80	24.00	27.00	27.00	30.00
6	18.00	21.60	21.00	24.00	34.20	37.80	37.80	42.00

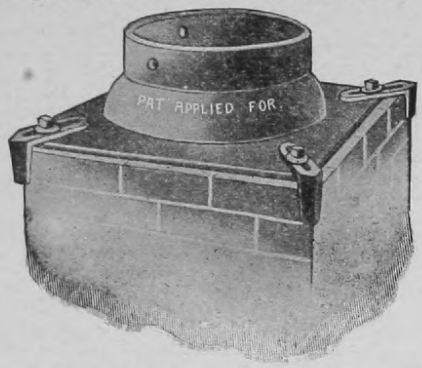
Polygon and Square Corrugated

Size, inches	*Galvanized Steel		Galvanized "Armco" Ingot Iron		14 oz. Copper		16 oz. Copper	
	Elbows	Shoes	Elbows	Shoes	Elbows No. 0-1-2-3	Shoes and No. 4 Elbows	Elbows No. 0-1-2-3	Shoes and No. 4 Elbows
2	$4.80	6.00	7.20	9.00	10.20	10.80	10.80	12.60
3	6.00	7.20	8.40	10.20	13.20	14.40	14.40	16.20
4	7.80	9.60	10.80	13.20	19.20	21.60	21.60	24.00
5	12.00	15.00	16.20	19.20	28.80	33.00	33.00	36.00
6	14.40	16.80	20.40	24.00	40.80	45.00	45.00	50.40

Note.—6 Inch List Applies to Polygon only. 5 Inch is our Capacity on Square Pipe, Elbows and Shoes. *We furnish Polygon Goods in Armco American Ingot Iron and Copper only.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ADJUSTABLE CHIMNEY CAPS



Nos. 7-7 to 10-10.

SWING CHIMNEY TOPS

DAYTON

Castings Only.

Complete with Hood and Vane.

"Buhl" Adjustable Chimney Caps

Takes the place of a galvanized base for chimneys, made of cast iron. Holds flue together, fastens with a machine screw, will last as long as the chimney. Legs can be attached either at corners or sides of chimney.

Nos.	Size of Base Inches	Size of Collar Inches	Fits Chimneys with		Weight Pounds	Per Dozen	
			Bricks	Flues Inches		For Lots of Half Dozen	For Less Than Half Dozen Lots.
7-7	11½x13½	7	1½x2 1½x2½	4x 8 4x12	10	$.....	$.....
8-7	12x16	7	1½x2 1½x2½ 2x2 2x2½	4x 8 4x12 8x 8 8x12	11	.....	.....
8-8	12x16	8	1½x2 1½x2½ 2x2 2x2½	4x 8 4x12 8x 8 8x12	12	.....	.....
10-10	16x20	10	2x3 2½x2½ 2½x3	8x16 12x12 12x16	20	.....	.....

Packed—Half Dozen of a Size in a Box.

DAYTON SWING CHIMNEY TOPS

The easiest turning chimney top made, center Bearing Pin is of wrought iron. Fits Buhl Adjustable Chimney Caps.

Castings Only, Mounted and Drilled

Inches	6	7	8	10
Per Dozen	$11.50	13.50	15.00	18.00

Hoods and Vanes Only, Formed and Punched, Ready to Attach

Inches	6	7	8	10
Per Dozen	$8.00	9.00	10.00	14.00

Complete with Castings, Hoods and Vanes

Inches	6	7	8	10
Per Dozen	$19.50	22.50	25.00	32.00

Stock Sizes—6, 7 and 8 inch only.

STAR VENTILATORS

Galvanized Steel

In.	Each	In.	Each	In.	Each
3	$....	**12**	$....	28	$....
3½	.....	13	.....	30	.....
4	.....	**14**	.....	32	.....
4½	.....	15	.....	34	.....
5	.....	16	.....	36	.....
5½	.....	17	.....	40	.....
6	.....	18	.....	44	.....
7	.....	19	.....	48	.....
8	.....	20	.....	54	.....
9	.....	22	.....	60	.....
10	.....	24	.....	72	.....
11	.....	26	.....		

Stock Sizes are indicated by Bold Face Type.

Cold Rolled Copper Star Ventilators quoted on request.

Fire Retarding Standard Skylight and **Fire Retarding Skylight** are other types of Star Ventilators much used by U. S. Government and specified and approved by all architects.

Star Ventilators give greater exhaust capacity per dollar invested than any other ventilators. They are unequaled for Factory, Warehouse or Residence use. They require no attention whatever, after proper installation.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TERNE ROOFING TIN PLATE

Announcement—We take pleasure in announcing that all of our Roofing Tin is now made with Copper Bearing Open Hearth Steel Base. It has been demonstrated that material of this character is not only unusually soft and ductile, but amalgamates with the tin and lead coating in such a manner as to overcome many of the surface imperfections which would otherwise exist. Every tinner knows the virtues of copper and copper roofing. It has been conclusively proven that when this metal is added to high grade Open Hearth Steel in proper proportions, many of its characteristics are still in evidence. There has been a strong demand from builders everywhere for better Roofing Tin. The service tests which we have made clearly indicate that we are in a position to meet this demand.

Coating Stamped on each Sheet

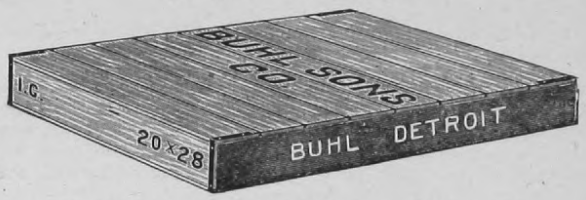
THURBER

Eight Pound Coating, Not Stamped with brand.

Mill Squared.

Size	Sheets Per Box	Net Weight Per Box	Price Per Box
20x28 I.C.L.	112	200 lbs.	$.....

BUHL DETROIT



Twelve Pound Coating, Stamped with brand.

Resquared, Palm Oil Finish.

Size	Sheets Per Box	Net Weight Per Box	Price Per Box
20x28 I. C.	112	220 lbs.	$.....
20x28 I. X.	112	276 lbs.	.....

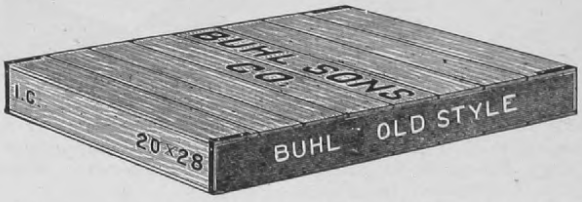
WOLVERINE OLD STYLE

Twenty Pound Coating, Hand Made, Stamped with brand.

Resquared and Redipped. Palm Oil Finish.

Size	Sheets Per Box	Net Weight Per Box	Price Per Box
20x28 I. C.	112	226 lbs.	$.....
20x28 I. X.	112	282 lbs.	.....

BUHL OLD STYLE



Twenty-Five Pound Coating, Stamped with brand.

Resquared and Redipped. Palm Oil Finish.

Size	Sheets Per Box	Net Weight Per Box	Price Per Box
20x28 I. C.	112	231 lbs.	$.....
20x28 I. X.	112	287 lbs.	.....

BUHL OLD PROCESS

Forty Pound Coating, Hand Made, Stamped with brand and Resquared. Palm Oil Finish.

Size	Sheets Per Box	Net Weight Per Box	Price Per Box
20x28 I. C.	112	246 lbs.	$.....
20x28 I. X.	112	302 lbs.	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"PROTECTION FIRE DOOR STOCK"

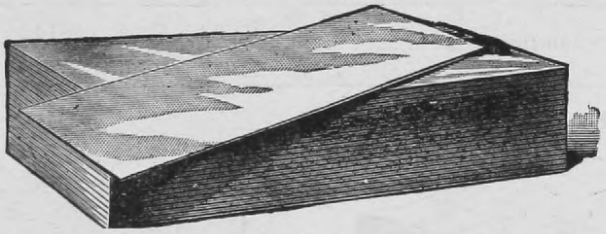
Palm Oil Finish.

Made to conform in all respects to the Plate required by the National Board of Fire Underwriters for standard fire doors, as published in their specifications, namely:

Prime Terne Plate of IC thickness and 14x20 inches in size to be used. Finished Plates to weigh not less than 113 pounds net per box of 112 sheets, including at least 10 pounds of coating. (Equal to Basis of 20 pounds Coating per box of 112 sheets 20x28 inches). Black Plate base to be of best quality Basic Open Hearth Soft Steel or Charcoal Iron, weighing 103 to 105 pounds per box of 112 sheets before coating. Coating to be an alloy of not less than 25 per cent pure new tin, nor more than 75 per cent pure new lead, applied by the **Palm Oil Finish,** no acid flux or flux of any kind other than palm oil being used. Plates to be resquared.

Protection Underwriters Fire Door Stock, 14x20 inch I. C., 112 Sheets in a box, **Net** weight per box not less than 113 pounds.....Per Box, $.....

LONG TERNES



Long Ternes are black plates coated with lead and tin and are used by automobile manufacturers for making Fenders, Tanks, Radiators and various other parts. **Stock:** Our regular stock is intended only for ordinary work. It will single or double seam fairly well and take shallow, easy stamping which does not require a special stamping grade. When wanted for deep stamping or other special work however, we solicit inquiries for the grade wanted, on which we will quote for direct shipment from mill.

Coating—Basis of 8 pounds per box of 112 sheets 20x28 inches.

Gauge	Decimal Thickness	Size Inches	Sheets Per Bundle	Weight Per Sheet	Approximate Weight Per Bundle	Price Per 100 Pounds
No. 18	.05	36x 96 in.	3	48 lbs.	144 lbs.	$.....
No. 18	.05	36x120 in.	2	60 lbs.	120 lbs.	.....
No. 20	.0375	36x 96 in.	4	36 lbs.	144 lbs.	.....
No. 20	.0375	36x120 in.	3	45 lbs.	135 lbs.	.....
No. 22	.03125	36x 96 in.	5	30 lbs.	150 lbs.	.....
No. 22	.03125	36x120 in.	4	37½ lbs.	150 lbs.	.....

"A Quality Rule—Buy Goods Branded Buhl"

Buhl

Mail Orders are our highest Compliments

and

We assure you the same will be given due and careful attention.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRIGHT TIN PLATE

ILLTYD COKE

Illtyd Coke, Bright Tin Plate.

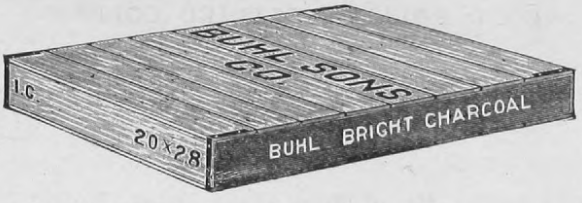
Regular Sizes.

Size	Quantity in Box: Sheets	Quantity in Box: Base Boxes	Base Weight Per Box for 112 Sheets of 14x20	Net Weight Per Box	Price Per Box
20x28 I. C. L.	112	2	90 lbs.	180 lbs.	$.....
20x28 I. C. L.	112	2	100 lbs.	200 lbs.	.....
20x28 I. X. L.	112	2	128 lbs.	256 lbs.	.....

Special Furnace Pipe Sizes.

Size	Quantity in Box: Sheets	Quantity in Box: Base Boxes	Base Weight Per Box for 112 Sheets of 14x20	Net Weight Per Box	Price Per Box
20x29½ I. C. L.	112	2.11	100 lbs.	211 lbs.	$.....
20x29½ I. X. L.	112	2.11	128 lbs.	270 lbs.	.....
20x32½ I. C. L.	112	2.32	100 lbs.	232 lbs.	.....
20x32½ I. X. L.	56	1.16	128 lbs.	148 lbs.	.....
20x39 I. C. L.	56	1.39	100 lbs.	139 lbs.	.....
20x39 I. X. L.	56	1.39	128 lbs.	178 lbs.	.....

BUHL BRIGHT CHARCOAL



Buhl Bright Charcoal Tin Plate.

Size	Quantity in Box: Sheets	Quantity in Box: Base Boxes	Base Weight Per Box for 112 Sheets of 14x20	Net Weight Per Box	Price Per Box
20x28 I. C. L.	112	2	100 lbs.	200 lbs.	$.....
20x28 I. X. L.	112	2	128 lbs.	256 lbs.	.....

Size	Quantity in Box: Sheets	Quantity in Box: Base Boxes	Base Weight Per Box for 112 Sheets of 14x20	Net Weight Per Box	Price Per Box
20x28 IXX	56	1	155 lbs.	155 lbs.	$.....
20x28 IXXX	56	1	175 lbs.	175 lbs.	.....
20x28 IXXXX	56	1	195 lbs.	195 lbs.	.....

STANDARD WEIGHTS AND GAUGES OF TIN PLATE

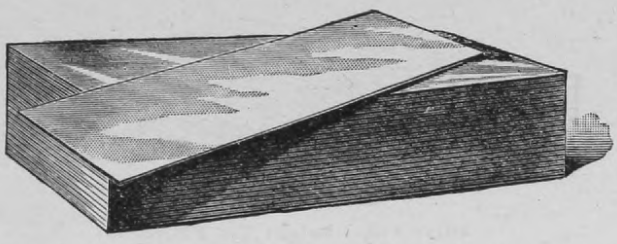
Trade Term	65 lb.	70 lb.	75 lb.	80 lb.	85 lb.	90 lb.	95 lb.
Nearest U. S. Standard Gauge	36	35	34	33	32	31	31+
Approximate Decimal Thickness	.0070313	.0078125	.0085938	.009375	.0101563	.0109375	.0113282
Weight per Box, 14x20", lbs	65	70	75	80	85	90	95

Trade Term	100 lb.	IC	IXL	IX	IXX	IXXX	IXXXX	IXXXXX
Nearest U. S. Standard Gauge	30½	30	28	28	27	26	25	24
Approximate Decimal Thickness	.0117188	.0125	.0148437	.015625	.0171875	.01875	.021875	.025
Weight per Box, 14x20", lbs	100	107	128	135	155	175	195	215

Note.—Slight variations must be expected in actual practice.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHEET COPPER



Common Soft Hot Rolled Sheathing Copper, 14 ounce, 14x48 inches ..... Per Pound, $.....

Tinning on One Side, extra ..... Per Sheet, ...

Cold Rolled Polished Sheathing Copper, 14 ounce, 14x48 inches ..... Per Pound, ...

Tinning and Polishing, extra ..... Per Sheet, ...

Cold Rolled Copper for Roofing, etc.	Weight per Square Foot	14 ounce	16, 18 and 20 ounce
	18 to 30x96 inches ..... Per Pound, $		.....
	30 to 36x96 inches ..... Per Pound, ...		.....
Soft Rolled Copper for Gutters, etc.	Weight per Square Foot	14 ounce	16, 18 and 20 ounce
	18 to 30x96 inches ..... Per Pound, $		.....
	30 to 36x96 inches ..... Per Pound, ...		.....

Tinning on One Side, extra ..... Per Square Foot, $.....

Note.—Tinning on **both** sides **double** the price of tinning on one side.

COLD ROLLED POLISHED COPPER

Boiler Sizes.

No. 8—Weight per Square Foot 14 ounces, Size of Sheet 14x56 inches, Weight per Sheet 4¾ pounds.. ..... Per Pound, $.....

Tinning and Polishing, extra ..... Per Sheet, ...

No. 9—Weight per Square Foot 14 ounces, Size of Sheet 14x60 inches, Weight per Sheet 5 pounds... ..... Per Pound, ...

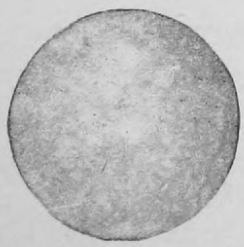
Tinning and Polishing, extra ..... Per Sheet, ...

Note.—Tinning on **both** sides **double** the price of tinning on one side.

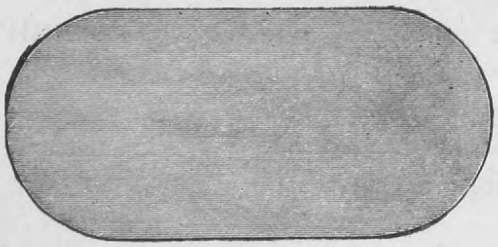
ROUND BOLT COPPER

Diameter, inches	⅜	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾	2
Per Pound ..... $	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

COPPER BOTTOMS



Round Flat, Copper Bottoms.



Oval Flat, Copper Bottoms.

Nos.	7	8	9
Weight per Dozen,	4 lbs. 11 oz.	5 lbs. 14 oz.	7 lbs. 11 oz.

Nos.	7	8	9
Weight per Dozen,	12 lbs. 9 oz.	16 lbs. 6 oz.	19 lbs. 12 oz.

Copper Bottoms, Flat, Round or Oval, 14 ounce ..... Per Pound, $.....

Note.—Bottoms cut to special sizes and other weights furnished on special orders when ordered in sufficient quantities. Circles less than 8 inches and over 13 inches in diameter are not classed as Copper Bottoms.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOT ROLLED SHEET COPPER

List of Advances, Adopted January 29, 1913

SIZE OF SHEETS		64 oz. and Over	32 oz. to 64 oz.	24 oz. to 32 oz.	16 oz. to 24 oz.	15 oz.	14 oz.	13 oz.	12 oz.	11 oz.	10 oz.	9 oz.	8 oz.	Lighter than 8 oz.
Widths	**Lengths**	**Advance Per Pound Over Base Price**												
Not Wider than 30 Inches	Not longer than 72 inches	Base	Base	Base	Base	$0.00½	.01	.01½	.02	.02½	.03	.04½	.06	.09
	Longer than 72 inches but Not longer than 96 inches	Base	Base	Base	Base	.00½	.01	.02	.03	.04½	.06	.07½	.09	.....
	Longer than 96 inches but Not longer than 120 inches	Base	Base	$0.00½	.01	.02	.03	.05	.07	.....	.....	.....	.....	.....
	Longer than 120 inches	Base	Base	.01	.01½	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 30 inches but not wider than 36 inches	Not longer than 72 inches	Base	Base	Base	Base	.01	.02	.03	.04	.06	.08	.10	.12	.....
	Longer than 72 inches but Not longer than 96 inches	Base	Base	Base	Base	.01	.02	.04	.06	.08	.10	.....	.....	.....
	Longer than 96 inches but Not longer than 120 inches	Base	Base	.01	.02	.03	.04	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	Base	$0.01	.02	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 36 inches but not wider than 48 inches	Not longer than 72 inches	Base	Base	.01	.02	.03	.04	.06	.08	.09	.11	.....	.....	.....
	Longer than 72 inches but Not longer than 96 inches	Base	Base	.01	.03	.05	07	.09	.....	.....	.....	.....	.....	.....
	Longer than 96 inches but Not longer than 120 inches	Base	Base	.02	.04	.06	.09	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	Base	$0.01	.03	.06	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 48 inches but not wider than 60 inches	Not longer than 72 inches	Base	Base	.01	.03	.05	.07	.09	.11	.....	.....	.....	.....	.....
	Longer than 72 inches but Not longer than 96 inches	Base	Base	.02	.04	.07	.10	.....	.....	.....	.....	.....	.....	.....
	Longer than 96 inches but Not longer than 120 inches	Base	.01	.03	.06	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	$0.01	.02	.04	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 60 inches but not wider than 72 inches	Not longer than 96 inches	Base	.01	.03	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 96 inches but Not longer than 120 inches	Base	.02	.05	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	.01	.03	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 72 inches but not wider than 108 inches	Not longer than 96 inches	.01	.03	.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 96 inches but Not longer than 120 inches	.02	.04	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	.03	.05	.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 108 inches but not wider than 120 inches	Not longer than 120 inches	.04	.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 120 inches	.05	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 120 inches but not wider than 132 inches	Not longer than 132 inches	.06	.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Longer than 132 inches	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wider than 132 inches		.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

EXTRAS

Circles, Segments, and Pattern Sheets, advance over prices of Sheet Copper required to cut them from ..... Per Pound, $0.03

Circles less than 8 inches in diameter, additional advance ..... Per Pound, .02

Cold or Hard Rolled Copper, 14 ounces per square foot and heavier, advance over the foregoing prices ..... Per Pound, .01

Cold or Hard Rolled Copper, lighter than 14 ounces per square foot, advance over the foregoing prices ..... Per Pound, .02

Cold Rolled and **Annealed** Copper Sheets and Circles, take the same price as Cold or Hard Rolled Copper of corresponding dimensions and thickness.

All Polished Copper, 20 inches wide and under, advance over the price for Cold Rolled Copper. ..... Per Square Foot, .01

All Polished Copper, over 20 inches wide, advance over the price for Cold Rolled Copper... Per Square Foot, .02

Cold Rolled Copper prepared suitable for polishing, same prices and extras as Polished Copper.

NET PRICES FOR TINNING

Tinning Sheets on One Side, all sizes ..... Per Square Foot.....

For Tinning or Polishing Circles and Segments, Based upon the Square of the Circle, or the sheet from which the segment is cut ..... Per Square Foot.....

Tinning Sheets on both sides, double the above Prices.

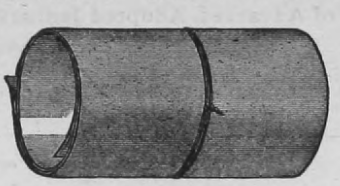
Tinning the Edges of Sheets, one or both Sides, price shall be the same as for Tinning all of one side of the specified Sheet.

Note.—Rolling to an exact given thickness is not practicable.

On Sheets, Bottoms and Circles, 16 oz. and lighter, a variation of not exceeding half ounce, either over or under, must be accepted as a good delivery.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ROLL AND SHEET BRASS



Price List of November 15, 1916.

Prices are for 100 pounds or more of One Item of Sheet Metal in One Order. "Brown and Sharpe's" Gauge the Standard.

Base Price .....Per Pound, $.....

Extras over Base Price—Cents Per Pound

Wider than and including	¼ In. and under	¼ In. ½ In.	½ In. 1 In.	1 In. 2 In.	2 In. 10 In.	10 In. 12 In.	12 In. 14 In.	14 In. 16 In.	16 In. 18 In.	18 In. 20 In.	20 In. 22 In.	22 In. 24 In.	24 In. 26 In.	26 In. 28 In.	28 In. 30 In.	30 In. 32 In.	32 In. 34 In.	34 In. 36 In.	36 In. 38 In.
To and including No. 12			1¼	¾	**Base**	½	1½	2¾	4¾	6¾	8¾	10¾	13¾	16¾	20¾	24¾	28¾	33¾	38¾
No. 13 to No. 16			2	1½	½	1	2	3¼	5¼	7¼	9½	11½	14½	17½	21½	25½	29½	34½	39½
No 17 & No. 18	7½	3½	3	2½	1	1½	2½	3¾	5¾	7¾	10	12	15	18	22	26	30	35	40
No. 19 & No. 20	8	4	3½	3	1½	2	3	4½	6½	8½	10¾	12¾	15¾	18¾	22¾	26¾	30¾	35¾	40¾
No. 21	8¾	4¾	4¼	3¾	1¾	2¾	3¾	5¼	7¼	9½	11¾	13¾	16¾	19¾	23¾	27¾	31¾	36¾	42¾
No. 22	8¾	4¾	4¼	3¾	1¾	2¾	3¾	5¼	7¼	10	12¼	14¼	17¼	20¼	24¼	28¼	32¼	37¼	43¼
No. 23	9½	5½	5	4½	2½	3½	4½	6	8	10¼	12½	15	18	21	25	29	33	38	
No. 24	9½	5½	5	4½	2½	3½	4½	6	8	10¼	12½	15	19	22	26	30	34	39	
No. 25	10	6	5½	5	3	4¼	5¼	7¼	9¼	11¼	13¾	16¼	20¼	24¼	29				
No. 26	10	6	5½	5	3	4¼	5¼	7¼	9¼	11¼	15	18	22	26	31				
No. 27	10½	6½	6	5½	3½	5	6	8	10	12	15¾	19							
No. 28	10½	6½	6	5½	3½	5	6	8	11	13	17	21							
No. 29	17½	8½	7½	7	4½	6	7	9	12	14	18								
No. 30	18½	9½	8½	8	5½	7	8	10	13	16	20								
No. 31	19½	10½	9½	9	6½	8	9	12											
No. 32	20½	11½	10½	10	7½	9	10½	14											
No. 33	28½	14	12½	12	8½	10	12												
No. 34	29½	15	13½	13	9½	11	13												
No. 35	31½	17	15½	14	10½	12½	14½												
No. 36	32½	18	16½	16	12½	14½													

Nos. 37 and 38 B. & S. Gauge. Prices quoted upon application.

Additional Extras

All Metal Heavier than No. 6 gauge, listed and charged as sawed metal whether sheared, slit or sawed.

Metal between gauges, takes price of nearest gauge.

Circles cut from above metal, over 6 in. and not exceeding 12 in. dia., No. 10 gauge and thinner...6c. list advance

Circles cut from above metal, over 6 in. and not exceeding 12 in. dia., thicker than No. 10.....10c. list advance

Circles cut from above metal, 6 in. and smaller and larger than 12 in. dia., special prices quoted upon application.

Segments, pattern sheets and irregular shape blanks, special prices quoted upon application.

Embossed Metal ..... 4c. list advance

Polishing one side, No. 16 and heavier..... (per pound) 4c. list advance

Polishing one side, lighter than No. 16.....(per square foot) 10c. list advance

Polishing both sides, double the above prices.

Sheet Metal extra leveled, special prices quoted upon application.

Sheet Metal 14 in. wide and narrower cut to uniform specific lengths, add the following list advances:

8 in. to 2 ft.	2 ft. to 4 ft.	4 ft. to 6 ft.	6 ft. to 8 ft.	8 ft. to 10 ft.	10 ft. and over, special prices quoted upon application not less than 6c. list advance.
No Charge	1c.	2c.	4c.	6c.	

Sheet Metal, 14 in. wide and narrower, cut to specific lengths, of less than 24 in. or any multiple thereof, no charge for cutting.

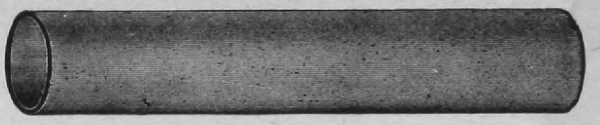
Sheet Metal, 14 in. wide and narrower, cut to specific lengths, shorter than 8 in., special prices quoted upon application, not less than..... 1c. list advance

Sheet Metal wider than 14 in., cut to uniform specific lengths, special prices quoted upon application, not less than prices for cutting 14 in. wide.

Specify whether Soft, Medium, Hard, or Spring Brass is wanted.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BRAZED BRASS TUBING



Price List of August 1, 1914.

Prices are for 100 pounds or more of Brazed Brass Tubing in one order. "Brown & Sharpe's" Gauge the Standard.

Base Price .....Per Pound, $.....

Extras Over Base Price—Per Pound

Outside Diameter		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"
No. 12	.0808	.....	...	...	...	...	...	.01							.02	.04	.05	.06
13	.0719	.....	...	...	...	...	...	.01							.02	.04	.05	.06
14	.0640	.....	...	...	...	.04	.02	.01							.02	.04	.05	.06
15	.0570	.....	...	...	.10	.04	.02	.01			BASE				.02	.04	.05	.06
16	.0508	.....	...	.25	.10	.04	.02	.01							.02	.04	.05	.07
17	.0452	.....	...	.25	.10	.04	.02	.01							.02	.04	.06	.08
18	.0403	.....	.55	.25	.10	.04	.02	.01							.02	.05	.07	.09
19	.0358	.....	.55	.25	.10	.04	.02	.01							.02	.06	.08	.10
20	.0319	$1.07	.57	.27	.12	.06	.04	.02	.01	.01	.01	.01	.01	.02	.04	...	...	...
21	.0284	1.09	.59	.29	.14	.08	.05	.03	.03	.03	.03	.03	.03	.05	...	...	...	...
22	.0253	1.11	.61	.31	.16	.10	.07	.05	.05	.05	.05	.05	.06	.08	...	...	...	...
23	.0225	1.13	.63	.33	.18	.12	.09	.07	.07	.07	.07	.07	.08	...	...	...	...	...
24	.0201	1.17	.67	.37	.22	.16	.13	.11	.10	.10	.10	.10	.11	...	...	...	...	...

Additional Extras

Square and Hexagon Tubing, advance over corresponding size and gauge of Round Tubing.....6c. per pound.

Rectangular Tubing, advance over corresponding size and gauge of Round Tubing, of narrower dimension .....6c. per pound.

Fancy Pattern Tubing, advance over corresponding size and gauge of Round Tubing.....8c. Per pound.

Extra Fancy Pattern Tubing, advance over corresponding size and gauge of Round Tubing.....16c. per pound.

Combination Tubing, advance .....25c. per pound.

All Tubing between gauges takes price of nearest gauge.

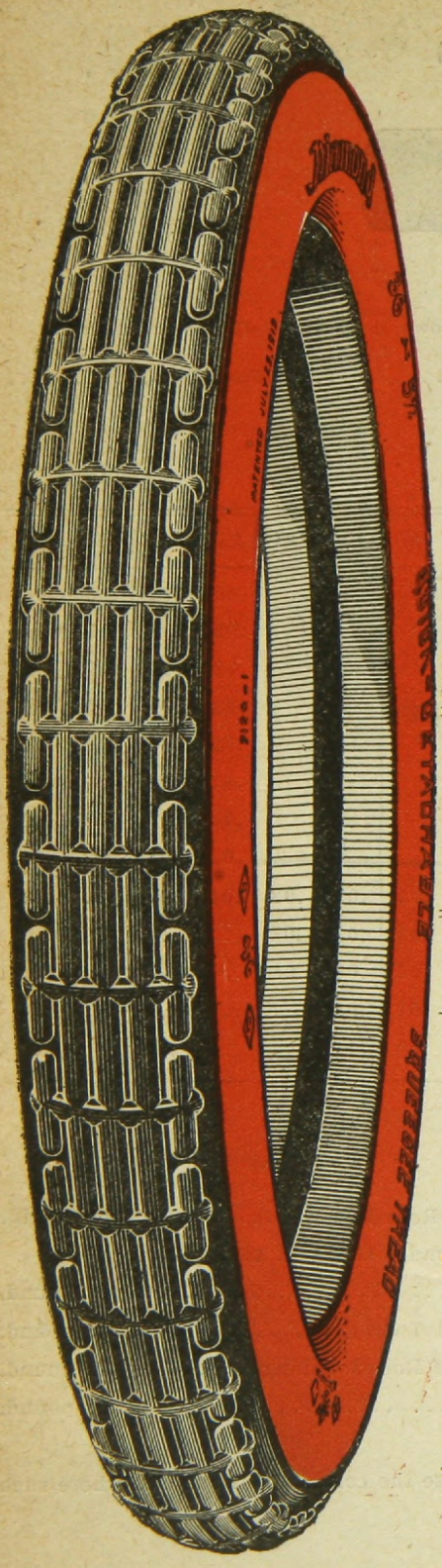
For diameters of the fractional parts of an inch where no price is given, take the column to the left of where such size would appear if designated.

Cutting to Length

Over 96 inch	Over 12 to 96 inch	Over 6 to 12 inch	Over 4 to 6 inch	Over 2 to 4 inch	Over 1 to 2 inch
1c.	No Charge	2c.	3c.	4c.	6c.

1 inch and shorter—Special prices on application.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN



Diamond Squeegee (Non-Skid) Tires

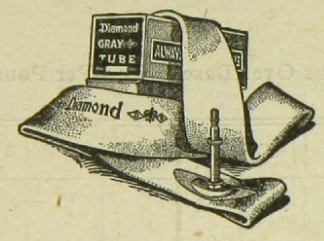
BLACK SQUEEGEE TREAD—RED SIDE WALLS

The new Black "Velvet Rubber" is tougher, more elastic, and longer wearing than has been put in auto tires heretofore.

The famous Squeegee (Non-Skid) Tread design is one of the most effective ground gripping treads on the market.

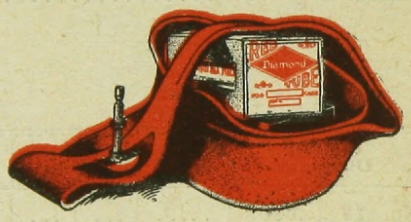
The price is lower than most of the other standard tires.

THE GRAY TUBE



This is the old standard Diamond Tube that has given motorists such splendid service. It can be depended on under all conditions to give the fullest measure of tube satisfaction.

THE RED TUBE



This is a new tube, a Tube De Luxe, costlier to manufacture and distinctive. It is made of tough, long-lived Red Rubber and will stand every test of time and service. It's the ideal tube for the man who wants something different, yet absolutely reliable.

DIAMOND TIRES AND INNER TUBES

Dealer and Consumer Price Schedules will be sent on request.

☛ Do Not Fail to Specify Type and Tread Desired.

Standard Car Equipment Sizes

Sizes	Regular, Q. D. or Straight Bead Smooth Tread	Regular, Q. D. or Straight Bead Squeegee Tread	Grey Tubes	Red Tubes
30x3	$....	.....	.....	.....
30x3 ½	.....	.....	.....	.....
31x3 ½	.....	.....	.....	.....
32x3 ½	.....	.....	.....	.....
31x4	.....	.....	.....	.....
32x4	.....	.....	.....	.....
33x4	.....	.....	.....	.....
34x4	.....	.....	.....	.....
32x4 ½	.....	.....	.....	.....
33x4 ½	.....	.....	.....	.....
34x4 ½	.....	.....	.....	.....
35x4 ½	.....	.....	.....	.....
36x4 ½	.....	.....	.....	.....
33x5	.....	.....	.....	.....
35x5	.....	.....	.....	.....
37x5	.....	.....	.....	.....

Occasional Sizes

Sizes	Regular, Q. D. or Straight Bead Smooth Tread	Regular, Q. D. or Straight Bead Squeegee Tread	Grey Tubes	Red Tubes
28x3	$....	.....	.....	.....
29x3 ½	.....	.....	.....	.....
34x3 ½	.....	.....	.....	.....
36x3 ½	.....	.....	.....	.....
30x4	.....	.....	.....	.....
35x4	.....	.....	.....	.....
36x4	.....	.....	.....	.....
37x4	.....	.....	.....	.....
37x4 ½	.....	.....	.....	.....
36x5	.....	.....	.....	.....
38x5 ½	.....	.....	.....	.....

Exceptional Sizes

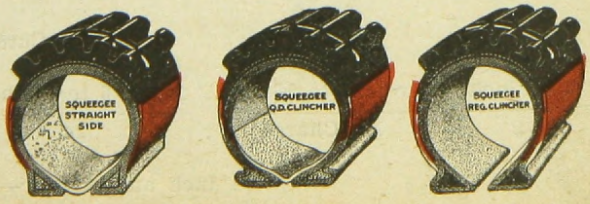
32x3	38x4 ½	39x5	37x5 ½
34x3	40x4 ½	41x5	37x6
33x3 ½	34x5	36x5 ½	39x6

Prices Quoted on Request.

Special Note.—The occasional sizes above are made to order only and are **not** subject to cancellation or return.

"Important"

Caution—When Ordering Be Sure to Specify Regular, Quick Detachable, or Straight Bead; Also Specify Smooth or Squeegee Tread as wanted.



Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RHINOS INNER TUBES

"Rhinos" Inner Tubes have inserts of heavy fabric to prevent blowouts. The several layers of high grade rubber stock add resiliency and easy riding. They are vulcanized into one complete circular tube including the valve stem. They are highly recommended and prove very satisfactory.

Size, inches	30x3	30x3½	32x3½	31x4	32x4	33x4
Each	$7.90	9.50	9.90	12.80	13.20	13.50

Size, inches 34x4	33x4½	34x4½	35x4½	36x4½	35x5	37x5
Each $13.90	16.80	17.30	17.60	17.90	21.00	21.90

THE "DIAMOND SILENT SALESMAN"

Automobile Accessories

Constitutes the first serious attempt to place before the trade generally, a concrete offer consisting of an assortment of Tire Accessories of proven merit and ready selling value.

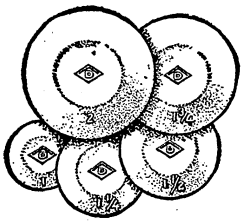
Contents.		Resale Value
½ Doz. ¼ Pint Cans Titan Cement	$0.15 ea.	$ 0.90
1 " ¾x4" Tubes Titan Cement	.05 "	.60
½ " ¼ Pint Cans M-638-X Vulc. Cement	.20 "	1.20
½ " 5½x7" Fabric Patches	.20 "	1.20
1½ " Boxes Cementless Patches	.60 box	10.80
½ " 3 " D. W. Rim Cut & B. O. Patches	.50 ea.	3.00
1 " 3½" " " " " " " "	.60 "	7.20
½ " 4 " " " " " " " "	.65 "	3.90
⅓ " 4½" " " " " " " "	.75 "	3.00
½ " 3 " Clincher Tire Sleeves	1.00 "	6.00
1 " 3½" " " "	1.25 "	15.00
⅓ " 4 " " " "	1.50 "	6.00
¼ " 4½" " " "	1.75 "	5.25
⅓ " 3½" Straight Side Tire Sleeves	1.25 "	5.00
⅓ " 4 " " " " "	1.50 "	6.00
¼ " 4½" " " " "	1.75 "	5.25
1 " Tubes Talcum	.15 "	1.80
50 Valve Insides	.05 "	2.50
25 Valve Caps	.03 "	.75
1 ½ lb. Roll Tire Tape	.35 "	.35
		$85.70

Diamond Silent Salesman Assortment including Cabinet, from Each, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DIAMOND ACCESSORIES

INNER TUBE PATCHES (ROUND)

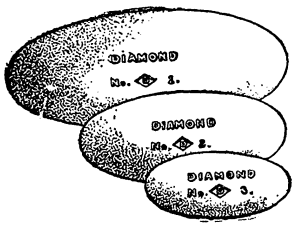


These patches are made of pure gum, and will give splendid satisfaction, especially when used with Titan Cement.

1 " diam.....Each $.....
1¼" diam.....Each .....
1½" diam.....Each .....
1¾" diam.....Each .....
2 " diam.....Each .....

Assorted Envelopes.
Containing 12 Assorted Patches 4-1"; 3-1¼";
2-1½"; 2-1¾" and 1-2".....Each, $.....

INNER TUBE PATCHES (OVAL)



These patches are made of the same stock as Diamond Inner Tubes and will give the best of satisfaction. Titan Cement should be used.

No. 1, large, 5x2¼", 3/32" thick.....Each $.....
No. 2, medium, 3¾"x1¾", 3/32" thich..Each .....
No. 3, small, 2 9/16x1 5/16", 3/32" thick.....Each .....
In sets of 6 assorted, consisting of 1 No. 1, 2 No. 2, 3 No. 3.....Per Set .....

TITAN CEMENT

A high-grade dependable rubber cement for general patching purposes.

¾x4" Tube.....Each $.....
1x4" Tube.....Each .....
¼-pt. Can.....Each .....
½-pt. Can.....Each .....
1-pt. Can.....Each .....
1-qt. Can.....Each .....
1-gal Can.....Each .....

QUICK ACTING CEMENTLESS PATCHES

The original cementless patch —simply remove the cloth protection and apply to the puncture—an immediate repair which is soon vulcanized by the heat of the running tire, and so becomes permanent.

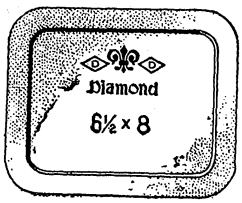
Quick Acting Cementless Patches.....
.....Per Box of one Dozen, $.....

SEAL-TITE

Seal-Tite is a putty-like gum which when kneaded into a cut in a casing will effectually seal it up and exclude moisture and grit that soon deteriorate and weaken the fabric.

Seal-Tite—In 2-oz. cans. Per Can $....

FLAT FABRIC PATCH



(For Motorcycle or Automobile)

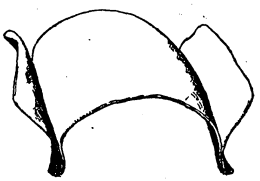
When moistened with gasoline and applied to the inner surface of the casing this patch adheres and for small blowouts makes a very affective temporary repair.

Flat Fabric Patches.
Packed in Strong Envelopes.

5½"x7"...Each $.... 7"x 9"....Each $....
6½"x8"...Each .... 8"x10"....Each ....

DOUBLE-WING BLOWOUT PATCH

(For Motorcycle or Automobile)



Made of strong fabric. The wings fitting under the bead hold it firmly in place—a practical temporary repair for blowout in either side walls or tread. Length, 7 to 18 inches.

3 ".....Each $.... 4½".....Each ....
3½".....Each .... 5 ".....Each ....
4 ".....Each .... 5½".....Each ....

HOOK-ON TIRE SLEEVE

Steel hooks fitting under the rim on clincher and Q. D. and under the bead on straight side tires hold the sleeve firmly in place. The inside patch which comes with every sleeve adds greatly to its effectiveness with large blowouts. For every kind of blowouts this sleeve is the ideal repair.

Be sure to specify straight bead or clincher. Prices are the same in each case. Quarter sizes are for non-skid or stretched casings.

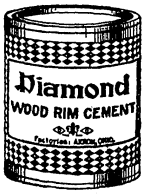
For Motorcycle Tires (Clincher Type Only)

2¼".....Each $.... 2¾".....Each ....
2½".....Each .... 3 ".....Each ....

For Automobile Tires

3 ".....Each $.... 4¼".....Each $....
3¼".....Each .... 4½".....Each ....
3½".....Each .... 4¾".....Each ....
3¾".....Each .... 5 ".....Each ....
4 ".....Each .... 5½".....Each ....

WOOD RIM CEMENT

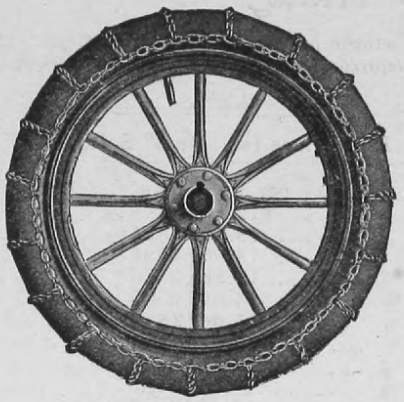


The best cement for properly fasening a bike tire to a rim, either wood or steel. Put up ready for use. No heating or thinning is required.

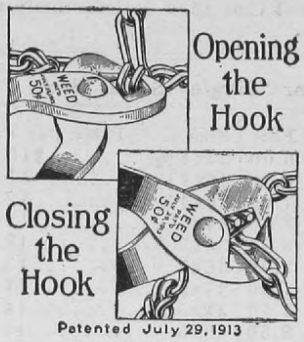
2-oz bottle with swab..Each $.....
¾x4" tubes.....Each .....
1x4" tubes.....Each .....
¼-pint cans.....Each .....
½-pint cans.....Each .....
Pint cans.....Each .....
Quart Cans.....Each .....
Gallon Cans.....Each .....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

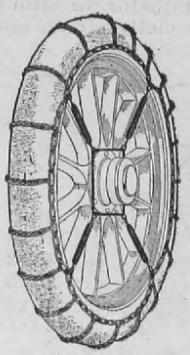
WEED TIRE CHAINS



Weed Tire Chains.



Weed Pliers.



Weed Chain Adjusters.

WEED TIRE CHAINS

Weed Grips represent the highest development of an Anti-Skid device. Made of heavy wire of high tensile strength, heavily galvanized to prevent rusting. Cross chains hardened. Each Weed Chain is closely inspected before leaving factory therefore the result is a perfect chain.

Size Inches	Per Pair	Size Inches	Per Pair	Size Inches	Per Pair
28x2 ½	$3.50	32x4	$6.00	40x4 ½	11.00
30x2 ½	3.75	33x4	6.50	42x4 ½	12.50
28x3	4.00	34x4	7.00	34x5	8.50
30x3	4.50	35x4	7.50	35x5	9.00
32x3	5.00	36x4	7.50	36x5	9.00
34x3	5.50	37x4	8.00	37x5	9.75
36x3	6.00	40x4	10.00	38x5	10.50
28x3 ½	4.50	30x4 ½	6.50	39x5	11.25
30x3 ½	5.00	32x4 ½	7.00	40x5	12.00
32x3 ½	5.50	34x4 ½	7.50	36x5 ½	12.00
34x3 ½	6.00	35x4 ½	8.00	37x5 ½	13.00
36x3 ½	6.50	36x4 ½	8.00	38x5 ½	14.00
30x4	5.50	37x4 ½	8.75	38x6	14.00
31x4	6.00	38x4 ½	9.50	40x6	15.00

Packed—Each Chain put up in a Brown Canvas Bag.

WEED PLIERS

Weed Pliers, for repairing Weed Tire Chains, easily open and close the hooks of the Cross Chains while the chain is on the tire.

Weed Pliers ..... Each, $0.50

Packed—One in a Box.

WEED CHAIN ADJUSTERS

Weed Chain Adjusters are four springs, radiating from a center chain surrounding the hub and attached by hooks to the side chain. The Adjuster draws the chain evenly to the tires,holding them right but not tight.

Sizes, 28, 30, 32, 34 and 36 inch,.....Per Pair, $1.00

Sizes, 37, 38, 40 and 42 inch.....Per Pair, 1.50

Packed—One Pair in a Box. **In ordering** state **Size.**

WEED CROSS CHAINS

Size, inches	2 ½	3	3 ½	4	4 ½	5	5 ½	6
Each	$0.05	.06	.08	.09	.10	.12	.15	.18

RID-O-SKID TIRE CHAINS

Rid-O-Skid will prevent skidding and slipping, will insure traction and preserve tires, but are not guaranteed same as Weeds. In these Chains we offer an anti-skid device to meet the requirements of those to whom price is the chief consideration; therefore, they are necessarily of inferior quality than the Weed Chains. They are of the same standard lengths, and carry the same number of Cross Chains as Weeds of corresponding size.

A trial will convince you that comfort and safety are well worth the price of a set of Tire Chains, and experience will teach you that Weed Grips, giving three times the mileage, are cheapest in the end.

Size Inches	Per Pair	Size Inches	Per Pair	Size Inches	Per Pair	Size Inches	Per Pair	Size Inches	Per Pair	Size Inches	Per Pair
28x2 ½	$2.20	28x3 ½	$2.90	32x4	$3.50	40x4	$4.55	38x4 ½	$4.75	39x5	$5.70
30x2 ½	2.40	30x3 ½	3.05	33x4	3.60	30x4 ½	3.50	40x4 ½	5.25	40x5	5.95
28x3	2.80	32x3 ½	3.15	34x4	3.70	32x4 ½	3.70	42x4 ½	6.15	36x5 ½	5.90
30x3	2.90	34x3 ½	3.30	35x4	3.75	34x4 ½	3.85	34x5	4.65	37x5 ½	6.15
32x3	3.00	36x3 ½	3.50	36x4	3.95	35x4 ½	4.05	36x5	5.00	38x5 ½	6.45
34x3	3.15	30x4	3.15	37x4	4.05	36x4 ½	4.20	37x5	5.25	38x6	7.00
36x3	3.45	31x4	3.40	38x4	4.30	37x4 ½	4.50	38x5	5.45	40x6	7.45

Packed—Each Chain in a Brown Canvas Bag.

WEED MOTORCYCLE CHAINS

The same high grade material and workmanship is used in these Motorcycle Chains as in the Standard Weed Chains for automobiles. Side Chains are galvanized to prevent rusting and Cross Chains are electrically welded and hardened by a special process to insure maximum wear.

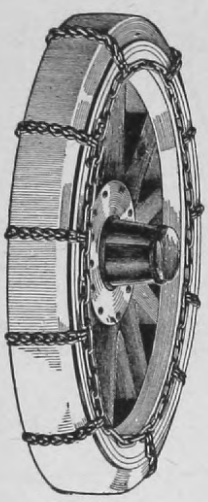
Weed Motorcycle Chains { Size, inches ..... 28x2 ½
Each 2.25
Cross Chains .....Each, .05

Note—Both Rid-O-Skid and Weed Chains should be attached so as to prevent "creeping."

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WEED CHAINS FOR SOLID TIRES

Weed Chains for solid tires are an efficient traction and anti-skid device for single and dual solid truck tires. They are made especially strong and so constructed that they satisfactorily meet the requirements of the heavy truck service.



List Prices for "Single" Solid Tires

Size	Price per Pair	Size	Price per Pair
32x3	$ 6.00	34x4½	$10.50
34x3	6.50	36x4½	11.50
36x3	7.00	38x4½	12.50
38x3	8.00	34x5	12.50
40x3	8.50	35x5	13.50
42x3	9.00	36x5	13.50
30x3½	7.00	37x5	14.50
32x3½	7.50	38x5	14.50
34x3½	8.50	39x5	15.50
35x3½	9.50	40x5	15.50
36x3½	9.50	41x5	16.50
37x3½	10.00	35x6	14.00
38x3½	10.00	36x6	14.00
30x4	8.50	37x6	15.00
32x4	9.00	38x6	15.00
34x4	10.00	39x6	16.00
35x4	11.00	40x6	16.00
36x4	11.00	41x6	17.00
37x4	12.00	42x6	17.00
38x4	12.00	36x7	16.00
39x4	13.00	38x7	17.00
40x4	13.00	39x7	18.00
41x4	14.00	40x7	18.00
42x4	14.00	41x7	19.00

List Prices for "Dual" Solid Tires

Size	Price per Pair	Size	Price per Pair
36x3	$12.50	36x4½	$16.50
38x3	13.50	38x4½	17.50
39x3	14.50	40x4½	18.50
41x3	15.50	34x5	16.50
34x3½	14.00	35x5	17.00
35x3½	15.00	36x5	17.00
36x3½	15.00	37x5	18.00
37x3½	16.00	38x5	18.00
38x3½	16.00	39x5	19.00
39x3½	17.00	40x5	19.00
40x3½	17.00	41x5	20.00
41x3½	18.00	42x5	20.00
34x4	15.00	35x6	19.00
35x4	16.00	37x6	20.00
36x4	16.00	39x6	21.00
37x4	17.00	40x6	21.00
38x4	17.00	41x6	22.00
39x4	18.00	42x6	22.00
40x4	18.00	39x7	23.00
41x4	19.00	40x7	23.00
42x4	19.00	41x7	24.00
34x4½	15.50	42x7	24.00

FIG.1

WEED CROSS CHAINS FOR SOLID TIRES

Size.	For "Single" Solid Tires.		Size.	For "Dual" Solid Tires.	
3 -inch	Per Hundred,	$ 9.00	3 -inch	Per Hundred,	$25.00
3½-inch	Per Hundred,	15.00	3½-inch	Per Hundred,	28.00
4 -inch	Per Hundred,	19.00	4 -inch	Per Hundred,	30.00
4½-inch	Per Hundred,	21.00	4½-inch	Per Hundred,	33.00
5 -inch	Per Hundred,	24.00	5 -inch	Per Hundred,	35.00
6 -inch	Per Hundred,	27.00	6 -inch	Per Hundred,	38.00
7 -inch	Per Hundred,	30.00	7 -inch	Per Hundred,	40.00

Extra Locks—For locking Side Chain Levers on Solid Tire Side Chains....Each, $0.15

FIG.2

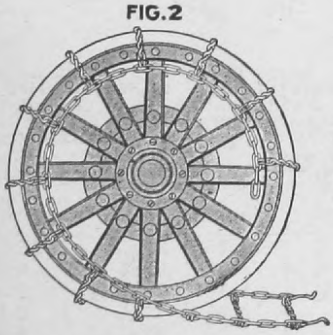
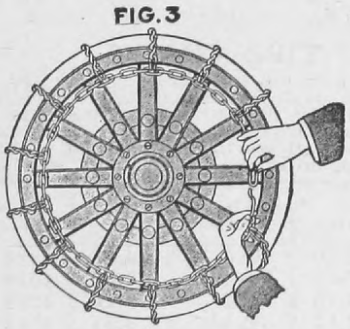


FIG.3



INSTRUCTIONS FOR ATTACHING WEED CHAINS FOR SOLID TIRES

Lay chains over wheel with link end toward rear and tuck the hook or slack end under front part of wheel. (See Fig. 1.)

Start car forward just enough to run over hook or slack end. (See Fig. 2.)

Hook chains as tightly as possible by hand. (See Figs. 3 and 4.)

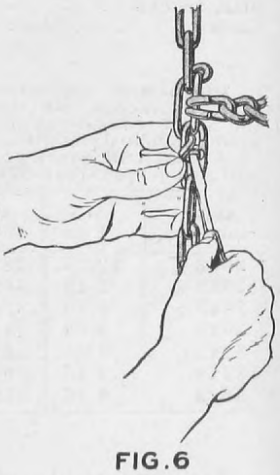
Insert "Lock" in link and give quarter turn with a screw driver. (See Figs. 5 and 6.)

Notice—Attach chains as tightly as possible, and when they stretch take up the slack. Do not leave extra links of side chain loose.

FIG.4

FIG.5

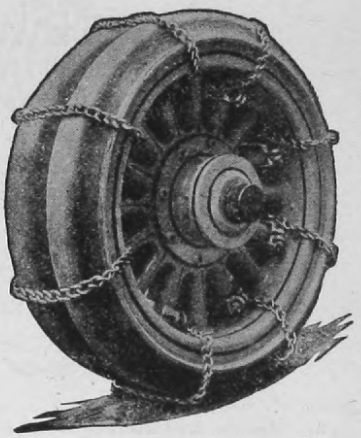
FIG.6



Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ARROW GRIP
TRADE MARK

ANTI-SKID CHAINS



The Arrow-Grip Clamp is fastened to the spoke of the wheel by two bolts and is easily attached or detached—one being used on each alternate spoke.

Clamps are made of the finest quality malleable iron and are lined with rubber to prevent marring the spokes.

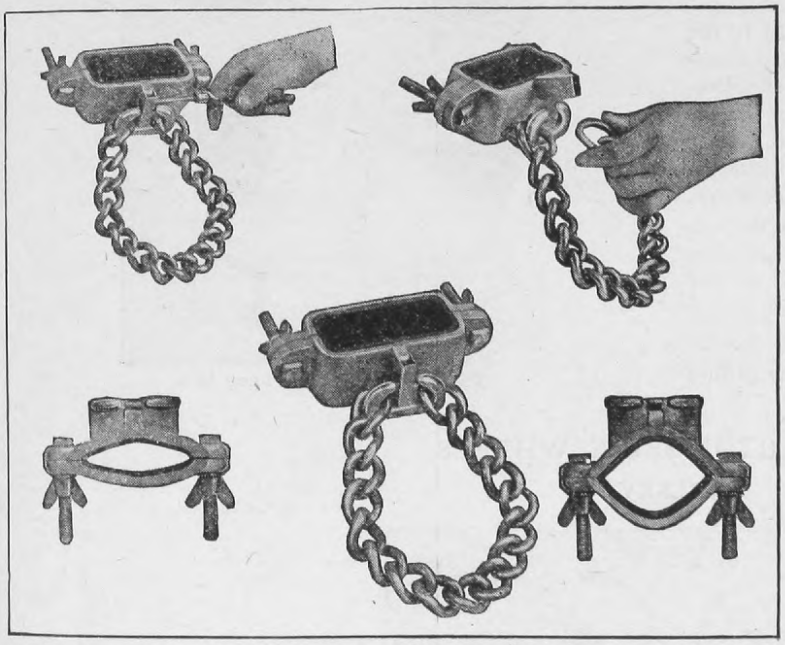
The lock it is noticed is integral with the clamp and there are no parts to lose being only two pieces to the unit, clamp and cross chain.

IT IS UNNECESSARY TO JACK UP THE WHEEL to apply them and as many cross chains can be used as the condition requires.

A set of Arrow-Grips on your truck will save time and money and will eliminate all possibility of accidents.

A size is made for every truck as listed below. Enough chain is furnished to fit largest size tire. Chain being electrically welded and as well as being guaranteed at weld is made from specially tempered steel, insuring the toughness and strength required for this kind of work.

Note.—If you do not find your truck listed, simply mention make, capacity, and year manufactured.



We have prepared the following standard clamps by careful measurement and they will fit nearly every make of truck wheel. You will find in this list a clamp which will fill your particular requiremets.

Clamp Nos.	Style	Long Opens	Length Chain	Unit Complete	Clamp Only
2	Oval	1¾"-1⅛" to 1¾"	14"	$1.75	$1.50
4	Square	1¾"-1¼" to 1¾"	15"	1.75	1.50
6	Oval	2 "-1¼" to 2 "	18"	2.05	1.50
8	Square	2 "-1¼" to 2 "	22"	2.05	1.50
10	Square	2¼"-1¼" to 2¼"	22"	2.25	1.65
12	Oval	2¾"-2 " to 3 "	26"	2.25	1.65
14	Square	2½"-1½" to 2½"	26"	2.25	1.65
16	Square	4 "-2 " to 3 "	35"	2.65	1.75
18	Square	2¾"-1¾" to 2¾"	28"	2.25	1.65
20	Square	3 "-2¼" to 3 "	30"	2.50	1.75
22	Square	3¼"-2¼" to 3¼"	32"	2.50	1.75
24	Square	3½"-2¼" to 3¼"	35"	2.65	1.75
26	Oval	3½"-1 " to 2 "	30"	2.50	1.75
28	Oval	5 "-1 " to 2 "	28"	2.85	1.95

Size of Chain furnished according to weight of truck.
Extra Chain—Nos. 7 and 8, 35c per foot; Nos. 9 and 10, 40c per foot.

Below we give Make of Trucks

Some of the leading makes of Trucks with number of spokes and size of Grip used. If you do not find your Truck listed below, give necessary measurements or simply mention make, capacity, and year manufactured.

Name of Truck—	No. of Spokes per Wheel	Clamp No.	Price of Complete Unit
Autocar	14	10	$2.25
Acme 1T	12	8	2.05
Acme 2T	12	14	2.25
Commerce 1T	12	8	2.05
Dearborn	12	6	2.05
Fulton	12	8	2.05
Federal 1½T	12	14	2.25
Federal 2T	12	16	2.65
Federal 3½T	12	16	2.65
Federal 2T worm drive	12	20	2.50
Tonford	12	8	2.05
G. M. C. 2T	12	12	2.25
G. M. C. 5T	14	16	2.65
G. M. C. 3½T	14	24	2.65
Hurlburt 7T	14	16	2.65
Hurlburt 3½T	14	20	2.50
Hurlburt 1½T	14	6	2.05
Kissel 2T	14	10	2.25
Kissel 4T	16	16	2.65
Mack 2T	12	14	2.25
Mack 2T worm drive	12	18	2.25
Mack 3½T chain drive	14	16	2.65
Mack 5½T	14	16	2.65
Mack 1T	12	10	2.25
Mack 3½T	14	22	2.50
Mack 1T	12	14	2.25
Packard 3T chain drive	14	24	2.65
Pierce-Arrow 5T	16	16	2.65
Pierce-Arrow 2T	14	12	2.25
Packard 3T worm drive	14	15	2.65
Packard 5T	14	24	2.65
Packard 2T	12	20	2.50
Pepublic 2T	14	14	2.25
Republic 1½T Model 11	14	10	2.25
Republic 1½T	14	4	1.75
Republic 1T	14	4	1.75
Republic ¾T	12	2	1.75
Riker EE 4T	14	24	2.65
Riker BB	14	24	2.65
Republic 3½T	14	24	2.65
Selden ¾T	12	4	2.25
Selden 1T	12	10	2.25
Stewart 1½T	14	14	2.25
Selden 2T	12	8	2.05
Selden ¾T	12	14	2.25
Stewart ¾T	14	6	2.05
Stewart 1T	14	4	1.75
White 3T	10	26	2.50
White 4T	10	26	2.50
White Ladder 3T	10	26	2.50
White Ladder 5T	10	28	2.85
White Ladder ¾T	12	2	1.75
White 2T	12	12	2.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FORD DEMOUNTABLE WHEEL SETS

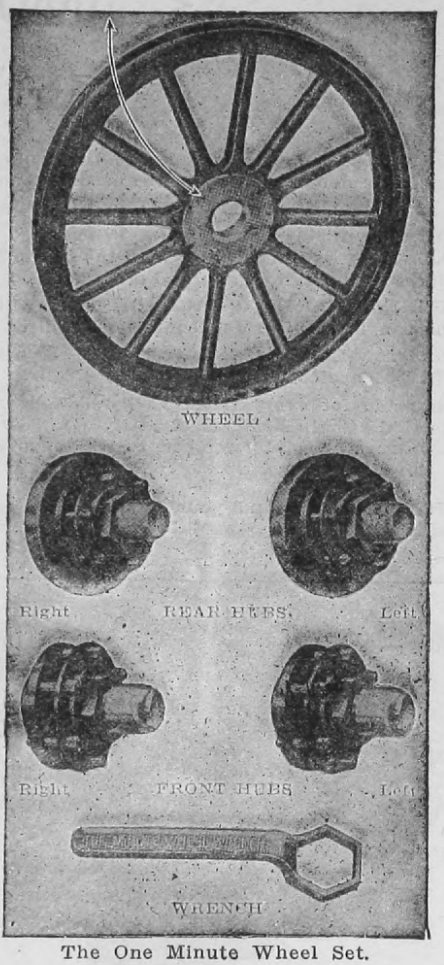
"MINUTE"

The Minute Demountable Wheel Set consists of: Four Main Hubs to fit the axle spindles and all the auxiliary parts for Five Wheels, also One Extra Wheel.

The original Ford equipment of Tires is retained in the Minute System. The Minute System Hubs are exact duplicates of Ford Hubs in their Inside construction and measurements and use the standard Ford parts of Ball Races, Cones, Balls or Hub Brake Shoes. The Minute Wheel Hubs, front or rear, are all exactly the same on the outside, so that all wheels are interchangeable and so constructed that the wheel is mounted on the hub without removing the hub cap and secured by one large nut. In equipping a car with Minute Demountable Wheels, the original wheels of the car are used.

One Nut to unscrew, Sixty Seconds does it.

One Minute Wheel Sets.....Per Set, $30.00



The One Minute Wheel Set.

FORD AUTOMOBILE WHEELS

KELSEY

The Kelsey No. 77 Wheel Set consists of: Four New Standard Wheels of the same size without Hubs, carefully painted and varnished. Each wheel is equipped with the New No. 77 Demountable Rim, 30x3½ inches (both front and rear), with an extra rim on which to carry an inflated tire. A wrench completes the set.

The operation of replacing old wheels with new ones is simple. It is only necessary to remove the hubs from the old wheels and apply them to the new set. These are accurately bored for the hub bolts, twenty-five of which are furnished with the outfit.

Kelsey Wheel Sets—Complete in Black or Natural Finish, as specified.....Per Set, $28.00

Kelsey Demountable Rims only.....Each, 3.00

Note.—Wheels are crated with spacers which preserve their true alignment.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MUD HOOKS

Nos. MH1 and MH2.

No. MH1—For 3 and 3½ inch tires .....Per Pair, $1.25

No. MH2—For 4 and 4½ inch tires .....Per Pair, 1.25

Mud Hooks

"Emergency" Mud Hooks can be put on when the wheel is in deep mud. One on each wheel frees the car from mud, sand or snow. Furnished complete with straps.

Tire Stands

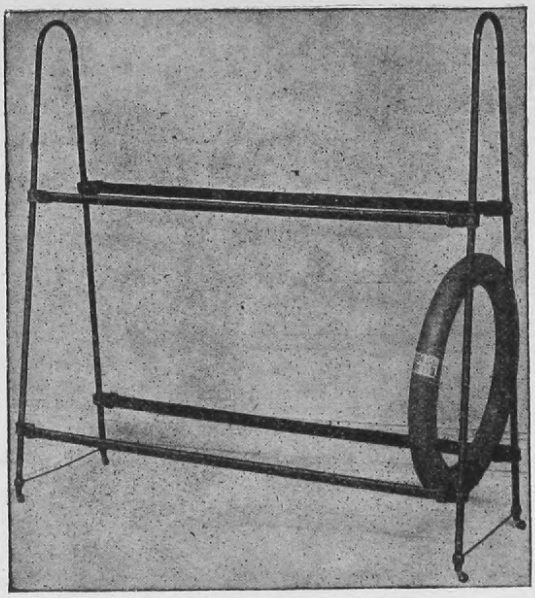
"Gemco" Tire Display Stands are constructed on the hinge principle which enables one stand to hold all sizes from 3 to 6 inches without change or adjustment. Finished completely Nickel Plated.

TIRE STANDS

No. 205.

No. 205—Weight, 6¾ pounds ..... Each, $2.50

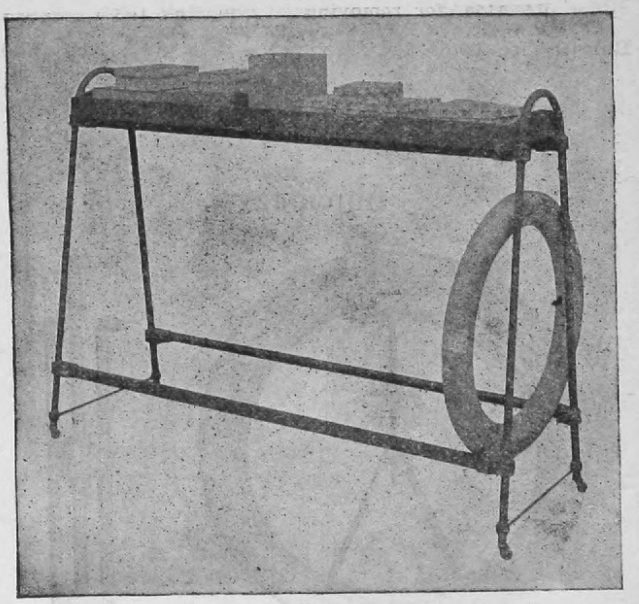
TIRE STOCK AND DISPLAY STAND



No. 2.

This is a Double Deck Rack 6 feet 3 inches long and will accommodate any size tires from 28x3 to 38x5½ inches. Keeps the tires on display clean and presentable at all times. Finished in black enamel. No screws or bolts are needed.

No. 2—Tire Stock and Display Stand.....Each, $5.50

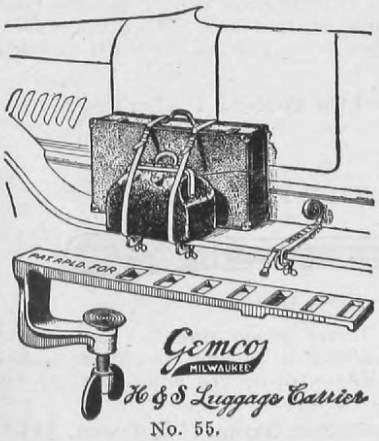


No. 3.

For Automobile Tires and Accessories. Will increase your sales 100 per cent. The lower rack is the same size as No. 2. The upper rack is a nice neatly finished wooden tray, designed for small boxes, auto chains, tubes, patches, and other small accessories. Finished in black enamel.

No. 3—Tire and Accessory Rack.....Each, $5.50

LUGGAGE CARRIERS



No. 55.

Luggage Carriers

Neat, Strong and Practical. Attached to Running Board without drilling.

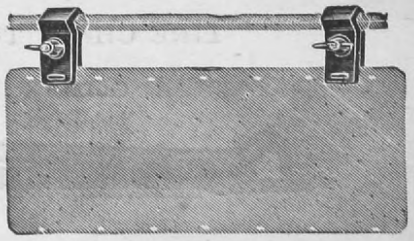
No. 55—Luggage Carriers..... .....Per Set of 2, $2.50

License Pad Clips

Pressed Steel, Japanned Finish. Clamps License Pad to Headlight Crossbar. Fits all pads with oblong slots.

No. 5—License Pad Clips..Per Set, $0.16

LICENSE PAD CLIPS

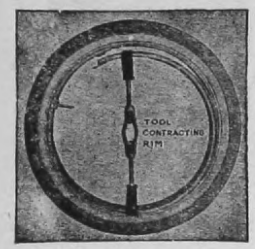


No. 5.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO TIRE TOOLS

BURRILL



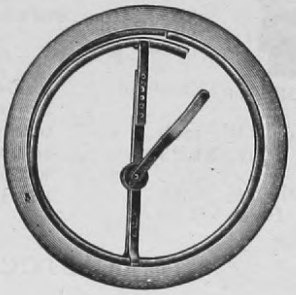
Contracting.

Expanding.

Strong, Compact and Serviceable. Easily operated in either direction, for removing or replacing tires.

Burrill Tire Tools.....Each, $3.00

EUREKA



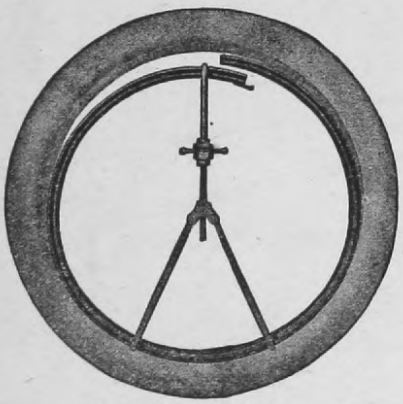
Contracting.

Folded.

For Contracting and Expanding Rims. Extra Strong Steel Lever Construction. The Eccentric Bearing and Long Handle give a tremendous leverage.

Eureka Rim Compressors.....Each, $.....

QUICK-EZY



Contracting.

Folded.

Quick-Ezy Tire Tool, for Contracting and Expanding Rims, grips the rim at three points, holds it securely and positively will not twist it out of shape. Quickly attached and operated on either straight side or clincher rims.

No. 30—Quick-Ezy for 30 to 34 in. Rims, Each, $2.50

No. 36—Quick-Ezy for 36 in. Rims.....Each, 3.00

M. S. Co.

No. 5—8¼x1 in. Black Lacquered.....Per 100, $10.00

Nos. 6A and 6B.

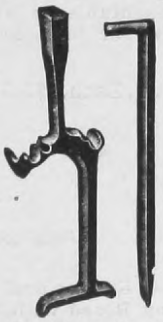
No. 6A—12¾ x1 1/16 in. Black Lacquered, Per 100, $16.00

No. 6B—16 x1 1/16 in. Black Lacquered, Per 100, 22.00

No. 7.

No. 7—11¼x1 in. Black Lacquered....Per 100, $12.00

OFF-AND-ON TIRE TOOLS



Fits Your Tool Kit

The Off-and-On tire tool for all clincher tires enables a complete tire change in three minutes. To put entire casing on at once, put inner tube in casing, valve stem in place. Push both heads into rim with hands until heads are held firmly in clinch. Insert hook in rim—tongue inside—handle against hub. Move the wheel—on goes tire. Use no air until casing is in place.

Off-and-On Tools.....Per Set, $.....

TIRE CHAIN TOOLS

CLIMAX

No. 1927.

Used to open Weed Auto Chains, to remove links, and to clamp down on chain links in putting in new sections. Polished Steel Jaws, Oil Finished Handles.

No. 1927—12¾ inches long.....Per Dozen, 15.00

Packed—Half Dozen in a Box.

AUTO TIRE PRY BARS

"Perfect Handle."

Drop Forged Steel, Inlaid Wood Handle. Length 13½ inches, width 1 inch, tapering to ⅞ inch, thickness ½ inch, tapering to 5/16 inch. Made with curved point to slip under tire.

No. 620—Perfect Handle Tire Tools..Per Dozen, $12.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"BASLINE"

AUTOMOBILE TOW LINES

"Basline" "Autowline"

It is made of ¼-inch Yellow Strand Powersteel Wire Rope: it is about 25 feet long with patent Snaffle Hooks for attaching. Weighs only 4½ pounds. Coils up flat and goes easily under a cushion, where it is out of the way. It will pull your car out of a mud hole or rut on the car's own power, and it will tow you home safely in case of a breakdown. Wound around and around the rim of the wheel it will serve temporarily as a tire chain.

Basline Autowlines.....Each, $4.55

POWER STEEL

"Powersteel" Truckline

Powersteel Truckline is made of ½-inch Yellow Strand Powersteel Wire Rope, and is about 18 feet long. It coils up flat and takes up practically no room. Its breaking strength is about 12 tons—strength enough to tow two loaded freight cars. It never fails in an emergency.

Power Steel Trucklines.....Each, $7.75

AMERICAN CABLE

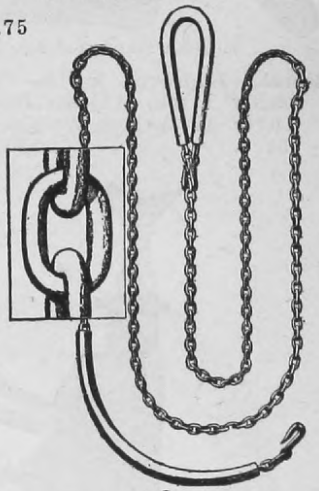
American Auto Towing Cables

Made up of 5/16-inch diameter high strength Steel Rope, special flexible, six strands, thirty-seven wires in each strand, one hemp center. Into each end is spliced a galvanized oval thimble, attached to which is a steel chain and a hook. Actual towing strength 4 tons.

American Auto Towing Cable—25 feet in length .....Each, $.....

Packed—One in a Sack.

AMERICAN CHAIN



American Auto Towing Chains

Made up of 17/64-inch Electric Welded Coil Chain with a Grab Hook on each end. Canvas Tubing at both ends protects the car from chafing. Chains are finished bright.

No. 2800—Auto Towing Chains.....Each, $4.00

Packed—One in a Bag.

WEAVER TOWING POLES

Spring Absorbs All Shocks

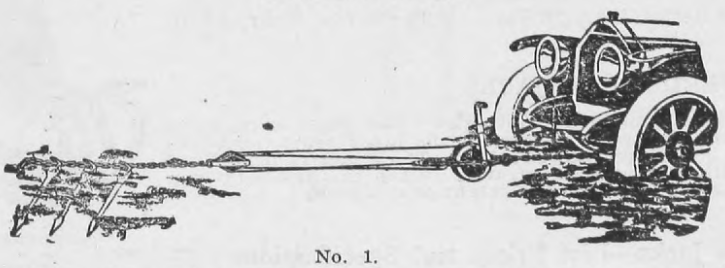
The danger and inconvenience of towing disabled cars is practically eliminated by the Weaver Towing Pole. The brakes of the towing car are in absolute control of the rear car. No danger of jamming on down grades or on sudden stops in crowded streets. Neither is there danger of a long tow line tripping pedestrains, or being run into by other cars.

The heavy coil spring is applied in such a manner that it cushions **both pulling** and **ramming shocks** so that there is no jerk or jar on either car. The connecting clamps are equipped with **heavy steel chains,** thirty inches long with a secure spring latch. The socket has a heavy woven pad eighteen inches long for protecting the finish of the car.

This clamping device gives the pole a practically unlimited range of application—either to axle, spring or frame of either car. **The Pole Telescopes,** and is adjustable from 5 feet 6 inches to 8 feet. It is made of double strength steel tubing. **Shipping weight 30 pounds.**

Weaver Towing Poles.....Each, $10.00

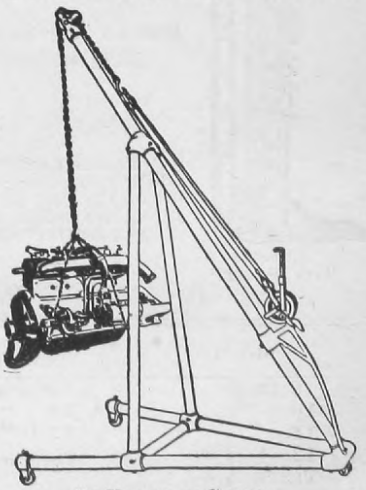
PULL-U-OUT



No. 1.

A Mechanical Device to Pull-U-Out of Trouble. With it one man can pull a touring car out of deep mud or a ditch or right the car if overturned. In the garage or elsewhere it can be fitted to a crane and used for heavy lifting, such as removing or replacing engines, changing bodies, putting in new axles, etc. **It consists** of a winding drum, lever crank, 40 feet of steel cable, pulley, two 7-foot chains and three stakes. Weight 28 pounds, and goes in a space 4x6x14 inches.

No. 1—Pull-U-Out only.....Each, $20.00
Pull-U-Out, complete with Crane.....Each, 75.00



In Use as a Crane.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EUREKA AUTOMOBILE JACKS

Eureka Improved No. 1.

Eureka Improved No. 1—Capacity 1 ton, Adjusts from 10 to 17 inches, Weight 4 lbs. .....Each, $1.10

Eureka Atlas No. 0.

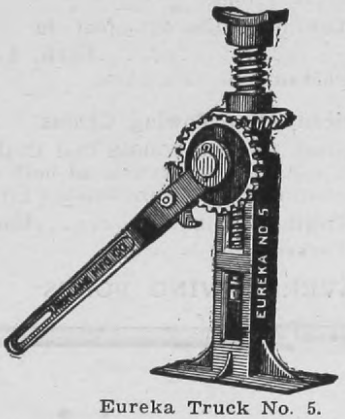
Eureka Atlas No. 0—Capacity 1 ton, Adjusts from 8 to 17 inches, Weight 4½ lbs. .....Each, $1.85

Eureka Atlas No. 1.

Eureka Atlas No. 1—Capacity 1½ tons, Adjusts from 7¾ to 18½ inches, Weight 6 lbs. .....Each, $2.20

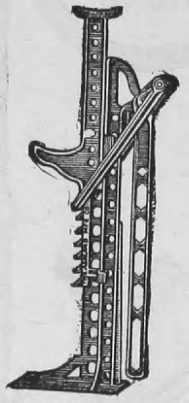
Eureka King.

Eureka King—Capacity 2 tons, Adjusts from 9 to 19½ inches, Weight 7 lbs. .....Each, $3.50



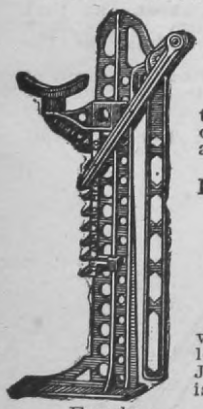
Eureka Truck No. 5.

Eureka Truck No. 5—Capacity 5 tons, Adjusts from 13 to 20 inches, Weight 15 lbs. .....Each, $5.00



Eureka Wagon Jack.

Eureka Wagon Jack—Capacity 1500 pounds, Adjusts from 10 to 25 inches, Weight 8 lbs.....Each, $1.80



Eureka Tire Saver.

TIRE SAVER JACKS

Eureka Tire Saver Jack. Designed especially for use in the Garage to hold the weight of the car off the tires, and also to keep the tires from resting on oily floors, chain grips, etc. Made entirely of malleable iron, easily adjusted to any height car instantly, and will raise 2½ inches with one lift.

Eureka Tire Saver Jack—Capacity **1500** Pounds, Adjusts from 8½ to 18½ inches, Weight per Set of four, 30 lbs.....Per Set of Four, $6.50

WEED CHAIN JACKS

To lift a car with the Weed Chain-Jack, simply give a few pulls on its chain while you stand away from the springs, tire carriers and other projections. To lower the car, pull the chain in the opposite direction. The 8 and 10 inch Weed Jacks are made with an auxiliary step as illustrated. When the auxiliary step is in operative position it adds two inches to the height of the Jack.

Weed Chain Jack.

Weed Chain Jacks—List Prices and Specifications

Size	Height when Lowered	Maximum Rise	Lifting Capacity	Weight	List Price
8 inch	8 inches	4½ inches	1 ton	10 lb. 8 oz.	$7.50
10 "	10 "	5⅜ "	1 "	11 " 1 "	7.50
12 "	12 "	6½ "	1 "	11 " 4 "	7.50
12 " Truck	12 "	7¼ "	5 "	25 "	15.00

Packed—One Jack in a Strong Carton, 12 Cartons in a Case.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE AND TRUCK JACKS

SIMPLEX

No. 36.
Middle Shoe.

No. 38
Adjustable Shoe.

Nos. 41 to 43.
Detachable Shoe.

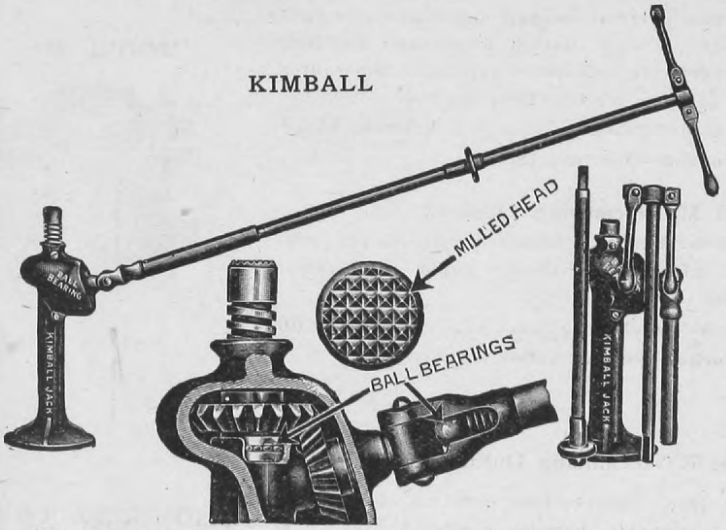
No. 45.
Detachable Shoe.

Nos. 36 and 38 Automobile Jacks are Single Acting. Operating on the down stroke of the lever bar only and are substantially built. **Nos. 41 to 43** Automobile Jacks are Double Acting. Operating on the up and down stroke of the lever bar and are substantially built. The Standard is heavy Malleable Iron and all working parts are Drop Forged Steel. The detachable Shoe adds another lifting point which is used in awkward positions. **No. 44** Automobile and Truck Jack is similar in construction to Nos. 41 to 43—every working part is Drop Forged Steel. Has convenient handle for carrying about and is furnished with Detachable Auxiliary Shoe which adds two additional lifting points. **No. 45** Automobile and Truck Jack is Single Acting. Operating on the down stroke of the lever bar. A powerful Jack of greatest efficiency because of the geared massive construction, ease of operation and absolute dependability. Has Detachable Shoe. **No. 47** Truck Jack—A bulldog for power, strength and durability. The gear and pinion construction permit handling excess loads in easy fashion. Furnished with Steel, Auxiliary Detachable Shoe, which provides additional lifting height.

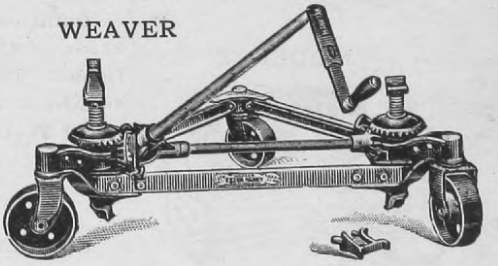
Specifications of Simplex Jacks

Nos. Kind.	Cap., Tons.	Each.	Height, Inches.	Lift, Inches.	Weight, Lbs.
36—Single Acting Auto Jack.....	¾	$2.00	10	6½	4¾
38—Single Acting Auto Jack.....	1	3.00	10½	6	6½
41—Double Acting Auto Jack.....	1½	5.00	10	7	11
42—Double Acting Auto Jack.....	2	6.00	11½	8½	14½
43—Double Acting Auto Jack.....	3	7.00	13	10	16
44—Double Acting Auto and Truck	4	9.00	13¼	9	19
45—Geared Auto and Truck.....	3	10.00	10½	6⅞	16
47—Geared Truck Jack.....	7½	20.00	12	6⅝	23

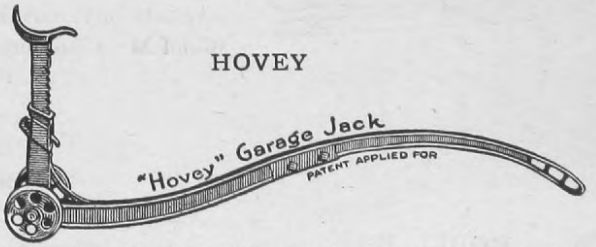
KIMBALL



WEAVER



HOVEY



Kimball Auto Jacks are equipped with Ball Bearings and Long Operating Handle. They hold anywhere, do not slip and avoid the necessity of getting under the car. **Packed**—One in a Strong Carton.

No. 1—Height closed, 9 inches. Lift, 6 inches.....Each, $4.50
No. 2—Height closed, 11 inches. Lift, 7 inches.....Each, 5.00
No. 3—Height closed, 12 inches. Lift, 8 inches.....Each, 5.50

Weaver Auto Twin-Jacks provide a means by which one man can readily manipulate a car in the garage, repair shop or storage room in any desired manner. They supply all the service of Turn Table, Transport, Lifting Jacks and Tire Rests. Ball and Roller Bearings throughout. Lifting leverage, 400 to 1. 34 inch Wheel Base. Shipping Weight, 50 lbs.

Weaver Twin-Jacks. Lifting Capacity, 4,000 lbs.....Each, $12.00

Hovey Garage Jack. The most practical Jack for the garage owner. Instant in operation. It operates by merely "kicking up" the movable head and depressing the handle, and lets down by lifting the handle. Locked by gravity. Adjustment is made by the foot. No working on hands and knees, the four foot handle gives tremendous leverage. Made throughout of malleable iron and open hearth steel.

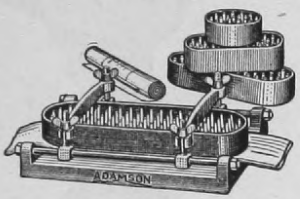
Hovey Garage Jack. Capacity, 2 tons. Adjust from 3 inches to 18 inches.....Each, $7.00

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

VULCANIZERS

ADAMSON

MODEL S



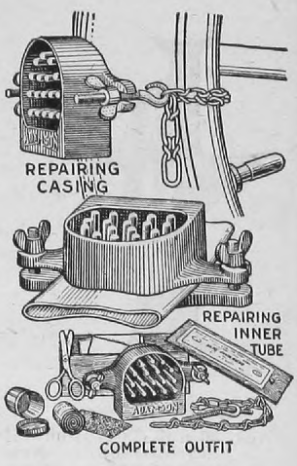
Model S Vulcanizing Outfits

Outfit consists of Four Cups (assorted sizes), Two Clamps and ½-lb Repair Gum. This Vulcanizer is designed for Private Garages and Repair Shops. It is entirely automatic, requires no attention, anyone can operate it. No steam, no electricity. The most practical and convenient vulcanizer made. With this Vulcanizer a cut 12 inches long can be repaired in 15 to 20 minutes. The patch is prepared in the usual manner and the proper size cup is clamped directly over the repair, the bottom faces of the cups are polished and slightly concaved; this prevents the gum from flowing and produces a perfect patch.

Model S—Complete as described.....Each, $12.00

Packed—One in a Box. Weight about 30 pounds.

MODEL U



Model U Vulcanizing Outfits—For Tubes and Casings

Outfit consists of Cast Iron Vulcanizer in two parts (base and upper gasoline receptacle), Japanned Chain, Shears, Can of Gasoline (1 oz.), Garnet Paper and Patching Rubber. Casings and Tubes can be vulcanized in 15 minutes.

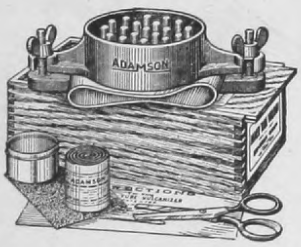
Absolutely Automatic. Place the patch, attach the vulcanizer, put in gasoline, light it, no further attention required. It will not burn, scorch or injure the tube or casing. It is a practical outfit; ready for instant use.

Model U—Complete as described.....Each, $2.00

Packed—One in a Box. Weight about 4 pounds

Model T Vulcanizing Outfits—For Tubes only

MODEL T

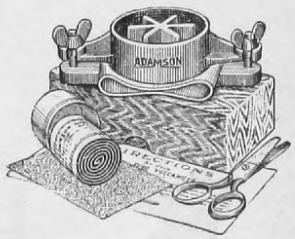


Outfit consists of two parts (base and upper gasoline cup), Shears, Can of Gasoline (1 oz.), Garnet Paper and Patching Rubber. Produces a perfectly vulcanized repair in 15 minutes, anywhere, on road or at home for less than one cent.

Model T—Complete as described.....Each, $1.50

Packed—One in a Box.

MODEL M



Model M Vulcanizing Outfits

Especially adapted for Fords. Furnished with Shears, rubber and small can of gasoline and Garnet paper. Vulcanizes perfectly in 15 minutes.

Model M—Complete as described.....Each, $1.00

Packed—One in a Box.

Model E Vulcanizing Outfits

MODEL E

The New 5 Minute Vulcanizer. Use common gasoline. Vulcanize a tube anywhere in 5 minutes. Furnished with box of one dozen Adamson 5 minute Gum Patches.

Model E—Complete as described.....Each, $1.00

Packed—One in a Box.

ADAMSON REPAIR GUM

Adamson Repair Gum

Especially prepared for use with Adamson Vulcanizers. High Grade Stock.

Size of Rolls	Repair Kit	¼ lb.	½ lb.
Adamson Gum.....Per Roll,	$0.25	.50	1.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHALER

VULCANIZERS for MOTORISTS

THE NATIONALLY ADVERTISED LINE

SHALER

The Popular VUL-KIT - *sells for* $3.50

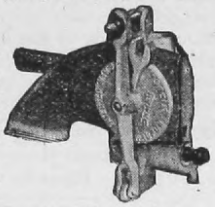
Gasoline Heated - For All Sized Casings and Tubes

Silent Salesman FREE

Steel background lithographed in four colors to represent section of tire on wheel. Vul-Kit is clamped to it as if in operation.

The sales of this well known tire saver have grown enormously as tire prices have increased. Take advantage of the big advertising. The "Shaler Vul-Kit" is known to every auto owner as the sure means of doubling tire mileage by sealing casing cuts before dirt and water get in to rot the fabric. Casings always need attention that will only be given if the motorist has his own vulcanizer. It is the stitch in time that saves nine.

The Vul-Kit has a 3½x4 inch curved surface for mending cuts, sandpockets, etc., in all sized casings without removing tire from wheel or letting out the air. A machined surface of 10 square inches mends all tube injuries, curing clear through and making permanent repairs of any size. The asbestos inlaid pressure plate is swivelled to avoid squeezing one side of tube tighter than the other and to enable the largest tube to be handled without pinching its edges. A lamp burning gasoline or alcohol produces the correct heat without dangerous exposed blaze or smoke. A measure gives the proper fuel charge. No watching or regulating. The fuel is absorbed by a wick so there is no flaming liquid to spill. Handle detachable for packing to carry in car. Complete with repair rubber, cement and full instructions. Polished nickel. Weight 4½ lbs. One dozen in carton. Should be in every accessory stock.



Repairing Tube

Type G, No. 32, retail price.....$3.50

The TUBE-KIT - - - *sells for* $2.00

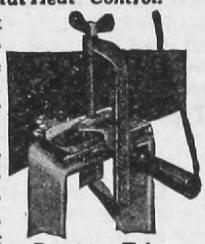
Same as Vul-Kit but for Tubes only. Wt. 4 lbs.

Type F, No. 31, retail price.....$2.00

HOME GARAGE MODEL - *sells for* $12.50

Heats from City Lighting Current. Thermostat Heat Control.

Handles every kind of tube and casing work that the average motorist will care to undertake. It has no equal for use at home where practically all repairing is done. Dealers should recommend it as the best motorist's vulcanizer for use where electric current is accessible.



Repairing Tube

Tube and casing surfaces are 3½x7 in. - twice the size of any other motorist's vulcanizer. Electricity is the safest heat for vulcanizing, and conflicts with no garage regulations. Thermostatic heat control maintains the exact vulcanizing temperature so that a tire cannot be overheated, and by maintaining this temperature as long as necessary, permits curing through the thickest tread as well as making superficial repairs. Upon connecting the vulcanizer to any lamp socket, the temperature quickly rises to the required degree and remains there as long as the current is turned on. No regulating required. All parts of the repair are heated alike. When several repairs are to be made in succession, the hot vulcanizer can be moved from one to the other by the cool handle. One or two tubes can be mended at a time. Outfit includes tube-shelf, ten foot conducting cord, thermometer, repair material and illustrated instructions. Current consumption 70 watts. Wt. 13 lbs.

Type D, No. 83, Polished Nickel, for D. C. or A. C.....$12.50

When ordering, specify voltage of your city current.

The Original 5-MINUTE - *sells for* $1.50

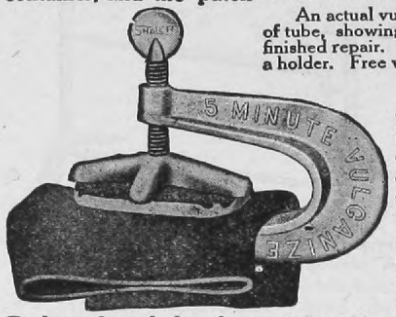
Heats with solid fuel - Complete with 12 Patch & Heat Units

In one season the demand for this wonderful Shaler Vulcanizer has made it one of the biggest selling accessories ever put on the market. Its simplicity appeals to every motorist on sight. Sales are quick and easy and every one sold sells another.

The Shaler 5-Minute mends all tube punctures perfectly, making repairs far superior to any "stuck-on" patch. Heat is produced by burning a non-flaming chemical heating unit. Each of the twelve patch units furnished with the outfit is complete in itself, consisting of the patent heat unit in its metal container, and the patch of raw rubber attached to the vulcanizing surface of the container. This cartridge is clamped over the puncture and the heat unit is lighted. In 5 minutes the repair is done. Only the patch is heated. Anyone can use it - no danger of overcuring.

DISPLAY CARTON WITH EACH DOZEN

An actual vulcanizer is attached to a section of tube, showing method of operation and a finished repair. Opposite is a match slipped in a holder. Free with each dozen outfits.



Each outfit includes clamp, 6 round and 6 oblong patch units packed in display box. 12 outfits in carton.

Type M, No. 5, With 12 Patch and Heat Units, retails at.....$1.50

5-MINUTE PATCH AND HEAT UNITS

The average user buys several packages each season. Few accessories produce such a continuous resale. 5-Minute Patch Units are packed 12 of a size in air tight boxes. 1 doz. boxes in carton

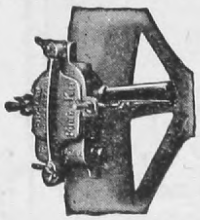
Round Patch and Heat Units, 1¾ in. diameter, per box of 12..... .75

Oblong Patch and Heat Units, 2¼x1⅜ in., per box of 12..... .75

MODELS for FORD OWNERS

The FORD-KIT - - - *sells for* $2.75

For Ford Casings and Tubes



Operates on same principle as the Vul-Kit but is designed to fit 3 inch and 3½ inch tires. A great seller among owners of Fords and other cars having small tires. Include some with your next order. Weight 4½ lbs.

Type H, No. 33, retail price.....$2.75

The FORD TUBE-KIT - - *sells for* $1.75

Same as Ford-Kit but for tubes only.

Type I, No. 34, Weight 4 lbs. Nickel plated.....$1.75

DEALERS NOTICE--The manufacturers of this standard line of accessories supply a large assortment of display fixtures, hangers, circulars with dealers name, etc. Tell us what models you want to feature and we will get these selling helps for you.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

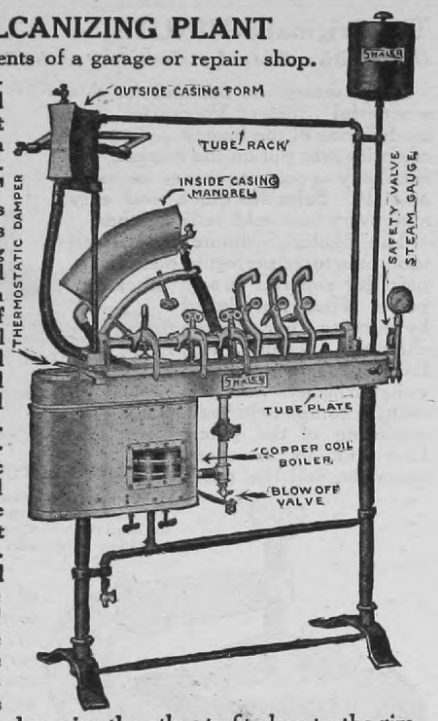
SHALER

VULCANIZERS for REPAIR SHOPS

MONEY MAKERS FOR GARAGES

SHALER

STEAM VULCANIZING PLANT



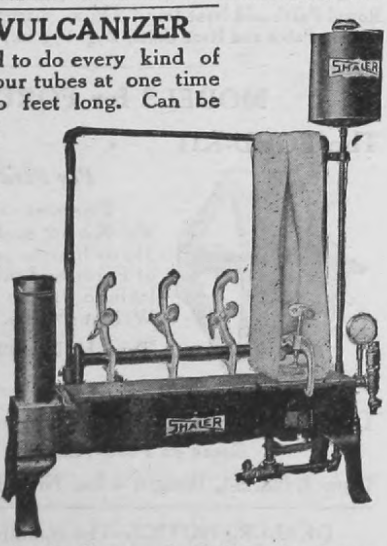
Covers all requirements of a garage or repair shop. Handles every practicable sort of tube and casing repairs, (about 200 tubes and a dozen casings daily). Machined tube plate, 4¾" x30", cures six tubes as quickly as one and heats independently of casing attachment. Swivelled clamps insure even pressure to all parts of any tube repair. All sizes of casings repaired by approved wrapped tread method as used by tire manufacturers. Simply build up a reenforcement of fabric *inside* the casing, and fill hole through tire with Para gum (do not cut away a lot of expensive rubber and fabric). The inside casing mandrel, 14" long, then applies the heat directly against the fabric; the outside casing form which has one side shaped for tread repairs, the other to fit close to the rim, heats from the outside. A wrapping of tape and the Shaler clamping device force new and old material into contact under enormous pressure. No air bags. The repair becomes the strongest part of the tire. No attention is necessary after lighting burner. The boiler, a copper coil, raises steam in about twenty minutes and holds it at the right pressure indefinitely, a thermostat automatically regulating the flame of the gas or gasoline burner. Steam gauge and thermometer indicate both pressure and temperature. Safety valve eliminates danger of explosion.

Type NPR, No. 41 Complete Garage Outfit as shown, wt. 200 lbs....$70.00
Includes 6 clamps and blocks for tube work, bead strips for rim cuts, casing clamps, tape for wrapping treads, thermometer, steam gauge and safety valve.

Type NPR, No. 42 Same as above, but having two casing forms, giving double capacity. Weight 260 lbs.....$90.00

Type N, No. 41 Same as above, but equipped for tube work only. Weight 160 lbs.....$50.00

STEAM TUBE VULCANIZER

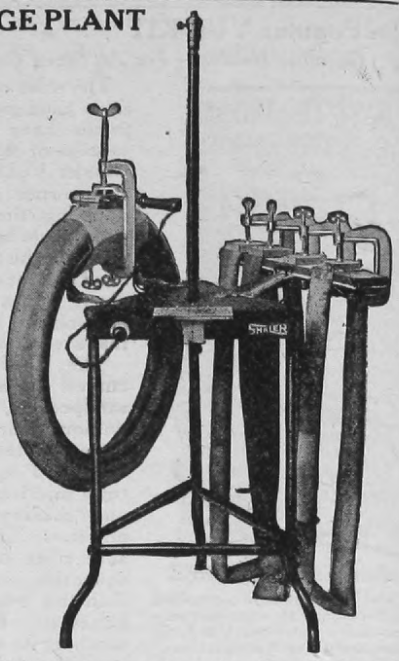


This model is designed to do every kind of tube repairing. It cures four tubes at one time or single repairs up to two feet long. Can be used either on floor or workbench, as the 4¾x24" machined tube plate stands 9 inches high. Cost of operation less than two cents per hour. Steam is raised in fifteen minutes and maintained at proper pressure, without regulating, by the Shaler automatic thermostat control. Equipped with steam gauge, safety valve, and 4 clamps and blocks, same as larger models. No other guaranteed steam vulcanizer at near the same price has so great a capacity, heats so quickly, or operates so simply.

Gas or gasoline burner as ordered. If none specified, gasoline burner furnished.

Type L, No. 40 Weight 75 pounds.....$35.00

ELECTRIC GARAGE PLANT



This plant, Type ACE, consists of the complete units Type A, Type C and Type E, mounted on a strong tubular stand. It will do the same perfect work and has the same capacity as Type NPR steam plant - - twenty tubes and one casing per hour. The temperature is controlled automatically.

Types C (inside casing form) and E (tube plate) are permanently attached to the stand and have separate switches to permit independent heating. Type A (outside casing form) has five feet of conducting cord ending in a plug which fits a socket in the stand or any lamp socket if work is to be done elsewhere on inflated tires. All electrical wiring is complete in the stand and connection to city current is made overhead, out of the way, through a plug at the top of the upright standard by means of extension cord to any lamp socket. No special wiring needed, as the entire apparatus consumes less current than an electric flat-iron. Shipping weight 115 pounds.

Type ACE, No. 101 For A. C.....$65.00

For rheostat controlled direct current equipment add $10.00 to list price. (Specify voltage when ordering).

UNITS WHICH MAKE UP PLANT.

(Can be purchased and used separately.)

Type A---Combination Casing Form and Tube Plate.

Corresponds with outside form of Type NPR; that is, one face mends rim cuts, while the other fits large tread repairs. A flat surface mends one or two tubes at a time on an asbestos inlaid shelf that attaches to workbench. Temperature controlled automatically by a thermostat. No watching or regulating. Fits all sized tires and will mend cuts, etc., while tire is inflated on rim. Supplied with tube shelf, thermometer, conducting cord and full instructions. Weight, 15 pounds.

Type A, No. 61 Polished nickel for A. C. and D. C.....$13.50

Type C---Inside Casing Form.

Corresponds with inside form on NPR. Used with Type A for making casing repairs by the wrapped tread method. Fits any sized tire. Supplied with tread tape, bench brackets, conducting cord and thermometer. Weight, 18 pounds.

Type C, No. 71 Thermostat Control, A. C. only.....$20.00

For rheostat controlled D. C. equipment, add $5 list.

Type E---"Gang" or Multi-Tube Model.

4½x24-inch surface mends six tubes at once or a two-foot slit at one setting. Furnished with four clamps and blocks for different sized repairs, conducting cord and two thermometers. Weight, 40 pounds.

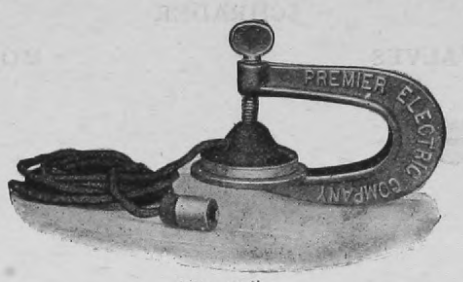
Type E No. 91 Thermostat Control, A. C. only..... $25.00

For rheostat controlled D. C. equipment, add $5 list.

NOTICE TO REPAIRMEN--Tire repairing will pay you big dividends on the small investment required to equip yourself with one of the models shown on this page. Write us for information as to how the manufacturer helps you start this profitable work.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRIC VULCANIZERS



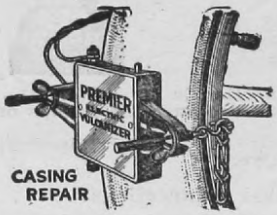
"Its-It."

Its-It makes perfect repairs on tubes quickly and permanently. Simply clean the repair, apply the patch, connect the vulcanizer to the battery, leave current on for 10 minutes and it's done. It consumes about as much current as one headlight and the heating element will live long enough to make 150 to 200 repairs. Its-It is made for 6 and 12 volt storage batteries and the 6 volt will operate successfully on the Ford car, if the engine is operated at a constant speed. Furnished with clamp, heating unit, flexible cord and 12 patches, also directions for using.

Its-It—Complete as described.....Each, $1.50

Note.—Specify Voltage and whether Single or Double Contact Plug.

PREMIER ELECTRIC



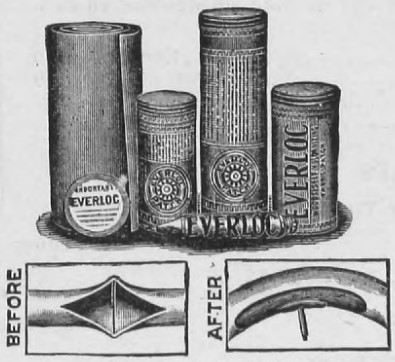
Premier Electric Vulcanizers.

With this vulcanizer you make preparations for the repair, stick on the vulcanizer and press the button. No further attention is necessary for when the vulcanizing is done the button will automatically release, which cuts off the current and the vulcanizer cools off. It will repair tubes and casings with little trouble. It is small and compact, weighing less than .2 lbs. It is economical and eliminates fire danger. Made for storage batteries of 6 and 12 volts and lighting circuits of 110 volts—**Specify what is wanted.** Outfit includes flexible cord, gum, cement, Peco tire tool, chain, scissors and directions for use.

Premier—Complete as described.....Each, $3.50

AUTO PATCHES

EVERLOCK



Everlock Auto Patches.

Self-Vulcanizing Quality Tire Patches. Three Ply Fabric consisting of U. S. Khaki Cured Rubber and Pure Para Facing. The Hotter the Road, the Tighter they Hold. Come rolled in container with tube of cement, etc. Will repair a puncture in 5 minutes.

Size of Roll in Square Inches	33	73	120
Everlock—Per Roll.....	$0.50	1.00	1.50

RIE-NIE

Rie-Nie Auto Patch.

For immediate use without Heat or Tools. Three Ply and Fabric. A quick and everlasting repair for Automobile, Motorcycle, Bicycle Tubes and Casings. Rie-Nie Auto Patches are positively guaranteed to mend satisfactorily the smallest puncture or the largest blowout. The layer of best cured rubber placed between the two layers of raw rubber make Rie-Nie Auto Patch absolutely leakproof. The selected fabric adds to the strength of the patch and gives the best possible wearing qualities.

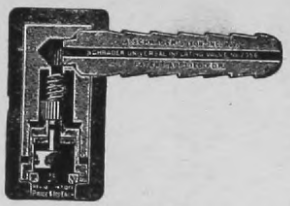
Size of Roll in Square Inches	36	108	648
Rie-Nie—Per Roll	$0.50	1.00	5.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOTOR TIRE VALVES AND ACCESSORIES

SCHRADER

ANGLE INFLATING VALVES

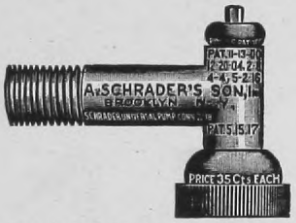


Universal.

Shank made for any size hose. Automatic for Street Free Air Line. Protected by Rubber Outside Cover.

No. 2356—½ inch Shank.....Each, $1.00
No. 2408—⅜ inch Shank.....Each, 1.00
No. 2410—5/16 inch Shank.....Each, 1.00

PUMP CONNECTIONS



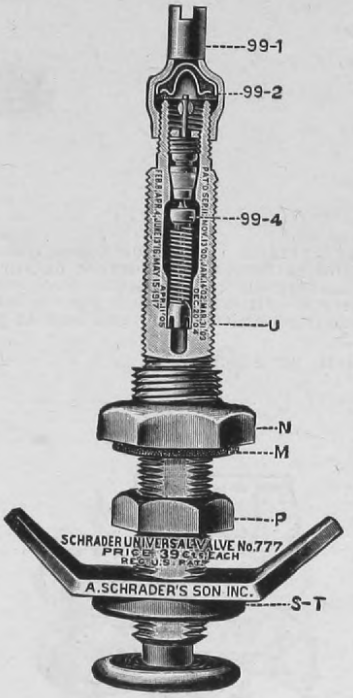
This Pump Connection is not Automatic and is designed only for Car Owners' use on Hand Pumps or Engine Pumps on car.

Air pressure in tire can be ascertained without detaching connection from valve.

No. 2238—Universal Connections.....Each, $0.35

Packed—One Dozen on a Display Card.

MOTOR TIRE VALVES



"Universal."

Nos.	For Tires.		
777—	3 in. and under. Without Dust Cap..	Each,	$0.39
725—	3½ in. and over. Without Dust Cap..	Each,	.46
792—	3½ in. and over. Without Dust Cap..	Each,	.50
1822—	3 in. and under. Without Dust Cap..	Each,	.44

Note.—No. 792 is the same as No. 725 but is ⅜-in. longer. It is regular valve for Demountable Rims. No. 1822 is the same as No. 725 but is made short for wire wheels.

No. 2078.

UNIVERSAL QUICK ACTING DUST CAPS

Slips over valve and locks securely with slight turn. Rim Nuts must always be on valve in order to make caps hold firmly. Cap will not seat or hold up against surface of rim.

No. 2078
- Universal Quick Acting Dust Caps.....Each, $0.40
- Put up in Sets of 50.....Per Set, 2.00
- 6 Sets (30 Caps) on a Display Board.....Per Board, ...
- 12 Sets (60 Caps) on a Display Board.....Per Board, ...

No. 2069.

UNIVERSAL DUST CAPS

For use on Schrader Universal Motor Tire Valves.

	Each	Per 100
No. 2069—Regular Size	$0.09	.....
No. 2070—⅜ in. longer, otherwise as No. 2069	.10	.....

RIMNUT AND DUST CAP BUSHINGS

For use on Schrader Universal Motor Tire Valves.

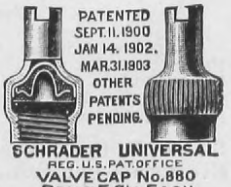
	Each	Per 100
No. 2026—Bushings	$0.05	.....

No. 2026.

UNIVERSAL MOTOR VALVE CAPS

For use on Schrader Universal Motor Tire Valves.

	Each	Per 100
No. 880—Valve Caps	$0.05	.....



No. 880.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TIRE VALVES AND ACCESSORIES

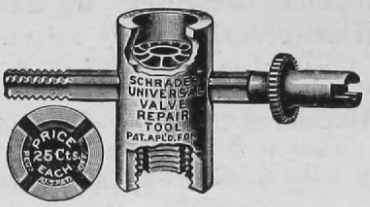
SCHRADER

VALVE INSIDES

Used on all Pneumatic Tire Valves.

Schrader Valve Insides .....Per Box of 5, $0.25
In Cartons of 100 (20 Boxes).....Per Carton, ...

VALVE REPAIR TOOLS



For Quick and Proper Repair of Cap and Inside Threads of Valves.

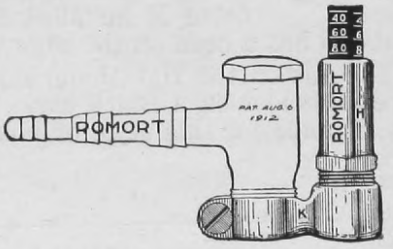
	Each	Per Dozen
No. 2395—Schrader Valve Tools.....	$0.25	.....

TIRE PRESSURE GAUGES

Air is essential to long life of tires The way to know if they have enough is to use a Schrader Pressure Gauge. Convenient in size, simple and accurate. The telescoping tube is marked plainly.

Schrader Pressure Gauges.....Each, $1.00
Packed—One in a Leather Case.

ROMORT TESTER ATTACHMENTS



This Attachment fits all Romort Automatic Air Valves and provides a holder for a pressure gauge. The Schrader Gauge fits into the holder and furnishes a Combination Tester and Inflater. We list and sell them separately. Attachments for A Style Valves are regular, but those for B Style furnished at same price.

Romort Tester Attachments.....Each, $1.00

ROMORT AUTOMATIC AIR VALVES

Style A.

Solid Bronze, Practically Indestructible. The most popular valve for heavy work. The New Step-up Stem fits any size rubber tubing from ¼ to ½ inch. Instantaneous in opening and closing, positively air tight.

Style A—Weight, 9 oz.....Each, $3.00

Parts No..	A	B	C	D	E	F
Name	Body	Nut	Spring	Plunger	Gasket	Cap
Each	$1.50	.40	.05	.50	.05	.50

Style B.

Solid Bronze, One Piece Casting, Universal Stem to fit any size tubing. This is a High Grade Air Valve, made to meet the popular demand for a light and inexpensive automatic air device. Automatic in opening and closing, positively air tight.

Style B—Weight 5 oz.....Each, $1.00

Parts No.....	1	2	3	4
Name	Body	Plunger	Cap	Gasket
Each	$0.50	.30	.25	.05

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE Tire Covers

Fancy colored tire covers are made up in single colors or in a combination of colors, matching the body and running gears of your automobile, and add much to the attractive appearance of the machine. A few of the colors which are always carried in stock are red, green, tan, cream, white, brown, yellow, battle-ship grey, and maroon. We have a great many other colors which we can furnish on request. All styles and numbers of Invincible tire covers are made in colors when requested.

When ordering fancy colored tire covers be sure and state whether the entire cover is to be of one color or a combination of colors. State whether the center strip or the side wall pieces are to be made in colors, and the color desired.

All colored tire covers are made on special order and we cannot allow the return of same unless it be through misfit, faulty material or workmanship. Be sure and state clearly colors, size, and style wanted, when ordering.

No. 7100 FOR SPECIAL HOLDERS AND WIRE WHEELS.

For extra tires carried on wire wheels or rims that fit on special holders.

This cover is made in two pieces and is of the same general style as our No. 5100, having two spiral springs which makes it very easy to apply, and allows for more adjustment than any other style of cover.

The accompanying cut shows the way this cover is installed on a tire. It overlaps on the tread and has a bead on the edge which fits snugly into the edge of the rim.

The cut on the right-hand side of this page shows this cover installed on a tire on a special holder on a Buick car. It is one of the most attractive and best fitting covers that is made for this style of holder.

Size	List
28-30, All Sizes	$2.15
31-32 " "	2.30
33-34 " "	2.50
35-36 " "	2.75
37-38 " "	2.90
39 and over, all sizes	3.25

No. 6100—For Wire Wheels

For extra tires carried on wire wheels

These covers are made to cover the rubber tire carried on wire wheels on special holders, and are held in place by eight straps which pass through the spokes and buckle on other side of cover, holding it solid. The cover fits snugly, without wrinkling, and is an absolute protection to the tire. It does not interfere in any way with mounting the wheel in the usual manner. In ordering this cover, be sure and mention make of wheel, size of tire, and whether tire has plain or non-skid tread.

Size	List
28-30, All Sizes	$1.60
31-32 " "	1.75
33-34 " "	1.95
35-36 " "	2.15
37-38 " "	2.35
39 and over, all sizes	3.00

No. 8100—For Special Holder and Wire Wheels

For extra tires carried on wire wheels or rims that fit on special holders. This cover is made in one piece and is of the same general style as our No. 4100 except that it has two flat springs in the side that fits down on the flange of the rim very close. It is very easily applied and fits perfectly.

Size	List
28-30, All Sizes	$1.95
31-32 " "	2.05
33-34 " "	2.25
35-36 " "	2.45
37-38 " "	2.55
39 and over, all sizes	3.05

Fancy Color Tire Covers in any of the above styles or sizes, List Price.....$5.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE Tire Covers

SPARE TIRES should never be carried as extras without a suitable covering. Sun, rain, dust and oil make quick work of the ruination of any tires left exposed to their action, and only the use of properly designed and well made tire covers prevents this damage.

INVINCIBLE brand Tire Covers are made to fit all styles and sizes of tires whether they are carried on demountable rims, special holders or the plain tire.

WHEN ORDERING TIRE COVERS be sure to give the size. For instance, if you want a cover for a tire 30x3½, plain tread order a 30x3½ tire cover. State whether tire is carried on a demountable rim or not.

NON-SKID tires require a larger cover than the plain tread. For instance a 33x4 light non-skid such as the Firestone, Goodrich, Pullman, Kelly-Springfield, etc. take covers one-half inch wider than a plain tread. A 33x4 tire in any of the above makes would take a 33x4½ Tire Cover. In the heavier type of non-skid such as Goodyear Cord, Midgley and Republic, etc., covers should be ordered one inch longer and one-half wider. For instance, a 33x4 in this type would take a 34x4½ cover.

BUTTON-ON TYPE

These covers are made of a high grade of enameled cloth which is weather, sun and oil proof. They have a double thickness of material over the tread, and an overlap of about six inches. They are equipped with special fasteners that make them adjustable. Can be furnished in either bright or dull finished cloth. The covers for tires on demountable rims are reinforced with metal where the tire valve comes through, so there is no wear on the goods at that point.

No. 2000—For Tires Not Used on Demountable Rims.
No. 2100—For Tires Used on Demountable Rims.

Size.	2000 List	2100 List
28-30 all sizes	$2.15	$2.15
31-32 " "	2.30	2.30
33-34 " "	2.50	2.50
35-36 " "	2.75	2.75
37-38 " "	2.90	2.90
39 and over, all sizes	3.25	3.25

SPECIAL HOLDER—No. 4100

For extra tires carried on special holders.

These covers are the result of a demand for a neat appearing, snug fitting tire cover for tires carried on demountable rims on special holders, such as are used on late models of the Buick, Maxwell, Chevrolet, Paige, Dodge, Interstate, Hupmobile, Patterson and other cars. If you want a neat, smart appearing tire cover for this type of carrier, this is the only one that will meet the requirement. Cover is held firmly in place by eight neat straps buckling across the rim, which allow for any kind of an adjustment. Made in either a dull or bright finish of a high grade enameled cloth.

	List
28-30, all sizes	$1.60
31-32 " "	1.75
33-34 " "	1.95
35-36 " "	2.15
37-38 " "	2.35
39 and over, all sizes	3.00

FLAT SPRING TYPE—Nos. 3000-3100

This tire cover is made up with a flat spring which overlaps on the inside of the tire when applied. It is equipped with four straps and four buckles which secure it tightly and allow for any kind of adjustment. The spring fits tightly all around the tire, making the cover dust and water proof and preserving it from all damage while not in use. The cover is made of a high grade enameled drill, in either a bright or dull finish, and fits the tire like a glove.

No. 3000—For Tires Not Used on Demountable Rims.
No. 3100—For Tires Used on Demountable Rims.

	3000 List	3100 List
28-30, all sizes	$1.25	$1.40
31-32 " "	1.35	1.50
33-34 " "	1.45	1.60
35-36 " "	1.55	1.70
37-38 " "	1.65	1.80
39 and over, all sizes	2.10	2.25

SPIRAL SPRING TYPE

This cover is made up with coil springs fitted into the cover in such a way that they slip over the tire and hold the cover securely in place without wrinkling. It is a continuous casing and the tension in the springs hold it very snugly. Owing to the special springs we use we have overcome the previous objection to this type of cover, and these covers are very easily applied and removed. Made of a high grade of enameled cloth, in either bright or dull finish.

No. 5000—For Tires Not Used on Demountable Rims.
No. 5100—For Tires on Demountable Rims.

	5000 List	5100 List
28-30, all sizes	$1.90	$1.95
31-32 " "	2.00	2.05
33-34 " "	2.20	2.25
35-36 " "	2.40	2.45
37-38 " "	2.60	2.55
39 and over, all sizes	3.00	3.05

Fancy Color Tire Covers in any of the above styles or sizes. List Price $5.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE Seat Cover Price List

Number

1200–A double texture fabric consisting of two pieces of material with a coating of rubber between, the whole forming a cloth that is waterproof and durable. Can be cleaned with soap and water.

1201–A double texture fabric of black and white weave, which is of excellent quality and appearance and will wear well. It is water proof and dust proof, and may be cleaned with soap and water.

1202–A double texture fabric of fast color similar to our No. 1200, of tan shade and an attractive piece of goods. It is water and dust proof and is durable. Can be cleaned with soap and water. Excellent value at the prices quoted.

Number

1203–A single texture black and white weave in which the colors are absolutely fast, will not spot or fade in the sun. Is of good wearing quality, and may be cleaned with soap and water or gasoline.

1204–A single texture, mixed dark gray and brown weave that will not fade in the sun. Wears very well. Cleans with soap and water or gasoline.

1205–A single texture, fast color light gray weave, of handsome appearance. Will not fade in the sun and has exceptional wearing qualities. Cleans with soap and water or gasoline.

1206–A single texture weave, brown in color that makes a very handsome cover. The color is fast and will not fade. This fabric is treated by a special waterproofing process, yet such is the nature of this process that the covers may be washed with soap and water, or cleaned with gasoline without injuring the fabric in any way. This is a big advantage over the double texture material.

1207–A single texture, fast color, specially waterproofed cloth of a gray mixture. This material has a special waterproof treated back and is also dust proof. Can be cleaned in gasoline or washed with soap and water and will not fade.

1208–A single texture, fast color, specially waterproofed cloth of a brown and tan mixture, with a small gray stripe woven into the goods. Has a special waterproof treated back and is dust proof. Can be cleaned with gasoline or soap and water and will not fade or spot.

Name	Model	Year	1200	1201 1202	1203 1204 1205	1206 1207 1208
Abbott-Detroit	P 5-p.	1915	22.00	28.00	30.00	37.00
Abbott-Detroit	F 7-p.	1915	27.00	33.00	35.00	42.00
Abbott-Detroit	8-44 7-p.	1915	27.00	33.00	35.00	42.00
Abbott-Detroit	8-80 7-p.	1916	27.00	33.00	35.00	42.00
Allen	....33 2-p.	1915	11.00	13.00	15.00	21.00
Allen	....34 5-p.	1915	19.00	23.00	25.00	31.00
Allen	....35 5-p.	1915	20.00	24.00	27.00	33.00
Allen	....40 5-p.	1915	22.00	28.00	31.00	37.00
Allen	....40 7-p.	1915	26.00	34.00	38.00	44.00
Allen	....32 2-p.	1916	11.00	14.00	16.00	22.00
Allen	....37 5-p.	1916	19.00	23.00	25.00	31.00
Alter	.....5-p.	1915	20.00	23.00	26.00	33.00
Apperson	..6-45 5-p.	1915	24.00	28.00	31.00	38.00
Apperson	..6-48 7-p.	1915	28.00	34.00	37.00	44.00
Apperson	8-16 4-p.	1916	23.00	27.00	30.00	37.00
Apperson	..6-16 4-p.	1916	23.00	27.00	30.00	37.00
Apperson	..6-16 5-p.	1916	24.00	28.00	31.00	38.00
Apperson	..8-16 7-p.	1916	28.00	33.00	36.00	43.00
Arbenz	.....25 5-p.	1915	24.00	28.00	31.00	38.00
Auburn	...4-36 5-p.	1915	24.00	29.00	35.00	40.00
Auburn	...6-40 6-p.	1915	28.00	34.00	40.00	45.00
Auburn	...4-38 2-p.	1916	12.00	14.00	16.00	21.00
Auburn	..6-40A 2-p.	1916	12.00	14.00	16.00	21.00
Auburn	...4-38 5-p.	1916	20.00	24.00	30.00	35.00
Auburn	..6-40A 7-p.	1916	27.00	33.00	40.00	45.00
Auburn	...6-38 5-p.	1916	20.00	24.00	30.00	35.00
Briscoe	..... 2-p.	1915	12.00	14.00	16.00	22.00
Briscoe	..... 5-p.	1915	19.00	23.00	29.00	35.00
Briscoe	..4-cyl. 2-p.	1916	11.00	13.00	15.00	21.00
Briscoe	..8-cyl. 2-p.	1916	11.00	13.00	15.00	21.00
Briscoe	..4-cyl. 5-p.	1916	19.00	22.00	28.00	33.00
Briscoe	..8-cyl. 5-p.	1916	19.00	22.00	28.00	33.00
Briscoe	...4-24 4-p.	1917	18.00	21.00	26.00	31.00
Briscoe	...4-24 5-p.	1917	19.00	22.00	27.00	32.00
Buick	....C-24 2-p.	1915	10.50	12.50	15.00	21.00
Buick	....C-36 2-p.	1915	10.50	12.50	15.00	21.00
Buick	....C-54 2-p.	1915	12.00	14.00	16.00	22.00
Buick	....C-25 5-p.	1915	18.00	22.50	27.50	32.50
Buick	....C-37 5-p.	1915	20.00	24.00	30.00	35.00
Buick	....C-55 7-p.	1915	27.00	33.00	40.00	45.00
Buick	....D-44 2-p.	1916	10.50	12.50	14.50	20.50
Buick	....D-54 2-p.	1916	11.50	14.00	16.00	22.00
Buick	....D-46 3-p.	1916	11.50	14.00	16.00	22.00
Buick	....D-47 5-p.	1916	20.00	24.00	30.00	35.00
Buick	....D-45 5-p.	1916	17.50	22.00	28.00	33.00
Buick	....D-55 7-p.	1916	27.00	33.00	40.00	45.00
Buick	....D-34 2-p.	1917	10.00	12.00	14.00	20.00
Buick	....D-35 5-p.	1917	16.00	22.00	28 00	33.00
Buick	....D-44 2-p.	1917	10.00	12.50	15.00	21.00
Buick	....D-45 5-p.	1917	17.00	22.00	28.00	33.00
Cadillac	....51 2-p.	1915	12.50	15.00	18.00	21.00
Cadillac	..T. C. 5-p.	1915	21.00	27.00	33.00	39.00
Cadillac	..T. C. 7-p.	1915	26.00	33.00	39.00	45.00
Cadillac	..... 2-p.	1916	11.50	14.00	16.50	19.50
Cadillac	..... 5-p.	1916	21.50	28.50	34.00	40.00
Cadillac	..T. S. 7-p.	1915	26.00	33.00	39.00	45.00
Cadillac	..... 2-p.	1917	11.75	14.00	16.50	19.50
Cadillac	Phaeton 4-p.	1917	21.00	28.00	34.00	40.00
Cadillac	Roads. 4-p.	1917	21.00	28.00	34.00	40.00
Cadillac	..T. C. 7-p.	1917	26.00	33.00	39.00	45.00
Cartercar	....9 2-p.	1915	14.00	17.00	20.00	23.00
Cartercar	....9 5-p.	1915	25.00	30.00	36.00	41.00
Cartercar	..... 2-p.	1916	14.00	17.00	20.00	23.00
Cartercar	..... 5-p.	1916	25.00	30.00	36.00	42.00
Case	.....30 5-p.	1916	23.00	28.00	34.00	40.00
Case	.....25 5-p.	1915	20.00	25.00	31.00	37.00
Case	.....35 5-p.	1915	23.00	28.00	34.00	40.00
Case	.....40 5-p.	1915	23.00	28.00	34.00	40.00
Case	.....40 5-p.	1916	23.00	28.00	34.00	40.00
Case	.....40 7-p.	1916	27.00	33.00	39.00	45.00
Chalmers	...29 4-p.	1915	25.00	30.00	36 00	42.00
Chalmers	..26B 5-p.	1915	21.00	27.00	33.00	39 00
Chalmers	...32 5-p.	1915	21.00	27.00	33.00	39.00
Chalmers	...29 5-p.	1915	25.00	30.00	36.00	42.00
Chalmers	..26A 5-p.	1915	21.00	27.00	33.00	39 00
Chalmers	6-26B 6-p.	1915	26.00	32.00	38.00	44.00
Chalmers	...29 7-p.	1915	30.00	36.00	42.00	48.00
Chalmers	32-6-40 5-p.	1916	20.00	25.00	31 00	37 00
Chalmers	29-M. S.-6 5-p.	1916	25.00	30.00	36.00	42.00
Chalmers	32-6-40 7-p.	1916	27.00	34.00	40.00	46.00
Chalmers	26-B-6-48 7-p.	1916	27.00	34.00	40.00	46.00
Chalmers	..26C 7-p.	1916	27.00	34.00	40.00	46.00
Chalmers	29-M. S.-6 7-p.	1916	30.00	36.00	42.00	48.00
Chalmers	..5-15 5-p.	1917	19.00	24.00	30.00	36.00
Chalmers	..7-22 7-p.	1917	27.00	34.00	40.00	46.00
Chandler	.....6 2-p.	1915	12.00	14.00	17.00	20.00
Chandler	.....6 5-p.	1915	22.50	27.50	33.50	39.50
Chandler	.....6 7-p.	1915	27.50	33.50	39.50	45.50
Chandler	.....6 2-p.	1916	12.00	14.00	17.00	20.00
Chandler	.....6 7-p.	1916	26.50	32.50	38.50	44.50
Chandler	....17 4-p.	1917	18.00	22.00	26.00	30.00
Chandler	....17 7-p.	1917	26.00	33.00	39.00	45.00
Chevrolet	Mon. 2-p.	1915	11.00	13.00	16.00	19 00
Chevrolet	H-2½ 2-p.	1915	11.00	13.00	16.00	19.00
Chevrolet	..H-4 5-p.	1915	19.00	24.00	30.00	36.00
Chevrolet	"6" L 5-p.	1915	24.00	26.00	35 00	41.00
Chevrolet	Mon. 2-p.	1915	11.00	13.00	16.00	19.00
Chevrolet	Mon. 2-p.	1916	11.00	13.00	16.00	19.00
Chevrolet	H-2½ 2-p.	1916	11.00	13.00	16.00	19.00
Chevrolet	490 5-p.	1916	17.00	22.00	28.00	34.00
Chevrolet	..H-4 5-p.	1916	18.00	23.00	29.00	35.00
Chevrolet	H2½ 2-p.	1917	11.00	13.00	16.00	19.00
Chevrolet	490 5-p.	1917	17.00	22.00	28.00	34.00
Cole	.....40 2-p.	1915	12.00	14.00	17.00	20.00
Cole	.....10-4 5-p.	1915	25.00	30.00	36.00	42.00
Cole Lit.	10-6G 5-p.	1915	25.00	30 00	36.00	42.00
Cole	.....8-50 6-p.	1915	30.00	36.00	42.00	48.00
Cole	...B-10-6G 7-p.	1915	30.00	36.00	42.00	48.00
Cole	6-50 S. S. 7-p.	1915	30.00	36.00	42 00	48.00
Cole	.....8-50 7-p.	1915	30.00	36.00	42.00	48.00
Cole	.....4-40J 2-p.	1916	12.00	14.00	17.00	20.00
Cole	.... 8-50J 2-p.	1916	12.00	14.00	17 00	20.00
Cole	.....4-40G 7-p.	1916	30.00	36.00	42.00	48.00
Cole	.....8-50G 7-p.	1916	30.00	36.00	42.00	48.00
Cole	..... 666 7-p.	1916	30.00	36 00	42.00	48 00
Cole	..... 4-p.	1917	23.00	30.00	36.00	42.00
Cole	..... 7-p.	1917	30.00	36.00	42.00	48.00
Crow-Elkhart	4 5-p.	1915	21.00	26.00	32.00	38.00
Crow-Elkhart	CE-23 2-p.	1916	12.00	14.00	17.00	20.00
Crow-Elkhart	E-25 2-p.	1916	12.00	14.00	17.00	20.00
Crow-Elkhart	CE-25 5-p.	1916	20.00	25.00	31.00	37.00
Crow-Elkhart	CE-30 5-p.	1916	20.00	25.00	31.00	37.00
Davis	..... 2-p.	1915	12.00	14.00	17.00	20.00
Davis	.....J-38 5-p.	1915	25.00	30.00	36.00	42.00
Davis	..... 5-p.	1916	25.00	30.00	36.00	42.00
Davis	.....6-38 5-p.	1916	25.00	30.00	36.00	42.00
Davis	.....6-E 7-p.	1916	30.00	36.00	42.00	48.00
Dixie Flyer	Road. 2-p.	1916	10.00	12.50	15.00	21.00
Dixie Flyer	Road. 2-p.	1917	10.00	12.50	15.00	21.00
Dixie Flyer	Tour. 5-p.	1916	17.00	22.00	28.00	33.00
Dixie Flyer	Tour. 5-p.	1917	17.00	22.00	28.00	33 00
Dodge	..... 2-p.	1915	10.00	12.00	15 00	18.00
Dodge	..... 5-p.	1915	17.00	22.00	28.00	34.00
Dodge	..... 2-p.	1916	10.00	12.00	15.00	18.00
Dodge	..... 5-p.	1916	17.00	22.00	28.00	34.00
Dodge	..... 2-p.	1917	10.00	12.00	15 00	18.00
Dodge	..... 5-p.	1917	17.00	22.00	28.00	34.00
Dort	..... 2-p.	1916	11.00	13.00	16.00	19.00
Dort	..... 5-p.	1916	18.00	22.00	28.00	34.00
Dort	..... 2-p.	1917	11.00	13.00	16.00	19.00
Dort	..... 5-p.	1917	18.00	22.00	28.00	34.00
Empire	.....31 2-p.	1915	11.00	13.00	16.00	19.00
Empire	.....31 5-p.	1915	20.00	25.00	31 00	37.00
Empire	.....33 2-p.	1916	11.00	13.00	16.00	19.00
Empire	....33A 5-p.	1916	19.00	23.00	29.00	35.00
Empire	.....45 5-p.	1916	21.00	25.00	31 00	37.00
Empire	....4-40 5-p.	1916	21.00	25.00	31.00	37.00
Empire	....6-60 5-p.	1916	27.00	33.00	39.00	45.00
Empire	....6-60 4-p.	1917	21.00	25.00	31.00	37.00
Empire	....6 60 5-p.	1917	27.00	33.00	39.00	45.00
Enger	.... 6-50 7-p.	1915	30.00	36.00	42.00	48.00
Enger	.....6-50 2-p.	1915	12.00	14.00	17.00	20.00
Ford	...Roads. 2-p.	1913	8.00	11.00	14.00	16.00
Ford	....Tour. 5-p.	1913	13.00	18.00	22.00	25.00
Ford	...Roads. 2-p.	1914	7.00	9.50	11.50	14.50
Ford	....Tour. 5-p.	1914	12.00	16.00	20.00	23.00
Ford	...Roads. 2-p.	1915	7.00	9.50	11.50	14.50
Ford	....Tour. 5-p.	1915	12.00	16.00	20.00	25.00
Ford	..Coupelet 2-p.	1915	8.50	11.00	14.00	16.00
Ford	....Sedan 5-p.	1915	14.00	18.00	22.00	25.00
Ford	...Roads. 2-p.	1916	7.00	9.50	11.50	14.50
Ford	....Tour. 5-p.	1916	12.00	16.00	20.00	25.00
Ford	..Coupelet 2-p.	1916	8.50	11.00	14.00	16.00
Ford	....Sedan 5-p.	1916	14.00	18.00	22.00	25.00
Ford Town Car	5-p.	1916	14.00	18.00	22.00	25.00
Ford	...Roads. 2-p.	1917	7.00	9.50	11.50	14.50
Ford	....Tour. 5-p.	1917	12.00	16.00	20.00	23.00
Ford	..Coupelet 2-p.	1917	8.50	11.00	14.00	16.00
Ford	....Sedan 5-p.	1917	14.00	18.00	22.00	25.00
Ford Town Car	5-p.	1917	14.00	18.00	22.00	25.00
Fostoria	..... 5-p.	1916	20.00	25.00	30.00	35.00
Fostoria	..... 5-p.	1917	20.00	25.00	30.00	35.00
Franklin	Ser. 7, 6-30 2-p.	1915	12.50	15.00	18.00	21.00
Franklin	..6-30 5-p.	1915	23.00	28.00	34.00	40.00
Franklin	Ser. 7, 6-30 5-p.	1915	23.00	28.00	34.00	40.00
Franklin	Ser. 6 3-p.	1915	12.50	15.00	18.00	21.00
Franklin	Ser. 6, 6-30 5-p.	1915	23.00	28.00	34.00	40.00
Franklin	Ser. 8, 6-30 2-p.	1916	12.50	15.00	18.00	21.00
Franklin	Ser. 8, 6-30 5-p.	1916	21.00	25.00	31.00	37.00
Franklin	Ser. 8 7-p.	1916	27.00	34.00	40.00	46.00
Franklin	Sedan 5-p.	1916	25.00	30.00	36.00	42.00
Franklin	Ser. 9 5-p.	1917	21.00	25.00	31.00	37.00
Franklin	Ser. 9 2-p.	1917	12.50	15.00	18.00	21.00
Glide	... 6-40 5-p.	1916	21.00	26.00	32.00	38.00
Grant	.....M 2-p.	1915	11.00	13.00	16.00	19.00
Grant	...6-cyl. 5-p.	1915	20.00	25.00	31.00	37.00
Grant	...6-cyl. 3-p.	1916	11.00	13.00	16.00	19.00
Grant	...6-cyl.. 5-p.	1916	20.00	25.00	31.00	37.00
Grant	...6-cyl. 5-p.	1917	20.00	25.00	31.00	37.00
H. A. L.	12 21 2-p.	1917	18.00	21.00	26.00	31 00
H. A. L.	Clover. 12 21 4-p.	1917	21.00	25.00	30.00	35.00
H. A. L.	12 21 7-p.	1917	30.00	36.00	42.00	48.00
Haynes	... 30 2-p.	1915	12.00	15.00	18.00	21.00
Haynes L. C.	30 5-p.	1915	25.00	30.00	36.00	42.00
Haynes	.....31 5-p.	1915	25.00	30.00	36.00	42.00
Haynes	.....33 7-p.	1915	30.00	36.00	42.00	48.00
Haynes	Cloverleaf 34 3-p.	1916	12.00	15.00	18 00	21 00
Haynes	.....34 5-p.	1916	24.00	29.00	35.00	41.00
Haynes	.....35 7-p.	1916	28.00	34.00	40.00	46.00
Haynes	..... 5-p.	1917	24 00	29.00	35.00	41 00
Haynes	..... 7-p.	1917	28.00	34.00	40.00	46.00
Hollier	.....8 5-p.	1915	25.00	30.00	36.00	42.00
Hollier	.....8 2-p.	1916	12.00	15.00	18.00	21.00
Hollier	.....8 5-p.	1916	25.00	30.00	36.00	42.00
Hollier	.....8 2-p.	1917	12.00	15.00	18.00	21.00
Hollier	.....8 5-p.	1917	25.00	30.00	36.00	42.00
Hudson	...6-40 2-p.	1915	12.00	15.00	18.00	21.00
Hudson	Cab. 6-40 3-p.	1915	12.00	15.00	18.00	21.00
Hudson	... 6-40 6-p.	1915	27.00	34.00	40.00	46.00
Hudson	....6-54 7-p.	1915	30.00	36.00	42.00	48.00
Hudson	Super Six 2-p.	1916	12.00	15.00	18.00	21.00
Hudson	...6-40 3-p.	1916	12.00	15.00	18.00	21.00
Hudson	Cab. 6-40 3-p.	1916	12.00	15.00	18.00	21.00
Hudson	....6-40 7-p.	1916	27.00	34.00	40.00	46.00
Hudson	....6-54 7-p.	1916	30.00	36.00	42.00	48.00
Hudson	Super Six 7-p.	1916	27.00	34.00	40.00	46.00
Hudson	Super Six 2-p.	1917	12.00	15.00	18.00	21.00

Send For Cover Samples

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE Seat Cover Price List

Name	Model	Year	1200	1201 1202	1203 1204 1205	1206 1207 1208
Hudson Super Six,	Cab, 3-p.	1917	12.00	15.00	18.00	21.00
Hudson Super Six,	Sed. 7-p.	1917	30.00	36.00	42.00	48.00
Hudson Super Six,	T. C. 7-p.	1917	27.00	34.00	40.00	46.00
Hupmobile	..32 2-p.	1915	11.00	14.00	17.00	20.00
Hupmobile	..K. 2-p.	1915	11.00	14.00	17.00	20.00
Hupmobile	..32 5-p.	1915	18.00	21.00	26.00	31.00
Hupmobile	..K. 5-p.	1915	19.00	23.00	28.00	33.00
Hupmobile	..N. 2-p.	1916	11.00	14.00	16.50	19.50
Hupmobile	..N. 5-p.	1916	18.00	22.00	27.00	32.00
Hupmobile	..N. 7-p.	1916	27.00	34.00	40.00	46.00
Hupmobile	.... 2-p.	1917	11.00	14.00	17.00	20.00
Hupmobile	.... 5-p.	1917	18.00	22.00	27.00	32.00
Hupmobile	.... 7-p.	1917	27.00	34.00	40.00	46.00
Imperial	....64 5-p.	1915	25.00	30.00	35.00	40.00
Imperial	....66 5-p.	1915	25.00	30.00	35.00	40.00
Imperial	....64 5-p.	1916	25.00	30.00	35.00	40.00
Imperial	....66 5-p.	1916	25.00	30.00	35.00	40.00
Imperial	....64 5-p.	1917	25.00	30.00	35.00	40.00
Imperial	....66 5-p.	1917	25.00	30.00	35.00	40.00
Interstate	30T 2-p.	1915	11.00	13.00	16.00	19.00
Interstate	30T 5-p.	1915	19.00	23.00	28.00	33.00
Interstate	30T 2-p.	1916	11.00	13.00	16.00	19.00
Interstate	30T 5-p.	1916	19.00	23.00	28.00	33.00
Interstate	30T 2-p.	1917	11.00	13.00	16.00	19.00
Interstate	30T 5-p.	1917	19.00	23.00	28.00	33.00
Jackson	....44 5-p.	1915	25.00	30.00	35.00	40.00
Jackson	....46 5-p.	1915	25.00	30.00	35.00	40.00
Jackson	....48 5-p.	1915	26.00	31.00	36.00	41.00
Jackson	...3-48 5-p.	1916	25.00	30.00	35.00	40.00
Jackson	....34 5-p.	1916	25.00	30.00	35.00	40.00
Jackson	....68 7-p.	1916	30.00	36.00	42.00	48.00
Jeffrey	.....4 5-p.	1915	23.00	28.00	34.00	40.00
Jeffrey	Chesterfield 6 5-p.	1915	23.00	28.00	34.00	40.00
Jeffrey	....6-48 5-p.	1915	25.00	30.00	36.00	42.00
Jeffrey	Chesterfield 6 5-p.	1916	22.00	26.00	32.00	38.00
Jeffrey	.....6 7-p.	1916	27.00	34.00	40.00	46.00
Jeffrey	....G-4 7-p.	1916	27.00	34.00	40.00	46.00
Jeffrey	.....6 7-p.	1917	27.00	34.00	40.00	46.00
King	.....8 2-p.	1915	12.00	15.00	18.00	21.00
King	.....8 5-p.	1915	20.00	25.00	30.00	35.00
King	.....8 2-p.	1916	11.00	13.00	16.00	19.00
King	.....8 5-p.	1916	20.00	25.00	30.00	35.00
King	.....8 7-p.	1916	27.00	34.00	40.00	46.00
King	.....E 7-p.	1916	27.00	34.00	40.00	46.00
King	..D-8-cyl. 5-p.	1916	20.00	25.00	30.00	35.00
Kissel	...4-36 5-p.	1915	23.00	28.00	33.00	38.00
Kissel	....6-42 5-p.	1915	23.00	28.00	33.00	38.00
Kissel	2D. 4-36 5-p.	1915	25.00	30.00	35.00	40.00
Kissel	2D. 6-42 5-p.	1915	25.00	30.00	35.00	40.00
Kissel	2D. 6-48 5-p.	1915	25.00	30.00	35.00	40.00
Kissel	3D. 4-36 7-p.	1915	30.00	36.00	42.00	48.00
Kissel	3D. 6-42 7-p.	1915	30.00	36.00	42.00	48.00
Kissel	....6-42 4-p.	1916	24.00	29.00	34.00	39.00
Kissel	....6-42 5-p.	1916	23.00	28.00	33.00	38.00
Kissel	3D. 4-32 5-p.	1916	25.00	30.00	35.00	40.00
Kissel	3D. 6-42 7-p.	1916	30.00	36.00	42.00	48.00
Kissel	4D. 4-32 5-p.	1916	25.00	30.00	35.00	40.00
Kissel	4D. 6-42 7-p.	1916	30.00	36.00	42.00	48.00
Kissel	....6-38 5-p.	1917	21.00	25.00	30.00	35.00
Kissel	Hundred Point 6	7-p. 1917	32.00	38.00	44.00	50.00
Lewis VI	6-cyl. 6-p.	1915	30.00	36.00	42.00	48.00
Lewis VI	6-cyl. 6-p.	1916	30.00	36.00	42.00	48.00
Lexington	Four 5-p.	1915	20.00	25.00	31.00	37.00
Lexington	Six 6-p.	1915	22.00	27.00	33.00	39.00
Lexington	K-4 5-p.	1916	20.00	25.00	31.00	37.00
Lexington	M. M. F. 5-p.	1916	20.00	25.00	31.00	37.00
Lexington	M. M. 6 5-p.	1917	20.00	25.00	31.00	37.00
Liberty	..6-cyl. 5-p.	1917	20.00	25.00	31.00	37.00
Lozier	....6-82 7-p.	1915	30.00	36.00	42.00	48.00
Madison	6-cyl. 5-p.	1916	25.00	30.00	36.00	42.00
Madison	6-cyl. 7-p.	1916	30.00	36.00	42.00	48.00
Marion	....6-41 2-p.	1915	12.00	14.00	17.00	20.00
Marion	....6-41 4-p.	1915	22.00	27.00	32.00	37.00
Marion	..6-cyl. 3-p.	1916	12.00	14.00	17.00	20.00
Marion	..6-cyl. 5-p.	1916	22.00	27.00	33.00	39.00
Marmon	..6-41 2-p.	1915	12.00	14.00	17.00	20.00
Marmon	..6-41 4-p.	1915	25.00	30.00	36.00	42.00
Marmon	..6-41 5-p.	1915	25.00	30.00	36.00	42.00
Marmon	..6-41 7-p.	1915	30.00	36.00	42.00	48.00
Marmon	..6-41 3-p.	1916	12.00	14.00	17.00	20.00
Marmon	....34 5-p.	1916	25.00	30.00	36.00	42.00
Marmon	..6-41 7-p.	1916	30.00	36.00	42.00	48.00
Marmon	....34 7-p.	1916	30.00	36.00	42.00	48.00
Maxwell	..Cab 2-p.	1915	12.00	14.00	17.00	20.00
Maxwell	..Cab 2-p.	1916	11.00	13.00	16.00	19.00
Maxwell	....25 5-p.	1915	17.00	21.00	27.00	33.00
Maxwell	....25 2-p.	1915	11.00	13.00	16.00	19.00
Maxwell	....25 2-p.	1916	10.00	12.00	15.00	18.00
Maxwell	....25 5-p.	1916	17.00	21.00	27.00	33.00
Maxwell	..... 2-p.	1917	10.00	12.00	15.00	18.00
Maxwell	..... 5-p.	1917	17.00	21.00	27.00	33.00
Metz	.....22 2-p.	1915	11.00	13.00	16.00	19.00
Metz	.....25 5-p.	1915	18.00	23.00	29.00	35.00
Metz	.....22 2-p.	1916	11.00	13.00	16.00	19.00
Metz	.....25 5-p.	1916	18.00	23.00	29.00	35.00
Mitchell	..B-35 2-p.	1915	11.00	13.00	16.00	19.00
Mitchell	L-4-35 5-p.	1915	21.00	26.00	32.00	38.00
Mitchell	..B-45 5-p.	1915	21.00	26.00	32.00	38.00
Mitchell	L-4-35 6-p.	1915	26.00	33.00	39.00	45.00
Mitchell	..6-45 6-p.	1915	26.00	33.00	39.00	45.00
Mitchell	Special Six 6-p.	1915	27.00	34.00	40.00	46.00
Mitchell	C-2-42 2-p.	1916	11.00	13.00	16.00	19.00
Mitchell	B-2-48 2-p.	1916	11.00	13.00	16.00	19.00
Mitchell	..... 3-p.	1916	11.00	13.00	16.00	19.00
Mitchell	C-5-42 5-p.	1916	20.00	25.00	31.00	37.00
Mitchell	B-5-48 5-p.	1916	20.00	25.00	31.00	37.00
Mitchell	Midyear 5-p.	1916	20.00	25.00	31.00	37.00
Mitchell	C-7-42 7-p.	1916	25.00	30.00	36.00	42.00
Mitchell	Midyear 7-p.	1916	25.00	30.00	36.00	42.00
Moon	.....6-40 5-p.	1915	25.00	30.00	36.00	42.00
Moon	.....6-30 5-p.	1916	22.00	26.00	32.00	48.00
Moon	.....6-40 7-p.	1916	27.00	33.00	39.00	45.00
Moon	.....6-43 5-p.	1917	22.00	26.00	32.00	38.00
Moon	.....6-66 7-p.	1917	27.00	33.00	39.00	45.00
Moline-Knight	50 2-p.	1915	12.00	14.00	17.00	20.00
Moline-Knight	50 5-p.	1915	25.00	30.00	36.00	42.00
Moline-Knight	50 7-p.	1915	30.00	35.00	41.00	47.00
Moline-Knight	40 2-p.	1916	12.00	14.00	17.00	20.00
Moline-Knight	50 2-p.	1916	12.00	14.00	17.00	20.00
Moline-Knight	40 5-p.	1916	20.00	25.00	31.00	37.00
Moline-Knight	50 5-p.	1916	25.00	30.00	36.00	42.00
Moline-Knight	50 7-p.	1916	30.00	35.00	41.00	47.00
Monitor	30-4-cyl. 5-p.	1916	20.00	25.00	31.00	37.00
Monitor	4-cyl. 5-p.	1917	20.00	25.00	31.00	37.00
National	..H-6 7-p.	1915	30.00	36.00	42.00	48.00
National	..H-12 7-p.	1915	30.00	36.00	42.00	48.00
National	..H-6 5-p.	1916	25.00	30.00	36.00	42.00
National	H-12 5-p.	1916	25.00	30.00	36.00	42.00
National	..N-6 5-p.	1916	25.00	30.00	36.00	42.00
National	..H-6 7-p.	1916	30.00	36.00	42.00	48.00
National	H-12 7-p.	1916	30.00	36.00	42.00	48.00
National	.N-6 7-p.	1916	30.00	36.00	42.00	48.00
Oakland	....37 5-p.	1915	19.00	23.00	29.00	35.00
Oakland	..6-49 7-p.	1915	28.00	33.00	39.00	45.00
Oakland	..6-32 2-p.	1916	11.00	13.00	16.00	19.00
Oakland	....38 2-p.	1916	11.00	13.00	16.00	19.00
Oakland	....32 5-p.	1916	19.00	23.00	29.00	35.00
Oakland	....38 5-p.	1916	19.00	23.00	29.00	35.00
Oakland	..8-50 7-p.	1916	28.00	33.00	39.00	45.00
Oldsmobile	..42 2-p.	1915	11.00	13.50	16.50	19.50
Oldsmobile	..42 5-p.	1915	20.00	25.00	31.00	37.00
Oldsmobile	.... 7-p.	1915	27.00	34.00	40.00	46.00
Oldsmobile	..43 2-p.	1916	11.00	13.50	16.50	19.50
Oldsmobile	..43 4-p.	1916	21.00	26.00	31.00	36.00
Oldsmobile	..43 5-p.	1916	22.00	27.00	33.00	39.00
Oldsmobile	8-cyl. 5-p.	1916	21.00	26.00	32.00	38.00
Oldsmobile	..44 5-p.	1916	21.00	26.00	32.00	38.00
Overland	..81R 2-p.	1915	10.00	12.00	15.00	18.00
Overland	..80R 2-p.	1915	10.50	12.50	15.50	18.50
Overland	..80T 5-p.	1915	20.00	24.00	30.00	36.00
Overland	..81T 5-p.	1915	18.00	22.00	28.00	34.00
Overland	..82T 7-p.	1915	25.00	30.00	36.00	42.00
Overland	....75 2-p.	1916	10.00	12.00	15.00	18.00
Overland	....84 2-p.	1916	10.00	12.00	15.00	18.00
Overland	....83 2p.	1916	10.00	12.00	15.00	18.00
Overland	....75 5-p.	1916	16.00	20.00	26.00	32.00
Overland	....83 5-p.	1916	17.00	21.00	27.00	33.00
Overland	....84 5-p.	1916	18.00	22.00	28.00	34.00
Overland	....86 7-p.	1916	25.00	30.00	36.00	42.00
Overland	..85-4 5-p.	1917	18.00	23.00	29.00	35.00
Overland	..85-6 7-p.	1917	26.00	32.00	38.00	44.00
Overland	..88-4 7-p.	1917	26.00	32.00	38.00	44.00
Overland	..88-6 7-p.	1917	26.00	32.00	38.00	44.00
Overland	....90 4-p.	1917	16.00	20.00	26.00	32.00
Owen Magnetic	M-25-1 2-p.	1917	18.00	21.00	26.00	31.00
Owen Magnetic	M-25-4 5-p.	1917	27.00	33.00	38.00	44.00
Owen Magnetic	O-36-6 4-p.	1917	25.00	31.00	36.00	42.00
Packard	...3-38 2-p.	1915	14.00	16.00	19.00	22.00
Packard	...3-38 5-p.	1915	25.00	30.00	36.00	42.00
Packard	...3-38 7-p.	1915	30.00	36.00	42.00	48.00
Packard Twin Six	1-25 2-p.	1916	14.00	16.00	19.00	22.00
Packard Twin Six	1-25 5-p.	1916	25.00	30.00	36.00	42.00
Packard Twin Six	1-25 7-p.	1916	30.00	36.00	42.00	48.00
Packard Twin Six	2-25 4-p.	1917	14.00	16.00	19.00	22.00
Packard Twin Six	2-25 5-p.	1917	25.00	30.00	36.00	42.00
Packard Twin Six	2-25 7-p.	1917	30.00	36.00	42.00	48.00
Paige	.....25 2-p.	1915	11.00	13.00	16.00	19.00
Paige	.....36 3-p.	1915	12.00	15.00	18.00	21.00
Paige	....6-46 2-p.	1915	11.50	14.00	17.00	20.00
Paige	.....25 5-p.	1915	19.00	24.00	30.00	36.00
Paige	.....30 5-p.	1915	20.00	25.00	31.00	37.00
Paige	.....36 5-p.	1915	21.00	26.00	32.00	38.00
Paige	....6-46 7-p.	1915	26.00	32.00	38.00	44.00
Paige	....6-36 2-p.	1916	12.00	14.50	17.50	20.50
Paige	....6-46 2-p.	1916	12.00	14.50	17.50	20.50
Paige	....6-36 5-p.	1916	18.00	23.00	29.00	35.00
Paige	....6-38 5-p.	1916	18.00	23.00	29.00	35.00
Paige	....6-46 7-p.	1916	26.00	33.00	39.00	45.00
Paige	....6-46 7-p.	1916	26.00	33.00	39.00	45.00
Paige	....6-38 5-p.	1917	18.00	23.00	29.00	35.00
Paige	....6-46 2-p.	1917	12.00	14.50	17.50	20.50
Paige	....6-38 5-p.	1917	18.00	23.00	29.00	35.00
Paige	....6-46 7-p.	1917	26.00	33.00	39.00	45.00
Paterson	32-4-cyl. 5-p.	1915	21.00	26.00	32.00	38.00
Paterson	48-6-cyl. 5-p.	1915	21.00	26.00	32.00	38.00
Paterson	..6-48 7-p.	1915	25.00	30.00	36.00	42.00
Paterson	..4-32 5-p.	1916	18.00	23.00	29.00	35.00
Paterson	..6-42 5-p.	1916	20.00	25.00	31.00	37.00
Paterson	..6-48 7-p.	1916	25.00	30.00	36.00	42.00
Paterson	..6-42 7-p.	1916	25.00	30.00	36.00	42.00
Pathfinder	..7C 2-p.	1915	13.00	16.00	19.00	22.00
Pathfinder	L-6 7-p.	1915	30.00	36.00	42.00	48.00
Pathfinder	..8B 7-p.	1916	30.00	36.00	42.00	48.00
Peerless 56	Road. 3-p.	1917	14.00	16.00	19.00	22.00
Peerless 56	Tour. 7-p.	1917	30.00	36.00	42.00	48.00
Pierce-Arrow B 4	4-p.	1916	18.00	22.00	28.00	34.00
Pierce-Arrow B 4	5-p.	1916	25.00	30.00	36.00	42.00
Pierce-Arrow B 4	7-p.	1916	30.00	35.00	41.00	47.00
Pierce-Arrow C 4	4-p.	1916	18.00	22.00	28.00	34.00
Pierce-Arrow C 4	5-p.	1916	25.00	30.00	36.00	42.00
Premier	..6-50 2-p.	1915	14.00	16.00	19.00	22.00
Premier	..6-50 2-p.	1916	14.00	16.00	19.00	22.00
Premier	..6-50 2-p.	1917	14.00	16.00	19.00	22.00
Premier	..6-50 5-p.	1917	25.00	31.00	37.00	43.00
Pullman	....Jr. 5-p.	1915	20.00	25.00	31.00	37.00
Pull man	..... 3-p.	1916	11.00	13.00	16.00	19.00
Pullman	....Jr. 5-p.	1916	20.00	25.00	31.00	37.00
Pullman	..6-48 7-p.	1916	30.00	36.00	42.00	48.00
Pullman	..6-66 7-p.	1916	30.00	36.00	42.00	48.00
Regal	.....D 2-p.	1915	12.00	14.00	17.00	20.00
Regal	.....D 5-p.	1915	20.00	25.00	31.00	37.00
Regal	..Light-4 5-p.	1915	18.00	22.00	28.00	34.00
Regal	.....E 5-p.	1915	18.00	22.00	28.00	34.00
Regal	...Eight 5-p.	1915	20.00	25.00	31.00	37.00
Regal	.....D 5-p.	1916	20.00	25.00	31.00	37.00
Reo	..... 2-p.	1915	11.00	13.00	16.00	19.00
Reo	..R, 4-cyl. 5-p.	1915	20.00	25.00	31.00	37.00
Reo	..M, 6-cyl. 5-p.	1915	20.00	25.00	31.00	37.00
Reo	.....4-cyl. 3-p.	1916	11.00	13.00	16.00	19.00
Reo	.....6-cyl. 4-p.	1916	20.00	25.00	31.00	37.00
Reo	.....4-cyl. 5-p.	1916	20.00	25.00	31.00	37.00
Reo	.....6-cyl. 7-p.	1916	25.00	33.00	39.00	45.00
Reo	..S, 4-cyl. 3-p.	1917	11.00	13.00	16.00	19.00
Reo	..N, 6-cyl. 4-p.	1917	20.00	25.00	31.00	37.00
Reo	..R,4-cyl. 5-p.	1917	20.00	25.00	31.00	37.00
Reo	..M, 6-cyl. 7-p.	1917	25.00	33.00	39.00	45.00
Saxon	B, 6-cyl. 5-p.	1915	20.00	25.00	31.00	37.00
Saxon	..... 2-p.	1915	9.50	11.50	14.50	17.50
Saxon	.....B 2-p.	1916	9.50	11.50	14.50	17.50
Saxon	...6-cyl. 2-p.	1916	11.00	13.00	16.00	19.00
Saxon	..... 3-p.	1916	12.00	14.00	17.00	20.00
Saxon	B, 6-cyl. 5-p.	1916	19.00	23.00	29.00	35.00
Scripps-Booth	3-p.	1915	11.00	13.00	16.00	19.00
Scripps-Booth	3-p.	1916	11.00	13.00	16.00	19.00
Stearns	....L-4 5-p.	1916	20.00	25.00	31.00	37.00
Stearns	B-4 Coupe ..	1916	13.00	16.00	19.00	22.00
Stewart	..... 7-p.	1916	31.00	36.00	42.00	48.00
Studebaker	..4 3-p.	1915	12.00	14.50	17.50	21.50
Studebaker	..4 5-p.	1915	18.00	22.00	28.00	34.00
Studebaker	..6 5-p.	1915	18.50	22.50	28.50	34.50
Studebaker	..6 7-p.	1915	25.00	31.00	37.00	43.00
Studebaker	17 3-p.	1916	12.00	14.00	17.00	20.00
Studebaker	..4 7-p.	1916	25.00	31.00	37.00	43.00
Studebaker	..6 7-p.	1916	25.00	31.00	37.00	43.00
Studebaker	17 7-p.	1916	25.00	31.00	37.00	43.00
Studebaker	Series 18 5-p.	1917	20.00	25.00	30.00	35.00
Studebaker	Series 18 7-p.	1917	25.00	30.00	35.00	40.00
Stutz	...H C S, 2-p.	1915	13.00	16.00	19.00	22.00
Stutz	....4-cyl. 2-p.	1915	13.00	16.00	19.00	22.00
Stutz	....6-cyl. 6-p.	1915	30.00	36.00	42.00	48.00
Stutz	..Ser. C 2-p.	1916	13.00	16.00	19.00	22.00
Stutz	...B D S, 4-p.	1916	20.00	25.00	30.00	35.00
Velie	.....14-6 5-p.	1915	24.00	29.00	35.00	41.00
Velie	.....14-4 5-p.	1915	24.00	29.00	35.00	41.00
Velie	.....15-6 5-p.	1915	24.00	29.00	35.00	41.00
Velie	.....6-22 5-p.	1916	20.00	25.00	31.00	37.00
Velie	.....15-6 5-p.	1916	24.00	29.00	35.00	41.00
Velie	.....15-6 6-p.	1916	25.00	30.00	36.00	42.00
Velie	.....15 7-p.	1916	25.00	30.00	36.00	42.00
Velie	.....28-6 5-p.	1917	27.00	33.00	39.00	44.00
Velie	.....27-6 7-p.	1917	26.00	32.00	38.00	44.00
Westcott	O-35 5-p.	1915	25.00	30.00	36.00	42.00
Westcott	U-50 7-p.	1915	30.00	35.00	41.00	47.00
Westcott	..6-41 5-p.	1916	25.00	30.00	36.00	42.00
Westcott	..6-51 7-p.	1916	30.00	35.00	41.00	47.00
Wescott	Series 17 4-p.	1917	18.00	22.00	26.00	30.00
Wescott	Series 17 5-p.	1917	25.00	30.00	36.00	42.00
Wescott	Series 17 7-p.	1917	30.00	35.00	41.00	47.00
Willys-Kt.	84-84B 2-p.	1916	10.00	12.00	15.00	18.00
Willys-Kt.	84-84B 5-p.	1916	17.50	21.00	27.00	33.00
Willys-Kt.	84-4 7-p.	1917	25.00	31.00	37.00	43.00
Winton	....21A 5-p.	1916	25.00	30.00	36.00	42.00

Send For Cover Samples

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE AUTO SPECIALTIES

TOP SLIP COVERS

Nos. 1200 to 1214.

Made to match all numbers of Seat Covers; numbers correspond to Seat Cover numbers of same material listed on preceding pages.

Nos.	1200	1201 1202	1203 1204 1205	1206 1207 1208	1209 1210 1211	1212 1213 1214
Fords, All Models .....Ea.	$4.00	5.00	6.00	7.00	8.00	9.00
Other Cars..Ea.	4.50	5.50	6.50	7.50	8.50	9.50
Bow Covers, Ea.	6.00	7.00	8.00	9.00	10.00	11.00

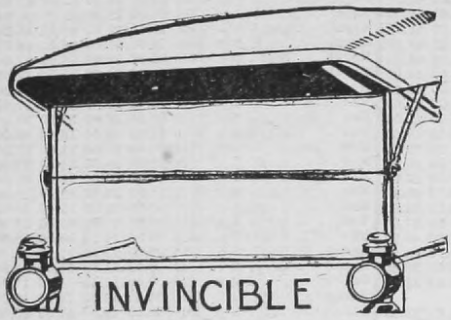
SEAT BACK COVERS

Nos. 1200 to 1214.

Extra Covering for Back of Front Seat. Protects the enamel. Has Large Pocket with Flap. Extra charge is made for the pocket. Numbers match those of Seat Covers listed on preceding pages.

Nos.	1200	1201 1202	1203 1204 1205	1206 1207 1208	1209 1210 1211	1212 1213 1214
All Models..Ea.	$2.00	3.00	4.00	4.50	5.50	6.00

FORD WEATHER STRIPS



The Ford Weather Strip fastens to inner face of front top bow and clamps to top of windshield, filling the opening there.

No. 800—Strips complete ready to attach....Each, $1.30

FORD DRIVERS ROBE

Nos. 75 and 80.

Absolutely Waterproof on one side and Fleece lined on the other side. Fits snugly against dash, cowl and back across the driver's lap. Shuts in the heat and keeps out cold, rain or snow. No fasteners necessary in installing.

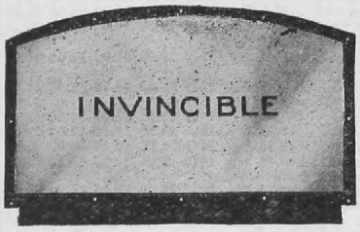
No. 75—Fits All Models prior to 1915.....Each, $2.75

No. 80—Fits Models 1915, 1916, 1917.....Each, 2.75

PONCHO AND AUTO ROBE

Nos. 120 and 121.

CURTAIN LIGHTS



For Rear Curtains of Ford Cars

Furnished with special fasteners. No tools required for installation.

No. 250—For Ford Model to 1916.....Each, $0.70

No. 260—For Ford Model 1917.....Each, .30

WASH APRONS

Nos. 150 to 170.

Ponchos and Auto Robes are made of Waterproof Material, Fleece Lined. Splendid protection against wind, rain or snow and as warm as an expensive robe.

No. 120—52x72 in. Brown and Blue Plaid.Each, $2.50

No. 121—52x72 in. Brown and White Plaid.Each, 3.00

Invincible Wash Aprons are made of Waterproof Material, Fleece Lined. Useful in changing tires or washing car.

No. 150—Invincible Cloth .....Each, $1.75

No. 160—Genuine Rubber ...Each, 2.00

No. 170—Waterproof Duck .....Each, 2.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INVINCIBLE RADIATOR AND HOOD COVERS

Detachable Type Curtain

Roll Type Curtain

Materials Used in INVINCIBLE Radiator and Hood Covers:

Numbers 400 and 450—Waterproof Drill and Kersey Lining.

Numbers 500 and 550—High Grade Artificial Leather. Felt Lining.

Numbers 600 and 650—Never-leak. Fabric. Gray Felt Lining.

INVINCIBLE Radiator and Hood Cover Price List

INVINCIBLE Radiator and hood Cover List for various makes of Automobiles.

Nos. 400R, 400D, 500R, 500D, 600R, 600D, Designate Covers for Radiators only.

Nos. 450R, 450D, 550R, 550D, 650R, 650D, Designate Covers for Radiator and Engine Combined.

Nos. with the Letter R following Designate Covers with Rolling Curtain.

Nos. with the Letter D following Designate Covers with Detachable Curtain.

Be sure and mention Year and Model when ordering.

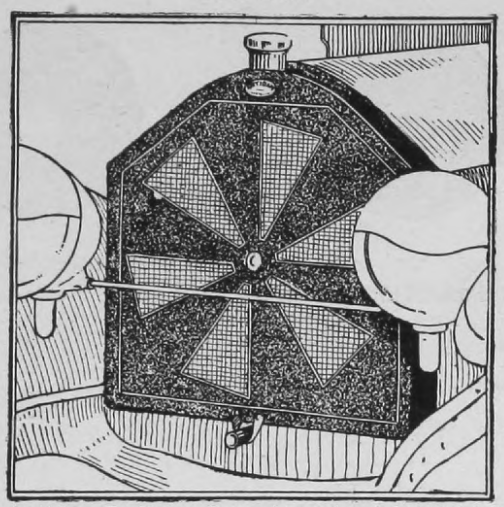
NAME	MODEL	YEAR	400R 400D	450R 450D	500R 500D	550R 550D	600R 600D	650R 650D
Abbott-Detroit	4-cyl.,	1914-1915	3.75	7.75	6.75	14.00	8.00	18.00
Abbott-D.	6-cyl., 8-cyl.,	1914-1915-1916-1917	3.75	8.00	6.75	15.50	8.00	18.00
Allen	30-32-33-34-35-37-40,	1914-1915-'16-'17	3.75	7.75	6.75	14.00	8.00	18.00
Apperson		1914-1915-1916-1917	4.00	8.00	7.00	15.50	8.25	18.25
Auburn	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.25	18.25
Auburn	6-cyl.,	1914-1915-1916	4.00	8.00	7.00	15.50	8.50	19.00
Briscoe		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.25	18.25
Buick	B-54, B-55, C-54, C-55, D-54, D-55,	1914-1915-1916	4.00	8.00	7.00	15.00	8.00	18.00
Buick	B-24, B25, C24, C25, D34, D35	1914-1915-1916-1917	2.75	5.25	6.00	12.00	7.50	16.00
Buick	B36, B37, C36, C37, D44, D45, D46, D47,	1914-1915-1916-1917	2.75	5.75	6.50	13.00	7.75	17.00
Cadillac		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Case	25-35,	1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Case	40,	1914-1915	4.00	8.00	7.00	15.50	8.50	18.50
Chalmers	30-36-40,	1914	3.75	7.75	6.75	14.00	8.50	18.50
Chalmers Six	24-26-29-32,	1914-1915-1916	3.75	7.75	6.75	14.00	8.50	18.50
Chalmers	6-30, 6-35, 6-35A,	1916-1917	3.50	7.00	7.00	14.00	8.00	18.00
Chandler		1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Chandler		1917	3.50	7.00	7.50	14.00	8.50	18.50
Chevrolet	490, 4-cyl.,	1914-1915-1916-1917	2.50	5.50	6.00	12.00	7.50	17.50
Cole	4-cyl.,	1914-1915	3.75	7.75	6.75	14.00	8.00	18.00
Cole	6-cyl., 8-cyl.,	1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Crow-Elkhart		1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Davis		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Detroiter		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Dixie Flyer		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Dodge		1915-1916-1917	2.75	5.50	6.50	13.00	7.75	17.00
Dort		1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Elgin		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Empire		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Enger		1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Federal Truck		1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Franklin		1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Ford		1913-1914-1915-1916	1.65	2.80	4.00	8.00	5.50	12.00
Ford		1917	1.75	3.20	4.25	8.50	5.75	12.50
Fostoria		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Grant		1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Glide		1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Haynes	4-cyl.,	1914-1915	3.75	7.75	6.75	14.00	8.00	18.00
Haynes	6-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Hollier		1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Hudson	6-cyl.,	1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Hupmobile		1914-1915-1916-1917	2.75	6.00	6.50	13.00	7.75	17.00
Imperial	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Imperial	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Interstate	30-T.,	1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Jackson	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Jackson	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Jeffrey	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Jeffrey	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Jordon		1917	4.00	8.00	7.00	15.00	8.50	18.50
King	8-cyl.,	1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Kissell	4-cyl.,	1915	3.75	7.75	6.75	14.00	8.00	18.00
Kissell	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Krit		1914-1915	4.00	8.00	7.00	15.00	8.50	18.50
Lambert		1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Lewis		1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Lexington		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Liberty		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Lozier	4-cyl.,	1914	3.75	7.75	6.75	14.00	8.00	18.00
Lozier	6-cyl.,	1914-1915	4.00	8.00	7.00	15.00	8.50	18.50
Mack Truck		1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Marion	6-cyl.,	1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Marmon	6-cyl.,	1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Maxwell	25,	1914-1915-1916-1917	2.75	5.50	6.50	13.00	7.75	17.00
Mercer		1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Metz		1914-1915-1916-1917	3.50	7.50	6.50	13.00	7.75	17.00
Mitchell	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Mitchell	6 and 8-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Moline Knight	4-cyl.,	1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Moline Knight	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Monroe		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Moon	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Moon	6-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Monitor		1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
National		1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Oakland	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Oakland	8-cyl.,	1914-1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Oakland	6-32-34,	1916-1917	2.75	5.50	6.50	14.00	7.75	17.00
Ohio	6-cyl.,	1914-1915	4.00	8.00	7.00	15.00	8.50	18.50
Oldsmobile	4-cyl.,	1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Oldsmobile	6 and 8-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Overland	69-79-81-82-84-85-86,	'15, '16, '17	3.00	6.25	6.00	12.00	7.50	16.00
Overland	61-71-88,	1917	3.75	7.75	6.75	14.00	8.00	18.00
Overland	75-75B-83-90,	1915-1916-1917	2.75	5.25	6.00	12.00	7.50	16.00
Packard	25-35-38-48,	1914-1915-1916-1917	4.50	9.00	7.50	17.00	9.00	20.00
Paige	25-30-36-28,	1914-1915-1916-1917	3.50	7.50	6.50	13.50	7.75	17.00
Paige	46,	1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Paige	6-39-6-41,	1918	4.25	8.50	7.25	14.50	8.50	18.50
Paterson	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Paterson	6-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Pathfinder		1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Peerless		1914-1915-1916-1917	4.50	9.00	7.50	17.00	9.00	20.00
Pierce-Arrow		1915-1916-1917	4.50	9.00	7.50	17.00	9.00	20.00
Pilot		1917	3.75	7.75	6.75	14.00	8.00	18.00
Premier		1914-1915-1916-1917	4.50	9.00	7.50	17.00	9.00	20.00
Pullman	4-cyl.,	1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Pullman	6-cyl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
R. C. H.		1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Regal		1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Reo	4-cyl.,	1914-1915-1916-1917	2.75	6.00	6.50	13.50	7.75	17.00
Reo	6-cyl.,	1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Republic	Truck,	1915-1916	4.00	8.00	7.00	15.00	8.50	18.50
Ross		1917	4.00	8.00	7.00	15.00	8.50	18.50
Saxon	4-cyl.,	1914-1915-1916-1917	3.00	5.00	6.00	12.00	7.50	16.00
Saxon	6-cyl.,	1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Scripps-Booth		1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Scripps-Booth	8-cyl.,	1917	4.25	8.50	7.25	14.50	8.50	18.50
Stearns		1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Studebaker	4-cyl.,	1915-1916-1917	2.75	6.00	6.50	13.50	7.75	17.00
Studebaker	6-cyl.,	1915-1916-1917	3.25	6.50	7.00	15.00	8.50	18.50
Stutz	4 and 6-cycl.,	1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Sun		1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Velie	4-cyl.,	1914-1915-1916-1917	3.75	7.75	6.75	14.00	8.00	18.00
Velie	6-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Wescott	4-cyl.,	1914-1915-1916	3.75	7.75	6.75	14.00	8.00	18.00
Wescott	6-cyl.,	1914-1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
White		1915-1916-1917	4.00	8.00	7.00	15.00	8.50	18.50
Willys-Knight	84,	1916-1917	3.00	6.25	6.00	12.00	7.50	16.00
Winton		1914-1915-1916	4.50	9.00	7.50	17.00	9.00	20.00

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

AUTO SPECIALTIES

RADIATOR COVERS

Anti-Dam



The Antidam Radiator Cover is made of Artificial Leather and Sheet Steel, lined with a special heat-retaining wool felt cloth which fits over the radiator. The position of the vents can be instantly regulated to allow just enough air to pass through the radiator to keep the water at the proper temperature. The Antidam was designed by an automobile engineer so that it allows the air to pass freely through all parts of the radiator, whether open or only partly open.

Small Size—For Ford, Maxwell, Vim, etc...Each, $5.00

Medium Size—For Overland, Buick, Reo, Dodge, Empire, etc.....Each, 6.00

Large Size—For Packard, Cole, Marmon, Cadillac, Pierce, etc.....Each, 7.00

Specify Name and Model of Car.

HOOD COVERS

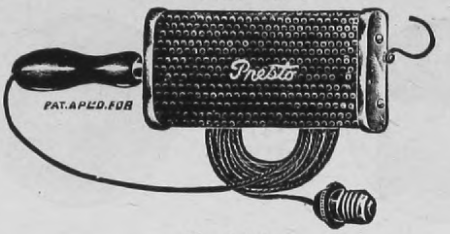
To be used in connection with Anti-Dam Radiator Covers.

Size	Each
Small Size	$3.20
Medium Size	3.70
Large Size	4.00

Specify Name and Model of Car.

ENGINE AND RADIATOR HEATERS

Presto Electric



No. 2100.

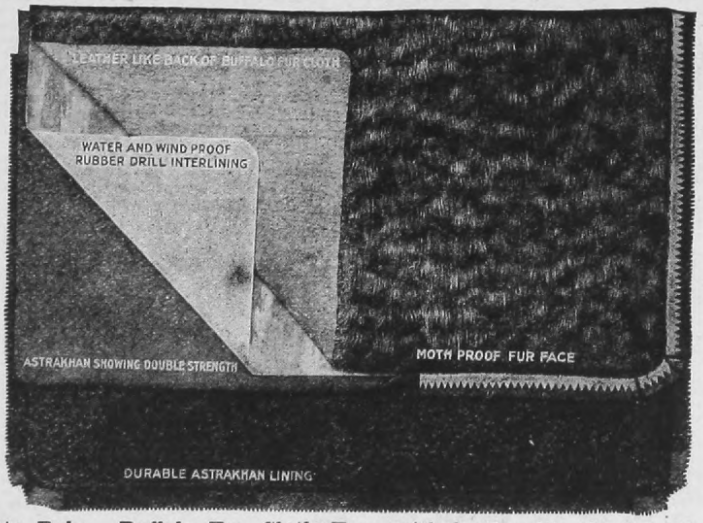
Eliminates The Difficulty of Starting.
11½ inches long, 3¼ inches wide, 1½ inches thick.
Furnished with 10 feet of cord and attachment plug.
Operates from any Electric Light Socket.

This Heater will keep your Automobile Engine Carburetor and Radiator warm in the coldest weather and **Eliminates the difficulty of Starting** your Engine no matter how cold the weather. Note the thin oval shape of this heater which permits its being placed anywhere the heat is desired and on account of its shape giving a wide heating radius. It draws 220 watts or 2 amperes thereby producing twice the heat of any other heater made for this purpose now on the market. It is dangerous to use flame around automobiles. Presto Electric Heater gives a strong uniform heat with no danger of fire. A cold garage may prove very costly by causing a frozen car. A stove or steam heated garage costs much money and wastes heat. A Presto Heater delivers the heat just where you want it inside the hood of the automobile. It costs about one cent per hour to operate.

No. 2100—Presto Electric Heater complete with 10-feet of cord and attachment plug ready for use on 110-volt either direct or alternating current .....Each, $4.00

Packed—In Individual Cartons.

WALLACE AUTOMOBILE ROBES



Montana—The leading Auto Robe. **Buffalo Fur Cloth Face with leather-like back.** Water and Wind Proof Rubber Drill Interlining with Double Strength Astrakhan Lining. Colors: Brown and Black.

Size, inches	54x62	54x72	54x82
Each	$9.60	11.20	12.80

Persian—Double Astrakhan Cloth in Black, Brown and Blue, Rubber Interlined.

Size, inches	54x62	54x72	54x82
Each	$7.50	8.50	9.50

Alaska—Astrakhan Face, Moose Fur Cloth Back in Blue, Black and Brown. Rubber Interlined, Pinked Edge.

Size, inches	54x62	54x72
Each	$7.50	8.50

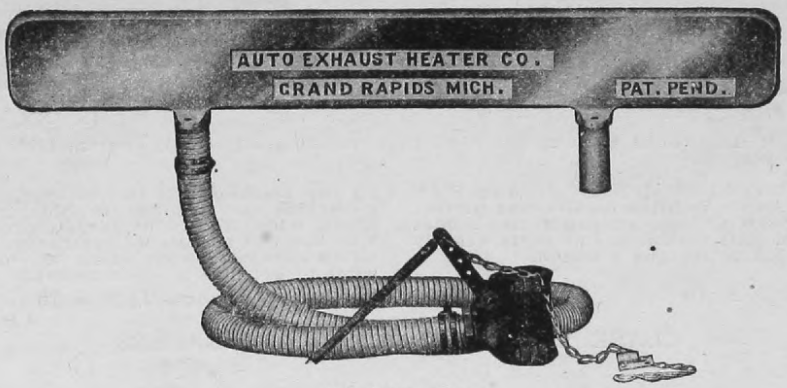
Comfort—Buffalo Fur Cloth Face in Brown or Black, Black Astrakhan Back, Trimmed with Pinking, Rubber Interlined.

Size, inches	54x62	54x72	54x82
Each	$8.15	9.40	10.80

Note.—Special catalogs in colors mailed on request.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO EXHAUST HEATERS



Grand Rapids.

The Auto Exhaust Heater uses a portion of the heated gases from the exhaust, entering from flexible metallic asbestos packed tubing on one side, passing through the heater and off into the open air on the other, costing nothing to operate.

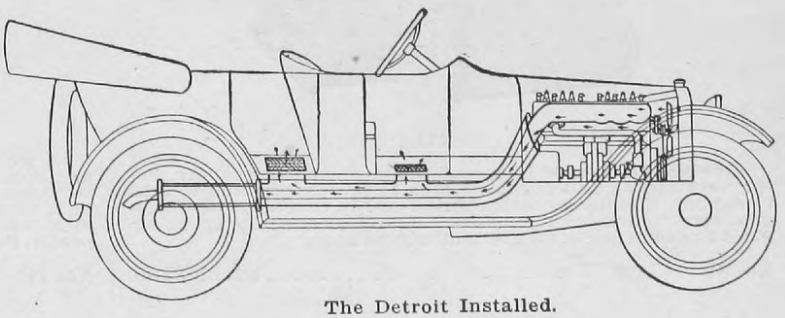
It is always ready for instant use, the heat being regulated by a chain connected to a cutout valve in the exhaust pipe. The control of the heat is absolute and positive, the control chain can be run to any convenient place in the car regardless of where the heater is placed.

The heater is a beautifully nickel plated iron casting, heavy enough to retain the heat for a considerable length of time after the motor stops running. It is efficient, indestructible, ornamental, practical and easily installed.

Grand Rapids—27x3x1½ inches, complete ready to attach.....Each, $10.00

Note.—In ordering give year, make and model of car, with outside diameter of exhaust pipe.

DETROIT AUTO HEATERS



The Detroit Installed.

Detroit Auto Heater Co's. System

Heating and Ventilating your car at the same time during the colder months of the year spells Comfort.

Costs nothing to operate. Nothing to get out of order.

Provides a constant current of Pure, Fresh, Warm Air through dainty Registers set flush in the floor of your car. No tapping of exhaust pipe.

Absolutely no contact with the Exhaust Gases.

Extra weight only about 10 pounds. No interference with the mechanism of the car.

The Detroit Auto Heater Co's. System is the only system on the Market today providing both heat and ventilation combined, the only rational one and by far the most efficient.

For Touring Cars, Sedans and Limousines, both Heaters are required. For Runabouts and Roadsters but one. The Front Heater is 4x6 inches. The Rear Heater is 8x10 inches. Heaters are Black Japanned but can be furnished Nickel Plated at an extra expense.

Couplets and Roadsters—Ford, Dodge or Maxwell.....Each, $7.50

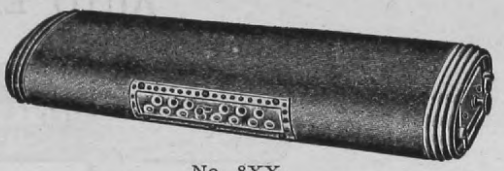
Sedans and Touring Cars—Double Heaters. Ford, Dodge or Maxwell.....Each, 15.00

Note.—In ordering give name of car for which Heater is wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CLARK AUTOMOBILE HEATERS

No. 7X.



No. 8XX.

The two styles of Clark Automobile Heaters described here are favorites with automobile owners. Their use for heating cars is growing very fast

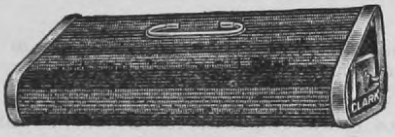
Clark Indestructible Riveted Steel Body. Drawn Steel Ends. Side and End Adjustable Ventilators, allowing perfect regulation of heat. Covered with Mohair plush in rich shades of maroon, blue or green. All outside metal parts heavily nickel plated. 14 inches long. Weighs 9 pounds.

No. 7X—Clark Automobile Heater.....Each, $4.00

The Duchess. 24 inches long, weighs 12 lbs. Covered with rich velvet plush in blue, green or maroon shades. Extra wide, highly finished, nickel plated flange at ends. Side and end adjustable ventilators. Reinforced Steel Body. Extra heavy asbestos lining. All outside metal parts quadruple nickel plated. Deluxe finish.

No. 8XX—Duchess Type Auto Heater.....Each, $10.00

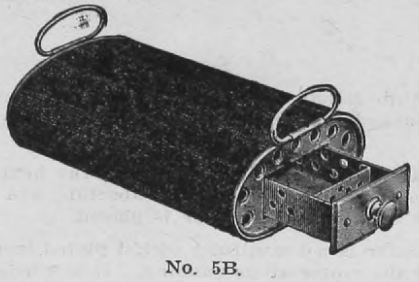
CLARK CARRIAGE AND AUTO HEATERS



No. 7C.

A slanting, flat-top heater, with adjustable end ventilators. Covered with a fine grade of rich green Brussels carpet. Very attractive and a splendid heat giver. Popular, and sure to please. 14 inches long. Weighs 8 pounds.

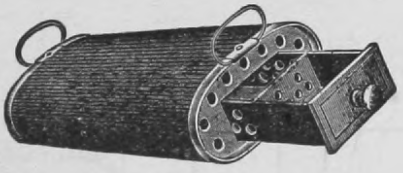
No. 7C—Clark Heaters.....Each, $1.75



No. 5B.

Light and handy, yet very durable and sightly. It is 12 inches long and weighs 4 pounds. Heats quickly, though, with a mild and comfortable temperature. This Heater is used extensively by mail carriers and milkmen. Covered with fine Brussels carpet.

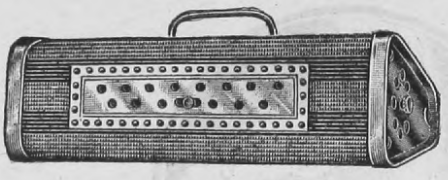
No. 5B—Clark Heaters.....Each, $1.50



No 3D.

Our No. 3D Heater is one of the most popular sellers, being very strong and durable. It is 14 inches long and weighs 7 pounds. Has fine asbestos lining and is covered with Brussels carpet; has braid binding. Easily cleaned by brushing. Ends are of triple strength white metal.

No. 3D—Clark Heater.....Each, $2.00

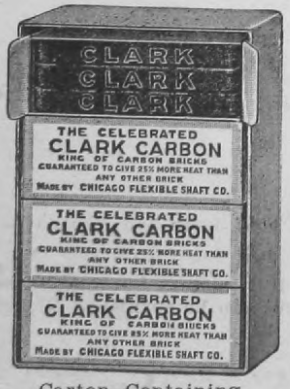


No. 7D.
Showing Side and End Ventilators.

A well known and popular style, having flat, slanting top, and both side and end ventilators, with which it can be made to throw out as much or as little heat as may be desired. It is 14 inches long, and weighs 9 pounds. Has cold drawn steel ends, heavily nickel plated, and is covered with superior Brussels carpet.

No. 7D—Clark Heater.....Each, $2.25

CLARK HEATER COAL



Carton, Containing
1 Dozen Bricks.

Clark Heater Coal

One Brick (7½x2½x1¼ inches) in a Clark Heater will furnish heat for 12 to 16 hours.

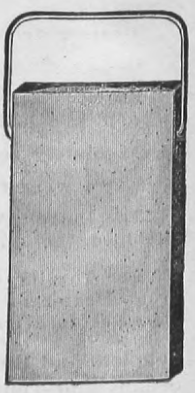
In Cartons holding 12 Bricks.....Per Carton. $0.75
In Boxes holding 100 Bricks.....Per Box, 6.00

A. B. C. Coal for use in Clark Heaters

In Cartons holding 12 Bricks.....Per Carton, $0.60
In Boxes holding 100 Bricks.....Per Box, 4.80

Packed—Six or Twelve Cartons in a Case.

SOAPSTONE FOOT WARMERS



Soapstone Foot Warmers

Inches	6x8	7x9	8x10	8x12	10x12
Per Dozen	$2.70	3.20	3.60	4.00	4.50

Packed—One Dozen in a Crate.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

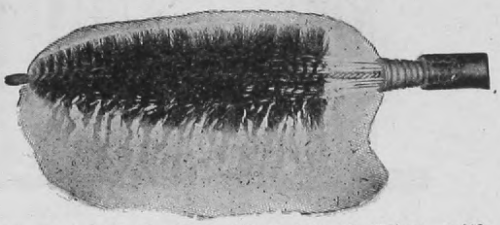
TEMPCO AUTO CLEANING DEVICES

AUTO WASHERS

A constant flow of water through the hose handle cleans the brush while the mud and grease is being removed. Does not scratch. Cleans every place. Furnished complete with mud scraper.

Tempco Auto Washers.....Each, $3.50

WIRE WHEEL WASHERS



Constructed of Flexible Rust Proof Wire, with water passing through the handle. Bristles will not mar enamel of spokes but will remove mud and stains.

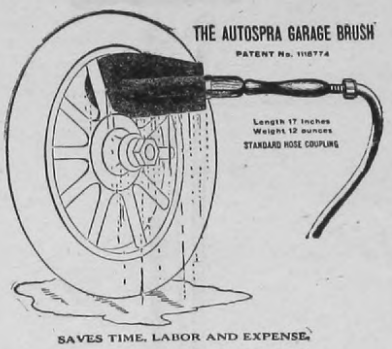
Tempco Wire Wheel Washers.....Each, $0.75

JR. CHASSIS WASHERS

In the Tempco Junior Washer the automatic cleaning feature is still maintained. The bristles are stiff enough to remove heavily caked mud from under the fenders and on chassis.

Tempco Jr. Washers.....Each, $1.00

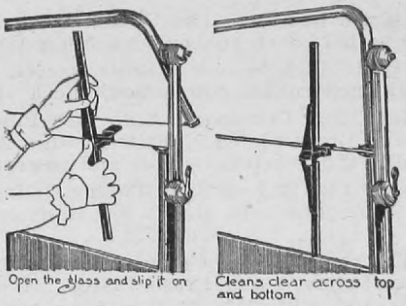
AUTOSPRA BRUSHES



Best China Bristles, Hard Maple Handle, Seamless Brass Spray Part. Equipped with the Hunter Spray. Quickly attached to standard hose coupling. Simple, Compact, Strong and Durable. Saves Time, Labor and Expense. Easy to use. Reaches the difficult places.

Autospra—Brushes.....Each, $2.50

WINDSHIELD CLEANERS



Tri-Co Rain Rubber or Windshield Cleaner attaches instantly and cleans the entire windshield, top and bottom, clear across. Holds firm as a vise, but slides without effort in the slot, spring pressure holds it; it will not rattle. Multiple gum rubber makes the cleaner flexible with two cleaning surfaces on each arm to remove rain or snow and wipe dry.

Tri-co—Rain Rubbers.....Each, $1.50

UNION CALCIUM CARBIDE

UNION CARBIDE
PACKED IN
BLUE AND GRAY DRUMS
CAPACITY 100 LBS.

Special attention is called to the different sizes of carbide and to the containers in which each size is packed. 2-lb. cans contain ½-inch size only, nothing larger; 10-lb. cans contain either ½-inch or 1-inch size, nothing larger; 100-lb. drums contain a special size about 1-inch and known as automobile size. Larger sizes are not suited for auto lamps. The Carbide is the best grade. Every pound is commercially pure and will yield about five cubic feet of acetylene gas where brought into contact with the proper proportion of water.

100 Lb. Drums—Auto size as described.....Per Drum, $.....

10 Lb. Cans— 1 inch size, 6 cans in a case.....Per Can, ...

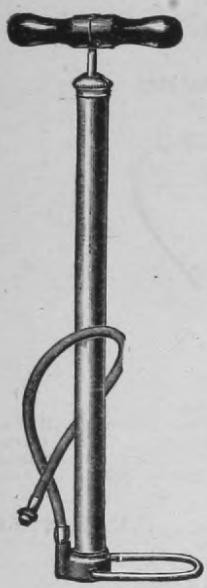
10 Lb. Cans—½ inch size, 6 cans in a case.....Per Can, ...

2 Lb. Cans—½ inch size, 24 cans in a case.....Per Can, ...

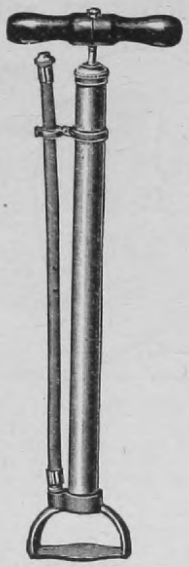
UNION CARBIDE
PACKED IN
BLUE AND GRAY CANS
CAPACITY 10 LBS.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

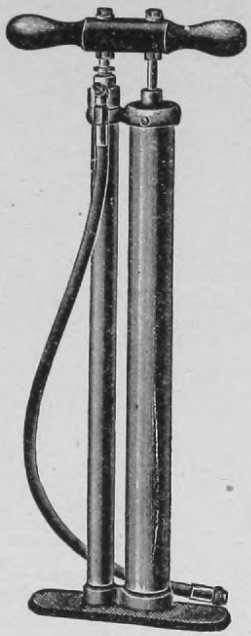
AUTOMOBILE TIRE PUMPS



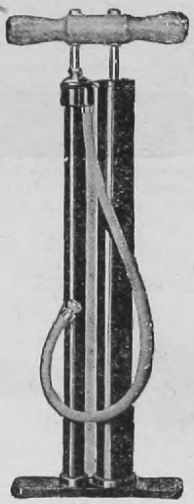
No. 90.



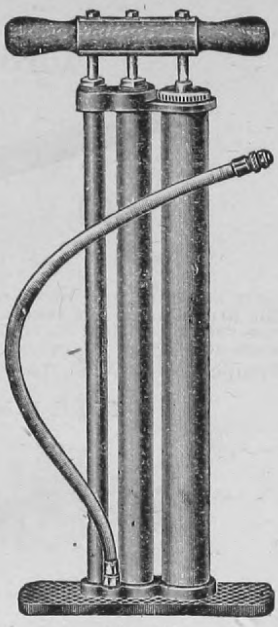
No. 84.



No. 50



Mayo.



No. 60.

No. 90—1¼x20 inch Seamless Steel Barrel, Highly Polished, Brass Finish. Height, 24 inches over all. Fitted with 18 inch rubber connection and check valve. Folding Wire Base, and Screw Cap..Each, $.....

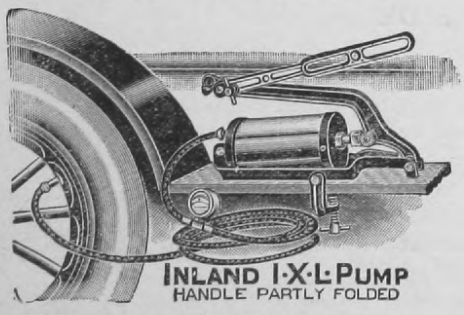
No. 84—1¼x18 inch Seamless Steel Barrel, Highly Polished. Height, 23½ inches over all. Fitted with 15 inch rubber connection, check valve and clamp for holding connection.....Each, ...

No. 50—New Ideal Compound Auto Tire Pump. Made of ⅞ and 1½ inch Seamless Steel Tubing, Polished and Brass Plated. Fitted with a 22 inch 5 ply rubber tubing connection. Height, 19½ in. over all. Quick acting, simple and powerful.....Each, ...

Mayo—⅞ and 1½x18 inch Steel Tubing Cylinders, Enameled. Height, 20½ inches. Steel Piston Rods, High Grade Leathers, Hardwood Handles, Shellac Finish. Fitted with 20 inch, 3 ply rubber tubing .....Each, ...

No. 60—Waterbury **Three Cylinder** Compound Auto Tire Pump. Made of ¾, 1½ and 1¾ inch Steel Tubing, Polished and Brass Plated. Height, 22 inches over all. Very powerful, will inflate tires quicker and with less strokes than any other pump on the market. Fitted with a 22 inch, 5 ply rubber tubing connection. Can be taken apart by simply removing the three holding plugs on top of cylinders..... Each, ...

I.X.L. LEVER PUMPS



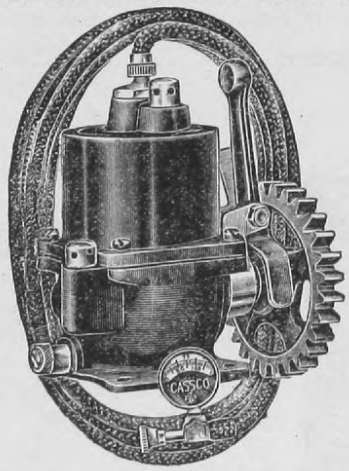
Inland.

The most powerful compact pump made. Cylinder 3x6¼ inches. Develops a leverage 18 times that of the ordinary foot pump. Clamps to either running board. Handle opens to 25 inches. Size folded 3x4½x13½ inches. Steel Bearings. Frame and handle are malleable iron.

I X L Pumps—With Hose and Accurate Pressure Gauge .....Each, $6.00

I X L Pumps—Without Gauge .....Each, 5.00

ENGINE DRIVEN PUMPS



Cassco.

Saves Time, Energy and Tires. The engine does the work, filling a 34x4 tire to 80 pounds pressure in 90 seconds. Tires are easily kept inflated to standard pressure all the time, which insures a great saving in tire bills. Furnished **complete** with hose, gauge, and all necessary fittings ready to install. Can be installed with a screw driver and wrench.

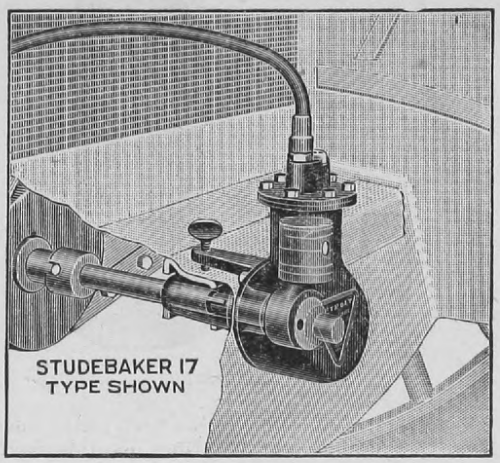
Cassco Pumps—As described.....Each, $10.00

Cassco Pumps—Ford Special .....Each, 8.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE TIRE PUMPS

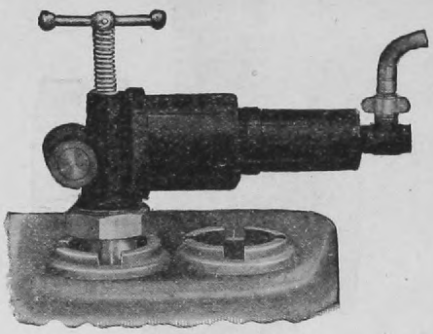
ENGINE DRIVEN



"Detroit Gearless."

The "Detroit Gearless" Crank Shaft Tire Pump is direct driven from front end of motor crank shaft. It is easily attached in exactly the same way as a hand crank. It is locked in position by a clamp or screw and is connected to the end of the motor crank shaft by a short shaft or coupling which drives it.

Detroit Gearless—With Hose and Gauge...Each, $10.00



Mayo "Valve Cap."

The Mayo "Valve Cap" Pump is fitted with a connection which screws into the Valve Cap and into the Engine Cylinder. It will remain there indefinitely and continue to give thoroughly reliable service for years. It is non-adjustable and has no wearing parts to break or get out of order—is noiseless and can be used by anyone with sure results.

Mayo "Valve Cap"—With Hose and Gauge. Each, $10.00

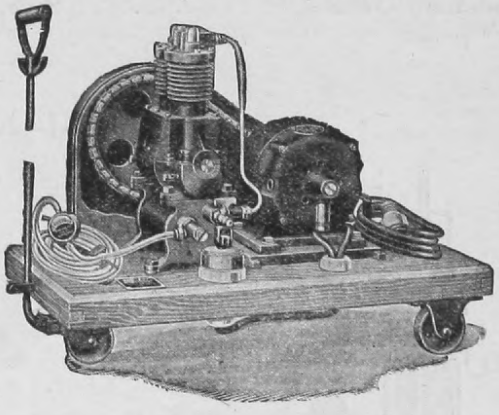
SPARK PLUG TIRE PUMPS

Mayo Junior.

Built especially for Ford cars. A real power tire pump which will inflate a 30x3 tire to 65 pounds pressure in two minutes. Strong and mechanically perfect, metal piston, ring and valve. Attached by inserting in sparkplug opening.

Mayo Junior—With Hose and Gauge.....Each, $5.00

ELECTRIC GARAGE PUMPS



No. 2.

MAYO ELECTRIC GARAGE PUMPS

This No. 2 Mayo Portable Outfit is designed for inflating tires direct. It is recommended for use in public and private garages. It incorporates every modern improvement. It is made of the best materials and durably constructed to withstand the hardest service. It consists of a two cylinder, air-cooled compressor, driven by a quarter horse power electric motor with silent chain drive. It is the Standard Garage Outfit. By actual test it inflates a 35x4½ inch tire from flat to 90 pounds pressure in 3 minutes 20 seconds and pumping against pressure continuously consumes only one-third of a kilowatt hour per hour or 3 cents in value. It has been inspected and approved by Insurance Companies and passed by the Chicago Board of Underwriters. Furnished complete with 110 or 220 volt 60 cycle A. C. motor.

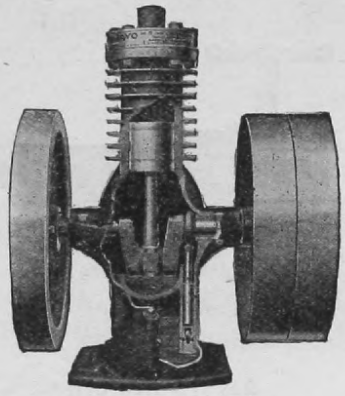
No. 2—Mayo Outfit—Complete with Hose and Electric Cord .....Each, $90.00

No. 3—Mayo Outfit—Same as above, without Truck, but with Wall Brackets and 25 feet of Armored Hose .....Each, 90.00

Note—Furnished at same price with 110 or 220 Volt D.C. Motor if specified.
Complete descriptive catalogs furnished on request.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

AIR COMPRESSORS



No. 8. Mayo.

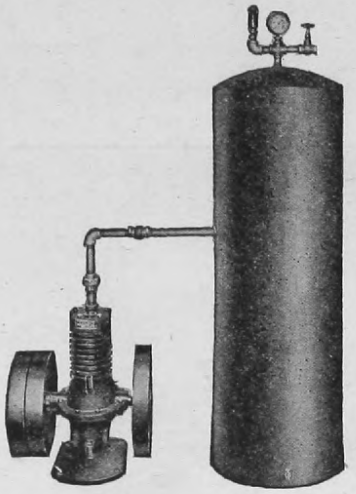
Single Cylinder, Air-Cooled Compressors. Designed to meet all the requirements of a modern garage, produced minus the objectionable features so common in compressors not made especially for tire filling purposes.

The superior oiling system insures nothing but pure, clean air being delivered to the storage tank. Materials and Construction are The Best. Bore, 3 in.; Stroke, 4 in.; Pressure, 200 lbs. per square in. Capacity at 350 R. P. M. 5.59 cubic feet per minute. Shipping weight, 155 lbs. 1½ Horse Power required.

No. 8—Mayo Compressor.....Each, $43.00

Note.—Complete descriptive literature furnished on request.

"FREE AIR" OUTFITS



No. 8A. Mayo.

No. 8A Mayo Combination "Free-Air" Outfit consists of No. 8 Mayo Air Compressor described on this page, 16x48 air tank tested to 300 pounds for working pressure of 150 pounds, one check valve for installation between compressor and tank, one ½ inch drain cock for tank, one triple tank fitting consisting of adjustable safety pop gauge, 2½ inch 200 pound pressure gauge, air tight. Needle valve and pipe fittings.

Furnished complete with the exception of iron pipe. Shipping weight 250 pounds.

No. 8A—Mayo "Free-Air" Outfits.....Each, $70.00

OIL AND GREASE GUNS

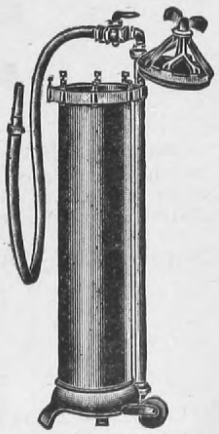
Ekerns.

Jumbo.

Heavy High Grade Combination Oil and Grease Gun. The Barrel is 9x2¾ inches and holds 15 ounces of Grease. Cork Plunger with Steel Reinforcement. Combination Spout with large or small delivery. An extra cap is furnished so it can be carried in the tool box while full of grease or oil.

Jumbo—Oil and Grease Guns, Highly Polished .....Each, $2.50

Packed—Each in a Separate Carton.



No. 27 B. O. E.

Ekerns Portable Garage Grease Guns consist of Heavy Seamless Steel Cylinders mounted on wheels. They work equally well on liquid oil or hard grease and the Register measures the amount of grease sold. Clean, Quick Service. No Waste. Durable. The Cylinder is 20x6 inches, capacity 20 lbs. of grease or 2½ gallons of oil.

Model B is provided with a set of quick return gears and can be refilled in one minute.

Model A is the same as Model B except that it does not have these gears and can be refilled in five minutes.

Model B—Ekerns Guns.....Each, $40.00

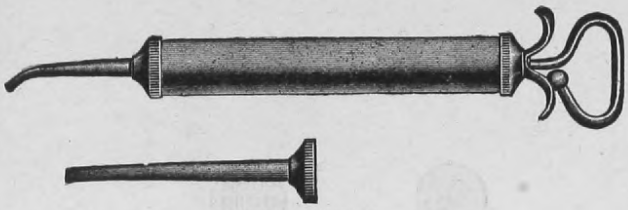
Model A—Ekerns Guns.....Each, 35.00

The B. O. E. Grease and Oil Guns shoot grease by forced air pressure into oiling systems of autos as quickly as water is forced from a hydrant through a garden hose and automatically measures same by pound or pint as accurately as a standard scale or measure. 5 inch Measuring Dial graduated to ¼ lb. or ¼ pint. Passed by State Inspectors. They are made with Steel Tanks 30x6 inches. Finished attractively with Nickel Plated Trimmings. In ordering specify whether measuring is wanted for pounds or pints.

No. 27BOE—Grease Guns.....Each, $20.00

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

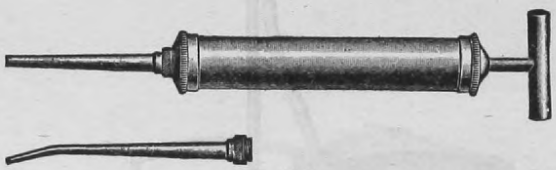
OIL AND GREASE GUNS



No. 33M.

Combination Oil and Grease Gun. Polished Cylinder, Cork Plunger, Two Spouts.

No. 33M—1¼x8 inches.....Each, $.....



No. 33A.

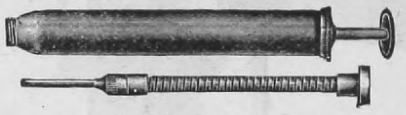
Combination Oil and Grease Gun. Polished Cylinder, Cork Plunger, Two Spouts.

No. 33A—1¼x6 inches.....Each, $.....

No. 1. Rollfast.

Rollfast Oil and Grease Guns are threaded to fit Ford and most other Differentials—¾-24. Tapered Cylinder, Cork Plunger, Two Spouts.

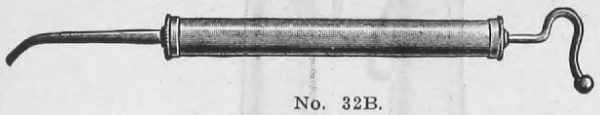
No. 1—1¼x8 inches.....Each, $.....



No. 2. Rollfast.

Rollfast Oil and Grease Guns are made carefully of excellent material. The No. 2 has Flexible Grease Spout and Oil Nozzle to attach.

No. 2—1¼x8 inches.....Each, $.....



No. 32B.

No. 32B Oil Guns or Syringes handle thick or thin oil. They are equipped with Double Plungers. Will last for years.

No. 32B—1¼x8 inches.....Each, $.....

Protex.

Protex Oil and Grease Guns are Highly Finished with Brass Plated Tubes, Cork Plungers, Two Spouts.

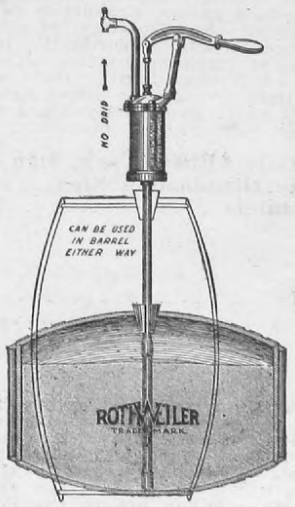
Protex—1¼x9 inches.....Each, ...

OIL AND GREASE PUMPS

Weaver Valveless Bucket Pumps for handling engine oils and soft greases. Three ways of using enables oil to be forced out of bucket into receptacle, to be sucked out of differentials, etc., or the barrel of bucket may be sucked full of foreign lubricant and discharged again through the hose into a third receptacle without disturbing the contents of the bucket. Steel and Brass used in Construction make them substantial and durable. Self Measuring, Flexible Steel Hose.

Weaver—Oil and Grease Pumps.....Each, $12.00

OIL PUMPS



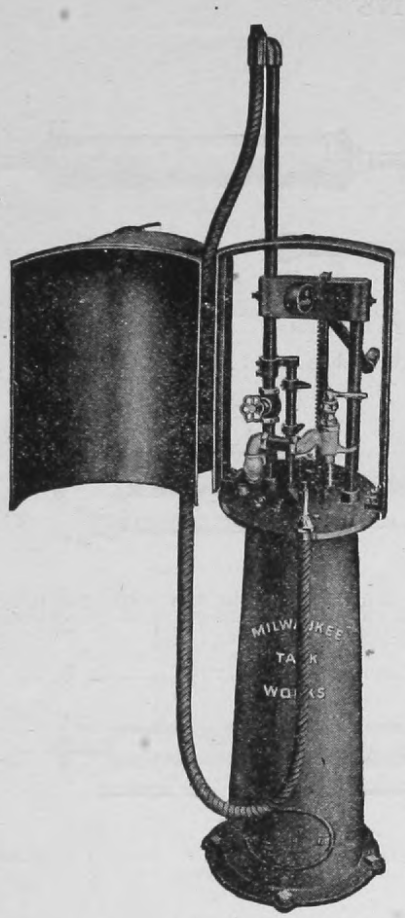
Rothweiler Oil Pumps are made strongly of Iron and Steel and are Well Finished. They pump a full quart at one stroke. The Foot Valve is composed of a high grads Steel ball accurately ground to a seat. A Strainer is provided and the pump is constructed so that it is held stationary ¼ of an inch from the bottom of the barrel. The Discharge Spout of cast iron is ground to a seat and held in place by a strong spiral spring.

Empties a barrel or drum completely. No waste. **No drip.** Good for Oil, Gasoline, Turpentine, Light Paint, Etc. Works easily, quickly and efficiently. A great trouble saver.

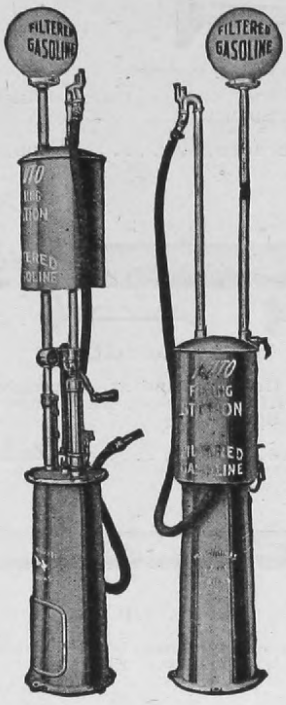
Rothweiler—Oil Pumps.....Each, $7.50

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

GASOLINE FILLING STATIONS



No. 37.



No. 35.

No. 37 Standard Roadway Filling Stations

This handsome Station stands permanently on the sidewalk attracting attention.

Pump: Of standard gallon measuring design with half-gallon and quart stops. A gallon recording meter is provided which keeps an accurate count of all gasoline pumped up to 100,000 gallons and then repeats, but cannot be set back. A discharge register records the individual purchases. A hose draining valve admits air and instantly drains out hose as soon as pumping ceases. Eight feet of special gasoline hose with fill nozzle is provided. A built-in filter removes water and foreign matter from gasoline. All these accessories are included in the price, except the can faucet. The pump is entirely encased in heavy cast iron.

Tank; Is built of 12 gauge galvanized steel closely riveted and soldered, bears the Underwriters' label and is finished by the Milwaukee "Kant-Leek" process.

No. 37—Pump Only without Tank, Sign or Faucet.....Each, $205.00
Electric Illuminating Sign.....Each, 12.00
Can Faucets.....Each, 7.00

No. 37 Pumps with Tanks

Capacity, gallons	120	180	225	280	550
Each	$245.00	270.00	286.00	315.00	400.00

No. 35 Curb Filling Stations

A Strictly First Class and Satisfactory Outfit at a moderate price.

Pump: Is of the standard self-measuring design with stops for gallon, half-gallon and quart instantly adjustable. A gallon recording meter is provided which accurately records gasoline pumped, up to 100,000 gallons and then repeats and cannot be set back—just as important as your cash register. A built-in filter removes water and foreign matter from the gasoline. A discharge register accurately totals individual sales. The hose drain valve drains the hose free from gasoline as pumping ceases. Ten feet of special gasoline hose with portable fill nozzle is provided for direct filling into automobile. When not in use cover is lowered and securely locked, enclosing operating parts as well as fill nozzle and hose, thus preventing meddling. When not in use the cover is suspended by spring latch. An electrically illuminated sign completes this exceptionally fine pump

Tank; Is built of 14 gauge steel, bears the Underwriters' label and is of the internationally known Milwaukee "Kant-Leek" construction. Fill pipe with automatic air vent and strainer is also provided.

No. 35 Stations Complete with Tanks

Capacity, gallons	120	180	220	280	550
Each	$231.00	242.00	253.00	264.00	352.00

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

GASOLINE FILLING STATIONS

No. 38.

No. 36.

NO. 38 MASTER ELECTRIC FILLING STATIONS

Function: A power driven Electric Pump. Tank is buried in the earth and connected to the pump, the same as hand operated pumps. Electric connections are taken from the regular lighting current. The cost of electricity is approximately 6c per 1,000 gallons.

Pump: Is of continuous motion rotary design. Will last for years without repair. The motor is especially enclosed and sealed against moisture of gas. All wire and electric work inside of station is especially incased in heavy metal jacket. A touch of a button pumps gasoline at twenty-five gallons per minute. A turn of the hand throttle reduces the flow to a mere drizzle in an instant. A large face dial shows the customer just what gasoline is being pumped down to the very pint. Removing the finger from the button stops pumping. The speed control by-passes the liquid around the pump, the motor running at a constant speed irrespective of the rate of flow. Filter is built-in. Ten feet of metal lined hose with portable fill nozzle included.

Tank: Up to and including 550 gallon capacity the tanks are 12 gauge galvanized steel, closely riveted and soldered. Above 550 gallons 3/16 inch black steel is used which is welded into one seamless piece. All tanks bear the Underwriters' label.

No. 38—Pump Only ..... Each, $480.00

NO. 38 PUMPS WITH TANKS

Capacity, gallons	280	550	820	1075
Each	$580.00	660.00	695.00	760.00

NO. 36 RAPIDELIVERY 10 GALLON FILLING OUTFITS

Function: Type 36 is the speediest and most satisfactory hand pump on the market. Lower in price than the cumbersome so-called "five gallon" pumps, is much faster and easier to operate. The large dial is in plain view of the customer and shows him to a pint exactly what he gets. It discharges constantly while handle is turning. No backward strokes of plunger. Fill Nozzle is locked in cabinet when not in use. Pump handle is detachable. A meter records to 100,000 gallons. Ten feet of special gasoline hose is provided. Works remarkably easy while discharging a heavy stream. Illuminated sign extra $11.00.

Tank: Is of standard Milwaukee "Kant-Leek" construction. The sizes up to 20 barrels are of 12 gauge galvanized steel; 3/16 inch welded tanks are furnished when larger tanks than 1,075 are required. All tanks bear the Underwriters' label.

No. 36—Pump Only ..... Each, $290.00

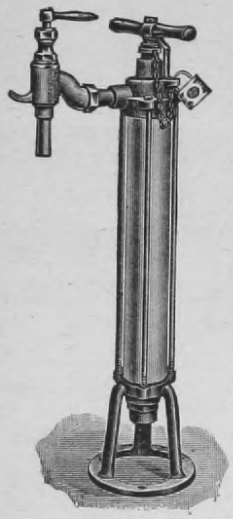
NO. 36 PUMPS WITH TANKS

Capacity, gallons	280	550	820	1075
Each	$385.00	478.00	566.00	660.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PUMPS AND TANKS

No. 9 LONG DISTANCE, NON-MEASURING PUMPS



No. 9

Function: Storing gasoline in private garages and hardware stores.

Tank: Is buried underground, pump placed at height of about 14 feet above tank. Tank is 16 gauge, riveted and soldered.

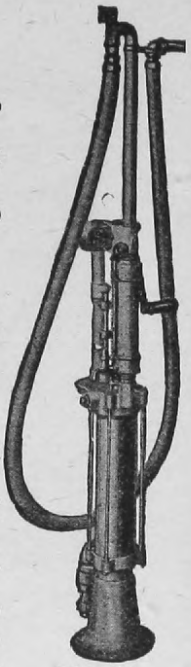
Pump: Is of lever handle design, works easily discharging an almost continuous stream, is largely made of brass. Valves are carefully ground. A lock prevents drawing except by authorized persons. Non-drip faucet is provided.

No. 9—Pump **Only**.....Each, $13.00

No. 9 PUMPS WITH TANKS

Capacity, gallons	60	120
Each	$40.00	48.00

No. 33 LONG DISTANCE, SELF-MEASURING PUMPS



No. 33.

Function: Pump is usually located inside of the building. Tank is buried conveniently near by, never more than 12 feet below pump. It is used for lubricating oils, kerosene, etc.

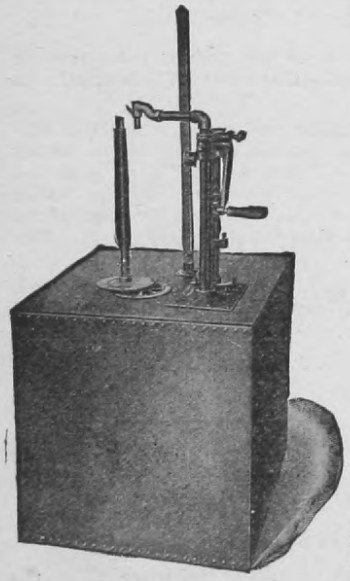
Pump: Is standard self-measuring, gallon measure with adjustable stops for half-gallons and quarts. It is built of the best material and furnished with a discharge register counting to ten, reset by hand, non-drip faucet, lock and key.

Tanks: Of standard Milwaukee "Kant-Leek" construction, 14 gauge, galvanized, closely riveted and soldered.

No. 33—Pump **Only**.....Each, $88.00
Gallon Meter.....Each, 22.00
Gasoline Filter.....Each, 15.00
1 inch Gasoline Hose.....Per Foot, 1.50
Portable Fill Nozzle.....Each, 3.50
Hose Draining Attachment.....Each, 7.00

No. 33 PUMPS WITH TANKS

Capacity, gallons,	60	120	180	225	280	550
Each	$112.00	124.00	136.00	148.00	169.00	249.00



No. 14.

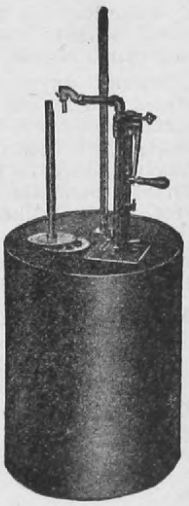
No. 14 LUBRICATING OIL OUTFITS

Pump: Self-measuring for quart, pint and half-pint; non-drip faucet. Fill opening with removable strainer, grate and dust-proof cover. Lock and key also provided.

Tank: 14 gauge Steel, Maroon Finish, Float Gauge.

Capacity, gallons	60	120	180	225	280
No. 14—Oil Outfit....Each,	$51.00	65.00	79.00	93.00	108.00

No. 12 LUBRICATING OIL OUTFITS



No 12.

Pump: Self-measuring for quart, pint and half-pint; nickel plated faucet. Fill opening with removable strainer, grate and dust-proof cover.

Tank: Heavy Steel, Maroon Finish, Float Gauge.

No. 12—Oil Outfits, 55 gallons capacity.....Each, $40.00
Detachable Bases with Wheel Casters Extra.....Each, 8.00

"KANT-LEEK" UNDERGROUND GASOLINE TANKS

Galvanized Steel Tanks with Riveted and Soldered Joints; Equipped with Gauge, Suction and Fill Pipes, but no piping to pump.

		1	2	3	4	5	10
Capacity, Barrels							
Capacity, Gallons		60	120	180	225	280	550
Dimensions, inches		23x36	38x42	38x48	42x42	42x48	42x96
12	Gauge.....Each,	$42.00	54.00	74.00	94.00	112.00	200.00
14	Gauge.....Each,	36.00	48.00	60.00	72.00	83.00	174.00
16	Gauge.....Each,	29.00	36.00	.....	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASOLINE FILTERING FUNNELS

Nos. 31 and 51.

Nos. 33 and 53.

Nos. 0 to 2.

GALVANIZED FILTERING FUNNELS

Extra Heavy and Extra Large. With Brass Wire Strainers and Hoop to hold Chamois. Nos. 31 and 51 have tube in center. Nos. 33 and 53 have tube at side for corner use.

Nos.	31	51	33	53
Diameter, inches	9½	12¼	9½	12¼
Per Dozen	$13.00	27.70	22.20	36.10

SCHUYLER FILTERING FUNNELS

Heavily Coppered and Lacquered to prevent corrosion. Fine Brass Strainer and Removable Ring with Filtering Fabric. When this Special Filtering Fabric is saturated with gasoline dirt will not pass through it.

Nos.	0	1	2
Diameter, inches	2⅜	5	9
Capacity per minute, gals.	1	5	12
Each	$0.75	1.50	2.75

Packed—Twelve in a Crate.

AUTO FILLING CANS

LEGAL GASOLINE CANS

Nos. 11 to 55.

No. 250.

Automobile Filling Cans

Galvanized Body, Stamped Fluted Breast, Large Opening for filling and Large Spout with Bail and Back Handle. Painted **Red.**

No. 250—5 Gallons capacity.....Per Dozen, $37.00

Packed—Half Dozen in a Crate.

LEGAL GASOLINE CANS

Nos. 133 and 155.
Style of No. 110R.

Legal Gasoline Cans are made of Galvanized Stock and Painted **Red.** Enameled Wood Handles, 1½ inch Screw Tops.

With Large Screw Spouts

Nos.	11	22	33	55
Gallons	1	2	3	5
Per Dozen... $	.....	.....	.....	.....

Packed—1 and 2 Gallon, 1 Doz.; others Half Doz. in a Crate.

With ⅜ inch Tinned Iron Faucets

Nos.	133	155
Gallons	3	5
Per Dozen $	.....	.....

Packed—Half Dozen in a Crate.

"Special" Gasoline Cans

No. 110R—10 Gallon Gasoline Cans, Galvanized and Painted **Red.** Fitted with ½ inch polished Brass Lever Handle Faucet. Hand made and extra heavy.....Per Dozen, $.....

Packed—Quarter Dozen in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OIL AND GASOLINE CANS

Nos. 600 and 600R.

Protection.

10 and 5 Gallon Jacket.

Auto and Delivery Pouring or Filling Cans

Can be conveniently used to pour gasoline into the funnel in filling auto tanks, etc., also by the grocer or hardware man for delivering oil or gasoline without spilling. Cover is so arranged that by turning it one can pour as small or large a stream as desired into the funnel. Top may be closed entirely by turning cover. **Galvanized** Body, Enameled Handle.

No. 600 —Five Gallon, for **Oil**.....Per Dozen, $.....

No. 600R—Five Gallon, for **Gasoline,** Painted **Red** and Stenciled Gasoline .....Per Dozen, ...

Packed—Half Dozen in Crate.

"Protection" Safety Non-Explosive Cans

One Piece Drawn Steel Body, Protected opening Device, Automatic Closing. Approved by the Underwriters' Laboratories of the National Board of Fire Underwriters.

Capacity, gallons	1	3	5
Each	$2.00	4.00	5.00

Wooden Jacket Shipping Cans

Cone Top with Double Handles—Capacity, gallons		5	10
Each		$0.85	1.50

OIL TANKS

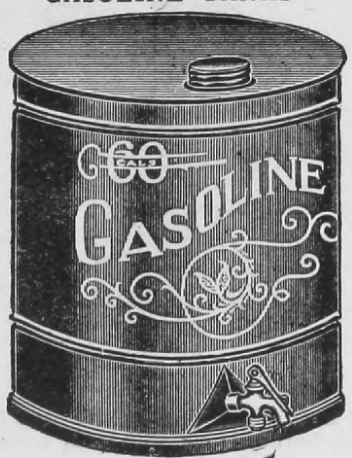
Nos. 130 and 131.

Standard Jr. Pump Oil Tanks, made of Heavy Galvanized Iron, with wood bottom under metal bottom. Has large hand hold in drip pan with removable cover for cleaning out. Pump can be taken out for pumping from barrel into tank. Tested and warranted, nicely painted and decorated.

No. 130—Capacity 30 gallons.....Each, $.....

No. 131—Capacity 60 gallons.....Each, ...

GASOLINE TANKS



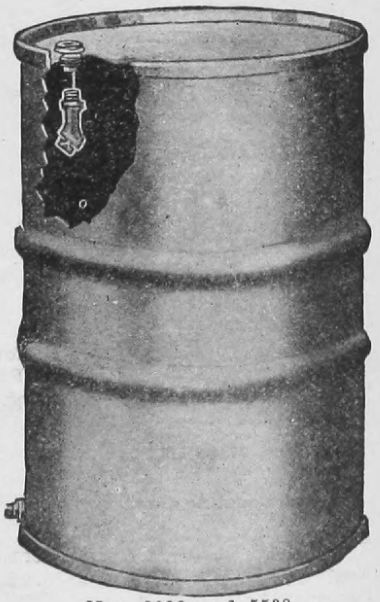
Nos. 180 and 181.

Red Gasoline Tanks, especially adapted for storing gasoline, which requires a tight tank. Made of Heavy Galvanized Iron, with wood bottom under metal bottom. Has 3½ inch heavy filler cap and **brass lock faucet,** strongly attached. Tested and warranted, nicely painted and decorated.

No. 180—30 gallons, with ½ inch Faucet .....Each, $.....

No. 181—60 gallons, with ⅝ inch Faucet .....Each, ...

STEEL BARRELS



Nos. 3038 and 5538.

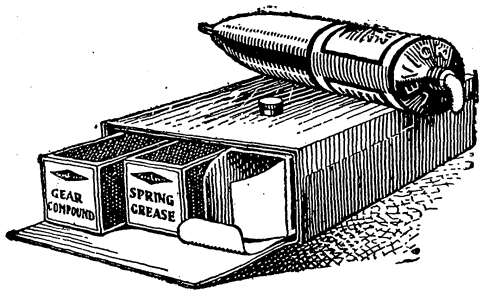
Painted Steel Shipping Barrels with 18 gauge Steel Body and Heads. Equipped with Heavy Mallable Iron Faucet. Cut shows Faucet inverted for shipping.

No. 3038—Capacity 30 gallons.....Each, $3.30

No. 5538—Capacity 55 gallons.....Each, 5.10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO OIL AND GREASE



Cup, Gear and Spring Grease in Tubes

No. L. H. K.—Lincoln Highway Kits—1 Tube of each grease .....Per Kit, $1.00
No. G. T. K.—Grease Tube Kits—3 Tubes of each grease .....Per Kit, 3.00

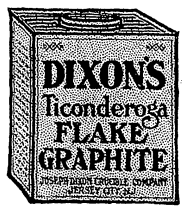
OIL

Three in One Lubricating Oil

Three in One prevents rust and lubricates.

No. 1—1 Oz. Bottles, 1 dozen in a case.....Per Dozen, $1.20
No. 2—3 Oz. Bottles, 1 dozen in a case.....Per Dozen, 3.00

FLAKE GRAPHITE

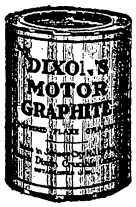


Ticonderoga Flake Graphite

The Standard Lubricating Graphite, the world over.

No. 632— 1 Lb. Cans, 36 in a case.....Per Can, $0.40
No. 633— 5 Lb. Cans, 10 in a case.....Per Can, 1.75
No. 634— 10 Lb. Cans, 5 in a case.....Per Can, 3.25
No. 646—100 Lb. Kegs.....Per Keg, 27.00

MOTOR GRAPHITE

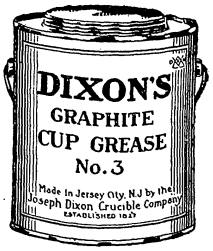


Dixon's Motor Graphite

The Purest, Most Carefully Selected Grade of Flake Graphite.

½ **Lb.** Tin Cans, 36 in a case.....Per Can, $0.50
5 Lb. Tin Cans, 10 in a case.....Per Can, 4.00

GRAPHITE CUP GREASE



Dixon's Graphite Cup Grease

Cup Grease containing Fine Flake Graphite is the best.

No. 3—In 1 Lb. Tin Cans, 36 in a case.....Per Can, $0.40
No. 3—In 5 Lb. Tin Cans, 10 in a case.....Per Can, 1.75

GRAPHITE GEAR OIL

Dixon's Graphite Gear Oil

Very light Body for Transmission and Differential Cases.

No. 675—In 5 Lb. Tin Pails, 10 in a case.....Per Pail, $1.75

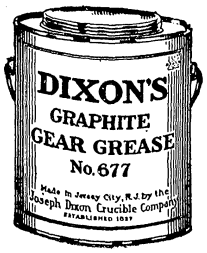
GRAPHITE GREASE

Dixon's Graphite Grease

Especially for Universal Joints, Water Pump Cups, Overhead Valve Cups, and Clutch Thrust Collars.

No. 676—In 1 Lb. Tin Cans, 36 in a case.....Per Can, $0.50
No. 676—In 5 Lb. Tin Pails, 10 in a case.....Per Pail, 2.25

GRAPHITE GEAR GREASE

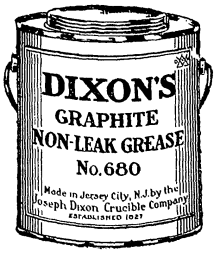


Dixon's Graphite Gear Grease

Graphite Grease—Just Right for Transmission Gears.

No. 677—In 1 Lb. Tin Cans, 36 in a case.....Per Can, $0.40
No. 677—In 5 Lb. Tin Pails, 10 in a case.....Per Pail, 1.75
No. 677—In 10 Lb. Tin Pails, 6 in a case.....Per Pail, 3.50

GRAPHITE NON-LEAK GREASE



Dixon's Graphite Non-Leak Grease

No. 680 Grease will positively not leak out of the housing on to the brakes and wheels. It is not intended for transmissions.

No. 680—In 2½ Lb. Tin Cans, 20 in a case.....Per Can, $1.00
No. 680—In 5 Lb. Tin Pails, 10 in a case.....Per Pail, 2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WOLF'S HEAD LUBRICANTS

Wolf's Head Grease and Compound like Wolf's Head Oils have been tested and endorsed by leading manufacturers. For use where joints are not tight and where oil will leak out, we offer the **Gear Compound**—a combination of oil and grease—which will insure perfect lubrication in the gears at all times.

Differentials—Use Wolf's Head Gear Compound or Non-Flowing Oil.

Wheels, Universal Joints, Compression Cups, etc., use Wolf's Head Cup or Graphite Grease. Wolf's Head Cup Grease may also be used for Transmission or Gear Lubrication, particularly during the summer months. Wolf's Head Grease has a high melting point, low cold test and is free from acid.

WOLF'S HEAD GREASE AND COMPOUND

	*Barrels 400 lbs. Per Pound	*Hf. Bbls. 200 lbs. Per Pound	*100-lb. Kegs Per Pound	50-lb. Cases Two 25-lb. Cans Each	25-lb. Cans Each	10-lb. Cans Each	5-lb. Cans Each	1-lb. Cans Each
Cup or Motor Grease	$.....	.....	.....	.....	.....	.....	.....	.....
Graphite Grease	.....	.....	.....	.....	.....	.....	.....	.....
Light Gear Compound	.....	.....	.....	.....	.....	.....	.....	.....
Dark Gear Compound	.....	.....	.....	.....	.....	.....	.....	.....
Non-Flowing Oil	.....	.....	.....	.....	.....	.....	.....	.....

Original Packages

Grease and Compound—1 25-pound, 6 10-pound, 12 5-pound or 24 1-pound Cans in a wooden case.

*400 pound Barrels, 200 pound Hf. Barrels, 100 pound Kegs for Direct Shipment only.

Extra—An extra charge of 25 cents net will be made for each broken case.

Note—No extra charge for "Original" packages. Grease and Compounds in lithographed cans.

Is Your Car on This List?

If not, we will be glad to place our technical department at your service and help you pick out an oil best suited to your needs. Please write to us.

The following recommendations are based on models of cars manufactured during the years 1914-1915, as we have found that cars upward of two years old (or having been run 15,000 miles) often need replacement of worn parts and require a different oil after such replacement or adjustments have been made. If you have been using an oil of a certain body and experience any trouble with your car after overhauling it, try a different bodied oil.

Abbreviations.

"L" means WOLF'S HEAD LIGHT OIL.
"P" means WOLF'S HEAD PACKARD OIL.
"M" means WOLF'S HEAD MEDIUM OIL.
"H" means WOLF'S HEAD HEAVY OIL.

Abbott Detroit	M	De Dion	H	I. H. C. (W. C.)	M	Metz	L
Allen	M	Delahaye	H	Imperial	P	Metallurgique	H
American	M	Delauncy-Belleville	H	Isotta Fraschini	H	Minerva	H
Apperson	M	Detroiter	M	Jackson	M	Mitchell	M
Auburn	M	Dodge	L	Jeffery	H	Moline	M
Austin	M	Dorris	L	Jeffery (Com.)	H	Moon	P
Autocar	H	Dudley	H	Keeton	M	Motokart	L
Avery	M	Empire	P	Kelly-Springfield	M	Moyer	M
Avery 1 ton truck	H	Enger	M	King	P	National	M
Benz	H	Federal	M	Kissel Kar	M	Norwalk	M
Briscoe	M	Fiat	H	Knox	H	Oakland	M
Buick	M	Ford	L	Krit	M	Oldsmobile	M
Cadillac	M	Franklin	H	Lambert	P	Overland	M
Carter Car	M	Gaggenau	M	Lancia	H	Packard	P
Case	M	Garford	M	Lippard-Stewart	M	Paige	M
Chadwick	H	Garford (Com.)	H	Locomobile	M	Pathfinder	M
Chalmers	M	G. M. C.	H	Lozier	M	Peerless	M
Chandler	M	Grant	M	Lyons	H	Peerless (Com.)	H
Chase (A. C.)	H	Haynes	M	Mack	H	Pierce Arrow	M
Chase (W. C.)	M	Havers	M	Mais	M	Pierce Arrow (Com.)	H
Chevrolet	H	Henderson	M	Marathon	P	Pope Hartford	M
Chesterfield	P	Herreshoff	M	Marion	M	Premier	M
Cole	M	Hewett	M	Marmon	M	Pullman	M
Crow-Elkhart	M	Hudson	M	Maxwell	Max	Regal	M
Cunningham	P	Hupmobile	M	McFarlan	M	Renault	H
Daimler Knight	H	I. H. C. (A. C.)	H	McIntyre	M	Reo	M
Darracq	H			Mercer	M	Rolls-Royce	H
						Saurer	H
						Saxon	L
						Selden	P
						S. G. V.	H
						Simplex	H
						Speedwell	M
						Stearns	H
						Stegeman	M
						Stevens Duryea	M
						Stewart	M
						Studebaker	M
						Stutz	M
						Trumbull	H
						Universal	M
						Velie	M
						Vulcan	M
						Vulcan (Com.)	H
						White	M
						White (Com.)	H
						Willys Knight	H
						Willys Utility	H
						Winton	M
						Woods Mobilette	H
						Zip	H

Note—"Max" means Maxwell Oil; A. C., Air Cooled; W. C., Water Cooled; Com., Commercial.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WOLF'S HEAD LUBRICANTS

For Motor Cars and Trucks, Gas Engines, Motorcycles and Motor Boats.

WOLF'S HEAD OILS

have been tested and endorsed by the leading manufacturers of Automobiles and Motor Boats in America. All WOLF'S HEAD OILS are made from straight Pennsylvania crude (the most expensive in the world) and are noted for freedom from carbon, and extraordinary mileage. WOLF'S HEAD QUALITY makes customers.

WOLF'S HEAD CYLINDER OIL

Light—Light Body—For water cooled engines of high compression having close fitting piston rings and of comparatively small horse power. May be used in cars whose bearings have recently been tightened until moving parts are thoroughly worked in. **Flows freely in cold weather.**

Medium—Medium Body—This oil is the result of constant study to produce an oil that can be **recommended for all round service.** Keeps its body under heat and produces greatest mileage where an oil of medium body is required.

Heavy—Heavy Body—For air cooled cars and most Foreign and American cars with loose fitting piston rings requiring a heavy bodied oil of superior lubricating qualities and high flash test.

Wolfs' Head Cylinder Oil	In Steel Drums About 55 Gal. Per Gal.	In Steel Drums About 30 Gal. Per Gal.	In Steel Drums About 15 Gal. Per Gal.	In 10 Gal Cases Two 5-Gal. Cans Per Case	In 5 Gal. Cans 1 in a Case Per Can	In 1 Gal. Cans 12 in a Case Per Case
Light	$.....	.....	.....	.....	.....	.....
Medium ...	.....	.....	.....	.....	.....	.....
Heavy	.....	.....	.....	.....	.....	.....
Motor Cycle						
Light	.....	.....	.....	.....	.....	.....
Heavy	.....	.....	.....	.....	.....	.....
Gear Oil	.....	.....	.....	.....	.....	.....

MAXWELL CYLINDER OIL

Made to MAXWELL Specifications and used in the MAXWELL factory and recommended by the MAXWELL Company as the **Best Oil** for MAXWELL Cars.

	Steel Drums About 55 Gals. Per Gallon	Steel Half Drums About 30 Gals. Per Gallon	In 10 Gal. Cases Two 5 Gal. Cans Per Case	In 5 Gal. Cans 1 in a Case Per Can	In 1 Gal. Cans 12 in a Case Per Case
Maxwell Cyl. Oil, $.....	.....	.....	.....	.....	.....

PACKARD LUBRICATING OIL

PACKARD Cylinder Oil is made to PACKARD Specifications and used in the PACKARD factory. The **Best Oil** for PACKARD Cars. LIGHT—Medium Body—Between Light and Medium. An all-year-round oil.

	Barrels About 50 Gal. Per Gallon	Steel Drums About 55 Gal. Per Gallon	Half Drums About 30 Gal. Per Gallon	Qr. Drums About 15 Gal. Per Gallon	In 10 Gal. Cases Two 5-Gal. Cans Per Case	In 5 Gal. Cans 1 in a Case Per Can	In 1 Gal. Cans 12 in a Case Per Case
Cylinder	$.....	.....	.....	.....	.....	.....	.....
Timing Gear		.....	.....	.....	.....	.....	.....
Transmission		.....	.....	.....	.....	.....	.....

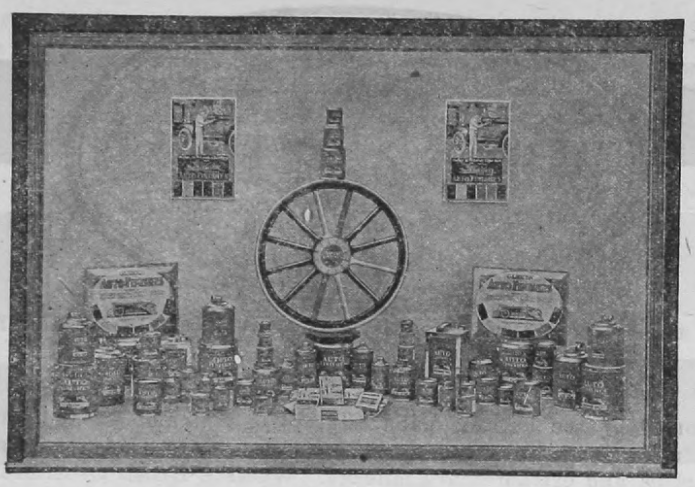
Original Packages

Oil—Two 5 Gallon, One 5 Gallon or Twelve 1 Gallon Cans are put up in a wooden case.
Extra.—An extra charge of 25 cents net will be made for each broken case.

Note—All cans and barrels are sealed when they leave our Factory. See that they reach you in the same condition. No extra charge for "original" packages. Our Oils and Greases are all packed in handsome lithographed cans.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GLIDDEN ENDURANCE AUTO FINISHES



SELECT ONE OF THESE FOUR ASSORTMENTS

To make it easier for you to order your stock of Glidden Endurance Auto Finishes and Specialties, and to make sure that your stock is so arranged as to afford quickest turn-overs and profit, we have catalogued four Assortments. Each of these furnishes a full stock of goods together with the needed advertising material. Determine the size of the Assortment you select by the size of your store and the number of motor cars in your community.

Assortment No. 1

Black.

2-½ Pts.	@	$0.40	..$0.80
4- 1 Pts.	@	.70	.. 2.80
6-¼ Gal.	@	1.25	.. 7.50

Red.

1- 1 Pt.	@	.95	.. .95

Gray.

2- 1 Pt.	@	.80	.. 1.60

Brewster Green.

1-½ Pt.	@	.45	.. .45
1- 1 Pt.	@	.80	.. .80

Cream.

2-½ Pts.	@	.50	.. 1.00
1- 1 Pt.	@	.95	.. .95

Blue.

1-½ Pt.	@	$0.45	..$0.45
1- 1 Pt.	@	.80	.. .80

Yellow.

1-½ Pt.	@	.45	.. .45
2- 1 Pt.	@	.80	.. 1.60

Auto Finishing Varnish Clear.

1-½ Pt.	@	.45	.. .45
2- 1 Pts.	@	.80	.. 1.60
1-¼ Gals.	@	1.50	.. 1.50

Total $23.70

ADVERTISING MATERIAL.

1 Lithographed Counter Display Sign.
1 Store Display Hanger.
10 Descriptive Color Cards.
Movie Slides.
Newspaper Electros.

Assortment No. 2

Black.

4-½ Pts.	@	$0.40	..$1.60
6- 1 Pts.	@	.70	.. 4.20
10-¼ Gals.	@	1.25	..12.50

Red.

2- 1 Pts.	@	.95	.. 1.90

Cream.

2-½ Pts.	@	.50	.. 1.00
1- 1 Pt.	@	.95	.. .95

Gray.

2- 1 Pts.	@	.80	.. 1.60
1-¼ Gal.	@	1.50	.. 1.50

Brewster Green.

1-½ Pt.	@	.45	.. .45
2- 1 Pts.	@	.80	.. 1.60
2-¼ Gals.	@	1.50	.. 3.00

White.

1-½ Pt.	@	$0.50	..$0.50
1- 1 Pt.	@	.95	.. .95

Blue.

1- 1 Pt.	@	.80	.. .80
1-¼ Gal.	@	1.50	.. 1.50

Yellow.

2- 1 Pts.	@	.80	.. 1.60

Auto Finishing Varnish Clear.

2- 1 Pts.	@	.80	.. 1.60
1-¼ Gal.	@	1.50	.. 1.50

Total $38.75

ADVERTISING MATERIAL.

1 Demonstration Wheel in Colors.
1 Lithographed Counter Display Sign.
1 Store Display Hanger.
20 Descriptive Color Cards.
Movie Slides.
Newspaper Electros.

Assortment No. 3

Black.

6-½ Pts.	@	$0.40	..$2.40
6- 1 Pts.	@	.70	.. 4.20
10-¼ Gals.	@	1.25	..12.50

Red.

2-½ Pts.	@	.50	.. 1.00
4- 1 Pts.	@	.95	.. 3.80

Gray.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60
2-¼ Gals.	@	1.50	.. 3.00

Brewster Green.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60
4-¼ Gals.	@	1.50	.. 6.00

White.

2-½ Pts.	@	.50	.. 1.00
2- 1 Pts.	@	.95	.. 1.90
1-¼ Gal.	@	1.80	.. 1.80

Blue.

2- 1 Pts.	@	.80	.. 1.60
4-¼ Gals.	@	1.50	.. 6.00

Yellow.

4-½ Pts.	@	.45	.. 1.80
4- 1 Pts.	@	.80	.. 3.20

Cream.

3-½ Pts.	@	$0.50	..$1.50
2- 1 Pts.	@	.95	.. 1.90

Auto Finishing Varnish Clear.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60
2-¼ Gals.	@	1.50	.. 3.00

Dull Black Lamp Enamel.

4-½ Pts.	@	.45	.. 1.80
2- 1 Pts.	@	.80	.. 1.60

Black Leather Dressing.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60

Auto Body Polish.

4- 1 Pts.	@	.55	.. 2.20
2-¼ Gals.	@	1.00	.. 2.00

Metal Polish.

4-½ Pts.	@	.20	.. .80
4- 1 Pts.	@	.30	.. 1.20
4-¼ Gals.	@	.50	.. 2.00

Total $78.20

ADVERTISING MATERIAL.

1 Lithographed Counter Display Sign.
1 Store Display Hanger.
25 Descriptive Color Cards.
1 Demonstration Wheel, the spokes finished in 7 colors White and Natural, with Aluminum rim—a very practical and attractive store and window Display.
Movie Slides.
Newspaper Electros.

Assortment No. 4

Black.

4-½ Pts.	@	$0.40	..$1.60
6- 1 Pts.	@	.70	.. 4.20
12-¼ Gals.	@	1.25	..15.00

Red.

4-½ Pts.	@	.50	.. 2.00
4- 1 Pts.	@	.95	.. 3.80
2-¼ Gals.	@	1.80	.. 3.60

Gray.

4-½ Pts.	@	.45	.. 1.80
4- 1 Pts.	@	.80	.. 3.20
2-¼ Gals.	@	1.50	.. 3.00

Brewster Green.

2-½ Pts.	@	.45	.. .90
4- 1 Pts.	@	.80	.. 3.20
2-¼ Gals.	@	1.50	.. 3.00

Blue.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60
2-¼ Gals.	@	1.50	.. 3.00

Yellow.

2-½ Pts.	@	.45	.. .90
2- 1 Pts.	@	.80	.. 1.60
1-¼ Gals.	@	1.50	.. 1.50

White.

4-½ Pts.	@	.50	.. 2.00
4- 1 Pts.	@	.95	.. 3.80
2-¼ Gals.	@	1.80	.. 3.60

Cream.

4-½ Pts.	@	$0.50	..$2.00
4- 1 Pts.	@	.95	.. 3.80
1-¼ Gal.	@	1.80	.. 1.80

Auto Finishing Varnish Clear.

4-½ Pts.	@	.45	.. 1.80
2- 1 Pts.	@	.80	.. 1.60
2-¼ Gals.	@	1.50	.. 3.00

Dull Black Lamp Enamel.

4-½ Pts.	@	.45	.. 1.80
4- 1 Pts.	@	.80	.. 3.20

Black Leather Dressing.

6-½ Pts.	@	.45	.. 2.70
6- 1 Pts.	@	.80	.. 4.80

Mohair Top Dressing.

4-½ Pts.	@	.45	.. 1.80
4- 1 Pts.	@	.80	.. 3.20

Auto Body Polish.

6- 1 Pts.	@	.55	.. 3.30
6-¼ Gals.	@	1.00	.. 6.00

Metal Polish.

6-½ Pts.	@	.20	.. 1.20
6- 1 Pts.	@	.30	.. 1.80
6-¼ Gals.	@	.50	.. 3.00

Heatproof Aluminum Paint.

6-No. 1	@	.25	.. 1.50
6-No. 2	@	.40	.. 2.40

Total $114.90

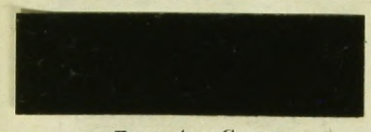
ADVERTISING MATERIAL.

1 Lithographed Counter Display Sign.
1 Store Display Hanger.
25 Descriptive Color Cards.
1 Demonstration Wheel, the spokes finished in 7 colors White and Natural, with Aluminum rim—a very practical and attractive store and window Display.
Movie Slides.
Newspaper Electros.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GLIDDEN ENDURANCE AUTO FINISHES

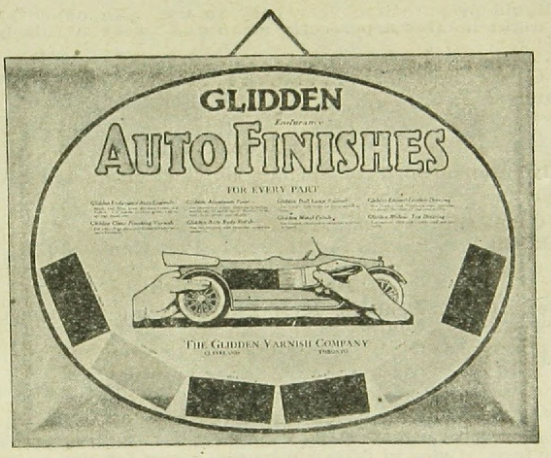
Gray.



Brewster Green.

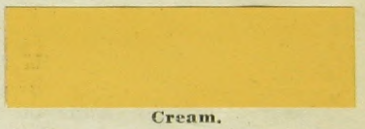
Red.

Blue.

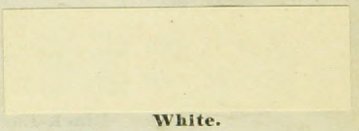


Yellow.

Black.



Cream.



White.

THE NEED AND THE REMEDY

Over three million pleasure cars are now in use. It is not difficult to conjure the tremendous need for materials used in re-finishing automobiles, and to realize that it is constantly growing greater.

Glidden Finishes are made in six attractive colors, the six shades most in popular favor. They are strictly quality products. The new line of Glidden Auto Specialties is complete and the quality is known to be in every can. The need is tremendous. The products meet the need.

Price List Per Can

	Gal.	½ Gal.	Quart.	Pint.	½ Pint.
Auto Finishes					
Black	$4.50	$2.40	$1.25	$0.70	$0.40
Red	6.50	3.40	1.80	.95	.50
Gray, Blue, Yellow, Brewster Green	5.50	2.85	1.50	.80	.45
Cream, White	6.50	3.40	1.80	.95	.50
Auto Finishing Varnish (Clear)	5.50	2.85	1.50	.80	.45

	Gal.	½ Gal.	Quart.	Pint.	½ Pint.
Dull Black Lamp Enamel	$5.50	$2.85	$1.50	$0.80	$0.45
Black Leather Dressing	5.50	2.85	1.50	.80	.45
Mohair Top Dressing	5.50	2.85	1.50	.80	.45
Auto Body Polish	3.50	1.85	1.00	.55	.35
Metal Polish	1.50	.85	.50	.30	.20
	Size No. 5	Size No. 4	Size No. 3	Size No. 2	Size No. 1
Heat Proof Aluminum Paint	2.00	1.10	.65	.40	.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

JOHNSON AUTO SPECIALTIES

CARBON REMOVER

Carbon Remover

It is a liquid preparation, very easy to use. An ounce poured into each cylinder at night insures a perfectly clean and sweet engine in the morning.

Size can	½ Pt.	1 Pt.	1 Qt.
Cans in a Case	96	48	24
Carbon Remover Per Can	$0.65	1.00	1.75

STOP-SQUEAK OIL

Stop-Squeak Oil

Especially recommended for Springs, applied with a brush. Very effective.

Size can	½ Pt.	1 Pt.	1 Qt.
Cans in a Case	96	48	24
Stop-Squeak Oil Per Can	$0.35	.50	.85

AUTO-LAK

Auto-Lak Varnish

For Bodies, Hoods, Fenders, etc. Does not lap or streak. Dries ready for use in twenty-four hours.

Size Can	1 Pt	1 Qt.
Cans in a Case	48	24
Auto-Lak Per Can	$1.50	2.50

BLACK-LAC

Black-Lac Dressing

For Mohair and Pantasote Tops, Cushions, Tire Covers, etc. One Coat gives rich black surface. Dries in fifteen minutes, ready for use.

Size can	½ Pt.	1 Pt.	1 Qt.
Cans in a Case	96	48	24
Black-Lac Per Can	$0.65	1.00	1.75

CLEANER

Cleaner

Removes Stains, Discolorations, Scum, Road-Oil, Tar and Grease without a scratch.

Johnson's Cleaner, 8 ounce cans.....Per Dozen, $4.20

Packed—One Dozen in a Carton—12 Cartons in a Case.

O-CEDAR POLISH

O-Cedar Auto Polish

"Channel Chemical Co."—A favorite with many car owners.

Size Can	4 oz.	12 oz.	1 Qt.	½ Gal.	1 Gal.
Dozen in a Box	3	2	1	1	½
O-C. Auto Polish Per Doz.	$3.00	6.00	12.00	18.00	30.00

PREPARED WAX

Prepared Wax—"Paste"

Preserves and Protects the Varnish, Keeps Body, Hood and Fenders like new.

Prepared Wax, 5 ounce cans.....Per Dozen, $4.20

Packed—One Dozen in a Carton—12 Cartons in a Case.

PREPARED WAX

Prepared Wax—"Liquid"

An Easier and Quicker way of using, otherwise same as paste form.

Size Bottle	½ Pt.	1 Pt.	1 Qt.
Bottles in a Box	96	48	24
Prepared Wax Per Bottle	$0.50	.75	1.40

Liquid Veneer Auto Spray Outfits

"Buffalo Specialty Co."

Liquid Veneer Auto Spray Outfits consist of One Quart Bottle of Auto Liquid Veneer and a Superior Brass Finished Sprayer which throws a fine even mist, easily wiped off leaving a highly satisfactory polish.

Liquid Veneer Auto Spray Outfits—In attractive box.... Each, $1.25

JOHNSON FREEZE PROOF

JOHNSON'S FREEZE PROOF

Prevents Frozen Radiators and raises the boiling point of water up to 235 to 250 degrees. Will not evaporate or steam; will not injure rubber and will not rust or corrode metal. **One** application sufficient for a winter.

In 5 pound cartons.....Each, $1.50

Packed—12 Cartons in a Case.

LIQUID VENEER AUTO SPRAY OUTFIT

Note.—For small cars having a cooling capacity of not more than 3½ gallons, (such as Fords, Maxwells, four cylinder Studebakers, etc.). To protect to 5 degrees below zero, use one package. To protect to 25 degrees below zero, use two packages.

For cars having a cooling capacity of not more than 5 gallons, (such as Dodge, Studebaker 6, Mitchell, Hudson, etc.) To protect to 5 degrees above zero use one package. To protect to 5 degrees below zero use two packages. To protect to 25 degrees below zero use 3 packages.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

NORWESCO AUTO SPECIALTIES

Skalex Radiator Cleaner

Prevents overheating of engine and maintains full efficiency of the cooling system. Dissolves and removes all rust and sediment, together with the coating of lime that forms inside the radiator and causes overheating. **Skalex** cleanses the cooling system thoroughly. Has no caustic action and is positively harmless.

Skalex ..... Per Dozen, $9.00

Packed—One Dozen in a Carton.

Thermite

The "Chemically Correct" Anti-Freeze for Radiators. Prevents water from freezing in the cooling system and can be so proportioned as to give protection in any climate. It does not evaporate, therefore one application will last an entire season. A freezing chart and scale is lithographed on every can. **Thermite** does not attack the metal and is entirely harmless to the cooling system. Mixed with water in a half and half solution it gives protection down to 16 degrees below.

Thermite. In one gallon cans ..... Per Gallon, $1.50

Packed—Six Cans in a Case.

Se-Ment-Ol Radiator Cement

"It finds the leak and fixes it."—The original self-acting radiator cement. A dry powder, when poured into the warm water of the radiator dissolves immediately. As it reaches the leak and strikes the air it congeals, stopping the leak permanently and quickly. It forms a film on the lips of the leak and builds film upon film, forming an elastic repair which cannot be torn down by the action of the water or the vibration of the car.

Se-Ment-Ol. In 7 oz. cans ..... Per Dozen, $9.00

Packed—One Dozen in a Carton.

"Norwesco" Rim and Gasket Shellac

A specially prepared Shellac unrivaled in cementing bicycle tires to their rims and in cementing gasket joints. A size for every use.

In 2 oz. Swab bottle ..... Per Dozen, $ 2.40
In ½ pt. cans ..... Per Dozen, 6.00
In 1 pt. cans ..... Per Dozen, 9.00
In 1 qt. cans ..... Per Dozen, 15.00
In 1 gal. cans ..... Per Dozen, 48.00

Packed—One Dozen in a Carton.

"Norwesco" Neatsfoot Clutch and Brake Compound

Restores clutch and brake facings of cork, leather or composition, causing them to grip with real stubbornness.

In pint cans ..... Per Dozen, $4.80

Packed—One Dozen in a Carton.

"Norwesco" Prussian Blue

Made from the finest quality Prussian Blue, ground in pure linseed oil. Used by practical mechanics for locating high places or worn spots on metal surfaces.

In 1 oz. tubes, ¾ x 4½ inch ..... Per Dozen, $2.40

Packed—One Dozen in a Carton.

"Norwesco" Mohair Dressing and Lining Dye

Makes old tops look new. It thoroughly dyes and waterproofs with one application. Restores the original black silken sheen and gives neatness and newness to soiled and water-stained linings.

In pint cans ..... Per Dozen, $ 9.00
In quart cans ..... Per Dozen, 15.00

Packed—One Dozen in a Carton.

"Norwesco" Leather, Pantasote Top and Upholstery Dressing

Makes old tops look new. It preserves and waterproofs the material and gives a desirable egg-shell, flat, black finish of great durability. It is elastic, does not crack or flake and will not rub off or discolor the clothes.

In pint cans ..... Per Dozen, $ 9.00
In quart cans ..... Per Dozen, 15.00

Packed—One Dozen in a Carton.

Never-Burn Engine Enamel

A baking enamel especially prepared for automobile engines. Applied like ordinary paint without filler. The heat of the engine bakes the enamel on and it adheres like a part of the metal itself. Two finishes. Gloss Black and Battleship Gray.

In ½ pint cans ..... Per Dozen, $ 6.00
In pint cans ..... Per Dozen, 10.20

Packed—One Dozen in a Carton.

Tire-Lac Tire Paint

A specially prepared rubber paint for use on tires and rubber matting. It fills the cracks and openings, producing a smooth even surface, which protects and beautifies the rubber.

In pint cans ..... Per Dozen, $7.80

Packed—One Dozen in a Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO TIRE SPECIALTIES

TIRE-DOH

Tire-Doh Outfits for repair work consist of a can of Tire-Doh and a can of Tire Cement, contained in one large can. Tire-Doh mends ordinary punctures and tears of inner tubes.

Tire-Doh Outfits—Large Size.....Each, $1.00
Tire-Doh Outfits—Junior Size.....Each, .50
Tire-Doh—Only in 2 oz. Cans.....Each, .50
Tire-Doh—Cement Only. In 4 oz. Cans....Each, .25

TIRE SEAL

Tire Seal not only stops punctures without loss of air but at the same time preserves the tubes, in fact making them last longer than they otherwise would. Made in three sizes of cans. A single can is sufficient for one tire.

Tire Seal—Size for 3 and 3½ in. tubes.....Each, $1.50
Tire Seal—Size for 4 and 4½ in. tubes.....Each, 2.00
Tire Seal—Size for 5 and 5½ in. tubes.....Each, 2.50

BUCKEYE CLEANSER

Soda Soap

WHIZ SOAP

Cleans Hands, Scours Pans in the house, the office, the garage or the factory. Lathers freely in the hardest of water.

Whiz—In Tin Cans.....Per Dozen, $4.80

Packed—One Dozen in a Case.

Buckeye Cleanser

Buckeye Cleanser is a Strictly Pure Neutral Vegetable Oil Soap. It is guaranteed for automobile use and will not injure any painted or polished surface that will stand clear water. It contains no alkali whatever and will not dim the luster of the finest finish.

Size of Package	Bbls.	Hf. Bbls.	Kegs	25 lb. Pails	10 lb. Pails	5 lb. Pails
Packages in Container	450 lbs.	225 lbs.	125 lbs.	Two	Six	Twelve
Buckeye Cleanser .....Per Pound,	$0.13½	.14	.15	.17	.19	.19

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DUTCH BRAND AUTO SPECIALTIES

VARNI-BRITE

Varni-Brite

Cleans and Polishes thoroughly, little rubbing being necessary. Used and endorsed by leading motor car makers and dealers.

Varni-Brite—1 Qt. Cans.....Per Dozen, $9.60

RADIATOR SEAL

Radiator Seal

Insures against delays on the road by providing an instantaneous and permanent repair for leaky radiators.

Radiator Seal—½ Pt. Cans, with Counter Display Stand.....Per Dozen, $6.00

Packed—One Dozen in a Carton.

PATCHING CEMENT

"7711" Patching Cement

Dutch Brand "7711" Patching Cement withstands a great amount of heat, friction and car weight.

In ¼ Pt. Cans.....Per Dozen, $1.90

Packed—One Dozen in a Carton.

VULCANIZING CEMENT

Vulcanizing Cement

The Dutch Brand Vulcanizing Cement "works" on all kinds of raw stock. It cures rapidly and is always satisfactory.

Vulcanizing Cement—¼ Pt. Cans.....Per Dozen, $2.70

Packed—One Dozen in a Carton.

RUBBER SEAL OUTFITS

"7711" Patching Cement

In ¾x4 inch Tubes.....Per Dozen, $0.90

Packed—One Dozen in a Carton.

SOAPSTONE

Rubber Seal Outfits

Outfit consists of a 2-ounce can of Rubber Seal, a 2-ounce can of Rubber Cement and a sheet of emery paper, all enclosed in a metal box.

Rubber Seal Outfits.....Per Dozen, $10.80

Dutch Brand Soapstone

Soapstone 2x8 inch Sifter-top Cans.....Per Dozen, $1.32

FLAKE GRAPHITE

Motor Flake Graphite

Prevents cutting in cylinders and bearings and is unaffected by heat or cold, acids or alkalies.

Flake Graphite—1 Pound Cans.....Per Dozen, $9.00

GRAPHITE GREASE

Graphite Grease

A combination of Fine Cup Grease and Flake Graphite for use in Grease Cups.

Graphite Grease—1 Pound Cans.....Per Dozen, $7.20

Packed—One Dozen in a Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASKET SHELLAC

DUTCH BRAND AUTO SPECIALTIES

TREAD FILLER

Gasket Shellac

A Solution of the Finest Orange Shellac unmixed with rosins or other foreign gums of any kind. Cements and makes leak-proof either metal, leather or rubber.

Package	1 Qt. Cans	2 Oz. Bottles
Gasket Shellac .....Per Dozen,	$18.00	1.70

Packed—2 oz. Bottles, One Dozen in a Carton; Quart Cans, in Open Stock.

2 in 1 Tread Filler (Liquid Rubber)

An Ideal Compound in nozzle pointed tubes for repairing small cuts in casings, eliminating the necessity of vulcanizing. It dries rapidly.

2 in 1 Tread Filler—1x6 inch Tubes.....Per Dozen, $4.00

Put up on a Lithographed Card-Board Display Stand.

TIRE TAPE

Rubber Friction Tire Tape

Finest Long Fiber Sea Island Cotton Fabric, not coated but impregnated thoroughly with Pure Rubber Friction.

Size Rolls	4 Oz.	8 Oz.
Tire Tape—¾ inch.....Per Pound,	$0.50	.50

Rubber Splicing Compound

High Grade All Rubber Tape possessing great stretch and covering quality.

Size Rolls	8 Oz.
Rubber Compound—¾ inch.....Per Pound,	$0.90

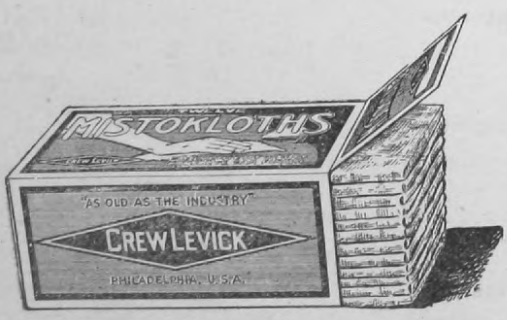
SPLICING COMPOUND

"BUHL" BLACK FRICTION TIRE TAPE

Buhl Black Friction Tire Tape, ¾ inch wide.

No. 1—1 oz. in a Roll, 16 Rolls in a Carton.....Per Carton, $.....
No. 2—2 oz. in a Roll, 8 Rolls in a Carton.....Per Carton, ...
No. 4—4 oz. in a Roll.....Per Roll, ...
No. 8—8 oz. in a Roll.....Per Roll, ...

MISTOKLOTH



Mistokloth possesses unrivaled cleansing and polishing qualities. It restores the original lustre quickly and easily Already cut in convenient size for use.

Cloths in Package	6	12
Mistokloth.....Per Package,	$0.25	.50

MISTOKLEEN

Mistokleen makes a single job of cleaning and polishing. It is easily applied with the enameled sprayer, which is furnished with each can and is readily wiped off with a Mistokloth (also enclosed), or any soft cloth leaving a lustrous finish.

Mistokleen—Outfits as described.....Each, $1.25

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

BRAKE BAND LINING

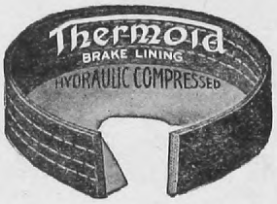
TRADE MARK Raybestos REG. U. S. PAT. OFF.

This is the Quality Brake Lining. It is used by all leading car makers. The Genuine is recognized by the Silver Edges and the name Raybestos stamped on every foot of it. Cabinets like the cut at the right are furnished free with orders for 500 feet.

PRICE LIST PER LINEAL FOOT.

Thickness	Widths																			
	1"	1⅛	1¼	1½	1¾	2"	2¼	2½	2¾	3"	3¼	3½	3¾	4"	4¼	4½	4¾	5"	5½	6"
⅛"	.32	.34	.36	.40	.46	.52	.58	.64	.69	.74	.80	.83	.89	.92	.97	1.01	1.06	1.10	1.20	1.30
5/32	.36	.39	.42	.48	.56	.64	.72	.80	.87	.94	1.00	1.06	1.13	1.20	1.27	1.33	1.40	1.46	1.53	1.60
3/16	.42	.46	.50	.58	.68	.76	.84	.94	1.03	1.12	1.20	1.28	1.36	1.44	1.52	1.60	1.68	1.76	1.92	2.08
¼	.56	.61	.66	.76	.88	1.00	1.12	1.24	1.35	1.46	1.57	1.67	1.78	1.88	1.99	2.09	2.20	2.30	2.51	2.92
5/16	.70	.76	.82	.94	1.08	1.24	1.40	1.54	1.67	1.80	1.93	2.06	2.19	2.32	2.45	2.58	2.71	2.84	3.10	3.36
⅜	.84	.91	.98	1.12	1.28	1.48	1.68	1.82	2.03	2.21	2.39	2.57	2.75	2.93	3.00	3.09	3.18	3.21	3.45	3.63

Special sizes made to order.



Thermoid
HYDRAULIC COMPRESSED
Brake Lining - 100%

Thermoid Brake Lining is constructed of long staple Canadian Asbestos, interwoven and reinforced with solid brass wire. It is Brake Lining all the way through—just the same inside as outside. Therefore it is dependable—has a uniform "gripping power" as long as any of it remains.

PRICE LIST PER LINEAL FOOT.

Folded and Stitched Brake Band Lining.

Adopted 1906.

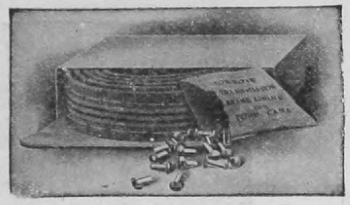
Width Inches	Thickness					
	⅛ in.	5/32 in.	3/16 in.	¼ in.	5/16 in.	⅜ in.
1	**$0.40**	$0.45	**$0.50**	**$0.70**	$0.83	$0.96
1⅛	.45	**.50**	.55	.75	.92	1.06
1¼	**.50**	.55	**.60**	**.80**	.98	1.16
1½	**.60**	.65	**.70**	**.90**	**1.13**	1.35
1¾	.70	.75	**.80**	**1.00**	**1.27**	1.54
2	.80	.85	**.90**	**1.20**	**1.47**	**1.73**
2¼	.90	.95	**1.00**	**1.30**	**1.62**	**1.93**
2½	1.00	1.05	**1.10**	**1.50**	**1.81**	**2.12**
2¾	1.10	1.15	1.20	**1.60**	**1.96**	**2.31**

Width Inches	Thickness					
	⅛ in.	5/32 in.	3/16 in.	¼ in.	5/16 in.	⅜ in.
3	$1.20	$1.25	$1.30	**$1.70**	**$2.10**	**$2.50**
3¼	1.25	1.33	1.40	1.80	2.25	2.69
3½	1.30	1.40	1.50	1.90	**2.39**	**2.88**
3¾	1.35	1.48	1.60	2.05	2.57	3.08
4	1.40	1.55	1.70	2.20	**2.74**	**3.27**
4½	1.60	1.75	1.90	2.50	3.08	**3.65**
5	1.80	1.95	2.10	2.70	3.37	**4.04**
5½	2.00	2.15	2.30	3.01	3.72	4.42
6	2.20	2.35	2.50	3.27	4.04	4.80

Note.—Sizes indicated by bold-faced type represent those sizes which have been approved by the Society of Automobile Engineers as "Standard." Any sizes other than "Standard" must be considered as special.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

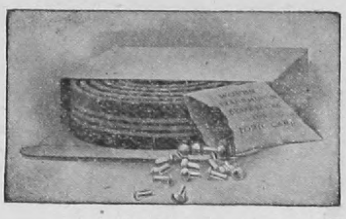
FORD TRANSMISSION LINING



Fordoid

Fordoid is almost entirely Asbestos, impregnated with special treatment to resist oil. Cured by hydraulic compression. Provided with Copper Rivets.

Fordoid—3 Pieces in a set.....Per Set, $1.50



Webenoid

Webenoid is a High Grade Noiseless non-metallic cotton fabric. It is specially treated to make it impervious to the action of grease, oil and dirt. Provided with Copper Rivets.

Webenoid—3 Pieces in a set.....Per Set, $1.00

ADVANCE
CORK INSERT
TRADE MARK REG. COPYRIGHTED 1917
TRANSMISSION LININGS FOR FORDS

Advance Linings insure a Ford owner a smooth, easy, quiet stop and an equally satisfactory start. The Cork does it. The Cork discs in the Advance grip at the slightest pressure and wear slowly.

Advance—3 Pieces in a set.....Per Set, $3.00

CHATTERLESS

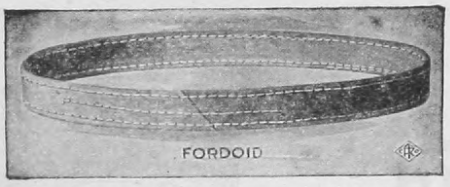
Chatterless eliminates chatter absolutely and is durable. It is not affected by hot oil. Provided with Rivets for attaching.

Chatterless—3 Pieces in a set.....Per Set, $1.00

Cotton Transmission Lining is treated to make it resist the action of oil and gasoline. Provided with Rivets for attaching.

Cotton—3 Pieces in a set.....Per Set, $0.75

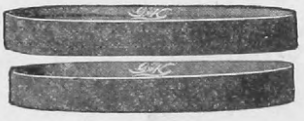
FAN BELTS



Fordoid Fan Belts are constructed of six plies of duck thoroughly impregnated with a special compound to increase the friction and to resist the action of oil and water. They are sewed with special thread and made endless.

Fordoid—Belts for early model Fords.....Each, $0.25
Fordoid—Belts for 1917 Ford cars.....Each, .30

FAN BELTS AND BELTING



G. K. Fan Belts are made of Genuine Belting Leather, treated to make them water proof, oil proof and heat proof. Very Durable and Practically Stretchless. Full Stitched with Linen Thread; made endless.

No. 1916 G. K.—For 1916 Ford cars.....Each, $0.40
No. 1917 G. K.—For 1917 Ford cars.....Each, .50

Steel-Clad Fan Belts consist of Fabric in several plies held together by steel teeth. The steel on the outside prevents curling.

Steel Clad—Belt for 1916 Ford.....Each, $0.35
Steel Clad—Belt for 1917 Ford.....Each, .40
Steel Clad—Belt for 1915 Maxwell.....Each, .70
Steel Clad—Belt for 1916 Maxwell.....Each, .75
Steel Clad—Belt for Dodge.....Each, .40

G. K. Belting is made of Genuine Belting Leather, treated to make it water proof, oil proof and heat proof. It is full stitched and the laps are stitched or plain as specified. In 50 or 100-foot rolls.

Width, in.	½	⅝	¾	⅞	1	1⅛	1¼	1½	2
Per Foot	$..	..	..	..	..	...	...	...	..

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

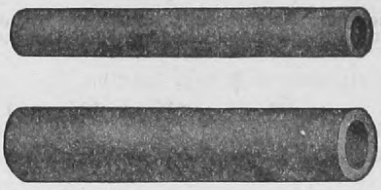
FAN BELTING

Calcutt's Steel Wire Belting

Calcutt Steel Wire Fan Belting is made in lengths of 25 feet and is packed two lengths in a box together with 20 couplings.

Calcutt—⅜ inch diameter, for Ford cars. Per Box, $3.40

RUBBER TUBING



Pure Gum Plain Surface Rubber Tubing. A grade specially adapted for bath sprays, hardware and supply trade, plumbing trade, natural gas, automobiles, etc.

No. 1509—White Rubber with medium thick wall.

Inside, inches	3/16	¼	5/16	⅜	½
Wall, inches	1/16	1/16	5/64	5/64	3/32
Per foot	$0.04	.05	.07½	.10	.13

Packed—Fifty Feet in a Box.

No. 1605—Red Auto Lamp Generator Tubing. A very high class tubing, elastic and strong.

Inside, inches		3/16	¼
Wall, 1/16 inch	Per Foot,	$0.04½	.05½
Wall, 3/32 inch	Per Foot,	.07¼	.08¾

Packed—Fifty Feet in a Box.

Cloth Inserted Rubber Tubing

Red C. I.—With White Tube and Friction. Adapted for water, air, beer apparatus, etc.

No. 35—Inside inches	¼	5/16	⅜	½
3 Ply Per Foot,	$0.10	.10	.10½	.13

Packed—Fifty Feet in a Box.

Dandy C. I.—With Black Tubing and Friction, otherwise the same as Red C. I.

No. 40—Inside, in	¼	5/16	⅜	½
2 Ply, Gas Per Foot, $	...	...	.07½	...
3 Ply Per Foot,	.08	.08	.08½	.11

Packed—Fifty Feet in a Box.

Air Pump C. I.—Construction similar to above, but black throughout. Adapted to heavier automobile pump work in garages, and for severe service.

No. 45—Inside inches	3/16	¼
5 Ply, Extra Heavy Per Foot,	$0.10	.10½

Packed—Fifty Feet in a Box.

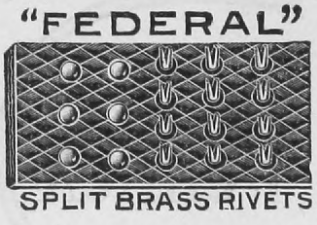
FAN BELT FASTENERS

Lakewood Fan Belt Fasteners are made of Steel, with two or three rivet holes in each section as ordered. Furnished complete with rivets ready for use.

Lakewood—Fan Belt Fasteners ..... Per Set, $0.15

Packed—Two Dozen Sets on a Display Card.

TRANSMISSION RIVETS



Split Brass and Brass Plated Rivets.

Length, inches	5/16	8/16
Split Brass Per 1000, $	....	....
Brass Plated Per 1000,	....	....

Packed—1,000 in a Box.

PNEUMATIC OR CHARGING HOSE

No. 50—Air Charging Hose, a light, flexible, but at the same time strongly built hose, especially adapted to withstand pressure and hard usage.

Inside, inches and plies	⅜ x 5 Ply	½ x 7 Ply
Plain Per Foot, $	.....	.....
Wire Wound Per Foot, $	.....	.....

Packed—Fifty Feet in a Roll.

Penflex Automobile Tire Filling Air Hose. Made in 5-16 inch (inside diameter) of galvanized steel, covered with a fine wire lacing. Very flexible and positively will not kink. It is not susceptible to oil usually found on a garage floor, therefore the life is far greater than rubber hose. Stands a pressure of 150 pounds.

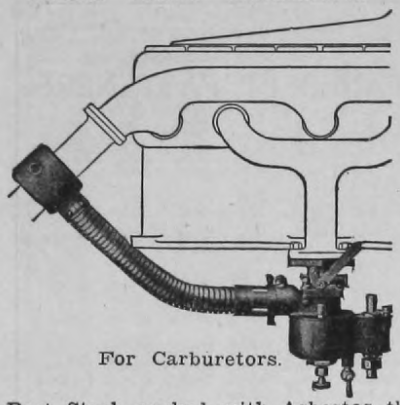
Supplied in any length desired, fitted with standard pipe thread couplings and acorn connections. Fittings, however, must be attached before shipment from Factory.

Penflex—5/16 inch inside.
Per Foot, $0.50

Couplings—Extra
Per Pair, $1.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOT AIR TUBING



For Carburetors.

Made of Best Steel, packed with Asbestos thread, very flexible, easily attached. **Pennsylvania** Carburetor Tubing is a favorite with Automobile manufacturers.

Inside, inches...	¼	5/16	⅜	½	⅝	¾
Per Foot	$0.50	.60	.70	1.20	1.30	1.80
Inside, inches	⅞	1	1⅛	1¼	1½	1¾	2
Per Foot	$2.00	2.20	2.70	3.20	3.80	5.80	7.00

GASOLINE HOSE

Used for conducting gasoline from Storage Pump to Tank in autos.

Penflex Combination Interlocking Joint Gasoline Hose with a specially designed covering to protect the hose and car, is the best flexible connection to a gasoline filling pump for the reason that it is perfectly tight; and, being made of metal, is not affected by the action of gasoline like rubber hose. With metal hose you can always deliver clean gasoline.

Inside Diameter—¾ inch.....Per Foot, $1.50
Couplings, Extra .....Per Pair, 2.50

Supplied in any length desired, fitted with connections for any style measuring pump. **Fittings,** however, must be attached before shipment from factory.

Wire Lined

Bull Dog—"Underwriters' Quality." Made with special compound which will not discolor or affect the gasoline. Constructed on a coil of specially tempered round wire, which prevents collapsing and adds greatly to its flexibility.

	Garage	
Inside, inches	¾	1
Per Foot	$0.80	.92

Bay State—Same construction as Bull Dog, but of lower quality, and not built to underwriters' specifications.

	Garage		Tank Wagon	
Inside, inches	¾	1	1¼	1½
Per Foot	$0.62	.74	.90	1.10

Supplied in 10, 12½, 15, 20, and 25 foot lengths. Fitted with connections for any style measuring pump. **Fittings,** however, must be attached before shipment from Factory.

RADIATOR HOSE

Winner.

Winner Three Ply Radiator Hose for Radiator connections on automobiles. Tubing is especially compounded to resist the deteriorating effect of hot water and steam.

Inside inches	1	1¼	1½	1¾	2	2¼	2½
Per Foot,	$0.26	.32½	.39	.45½	.52	.58½	.65

Lengths—Sold in multiples of 5 feet.

Testoid.

Testoid Hose has Black Cover, is made of heavy duck and strong tested friction. A substantial and serviceable radiator hose.

Furnished 3 ply only in 3 foot lengths.

Inside, inches	1	1¼	1½	1¾	2
Testoid—Per Foot,	$0.26	.30	.34	.39	.43

Packed—Six 3-foot pieces in a carton.

Thermoid.

Thermoid Hose has a White Cover and is designed to withstand for a long time the action of oil, anti-freezing solutions, heat and water at any temperature.

Furnished 3 ply only in 3 foot lengths.

Inside, inches	1	1¼	1½	1¾	2
Thermoid—Per Foot,	$0.29	.36	.43	.50	.57

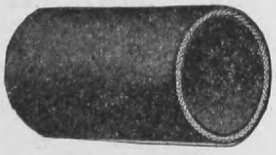
Packed—Six 3-foot pieces in a carton.

ASSORTED RADIATOR HOSE

Assortment consists of one 3 foot length of each 1, 1¼, 1½, 1¾, 2 and 2¼ inch, 3 ply Hose.

Testoid—Assortment as above .....Each, $6.60
Thermoid—Assortment as above.....Each, 8.35

RADIATOR HOSE FOR FORDS



Testoid.

Fordoid.

Testoid is 3 Ply Hose Duck with Heat Resisting and Non-Drying Tube and Cover.

Fordoid is especially constructed for Ford cars and will withstand for the longest time the action of water and heat at any temperature to which it can be subjected in service. Every piece is branded. For all models.

Inside Diameter,	Inch.....	1¾	2
Length	Inch.....	2¾	3¼
For		Inlet	Outlet
Testoid—Per Piece.....		$0.30	.40
Fordoid—Per Piece.....		.40	.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OIL CUPS

Style A.

Style D.

Opens smoothly and shuts positively. Dust-proof cap. Style A is designed for use where space is limited, Style D is designed for use where space is ample.

Sizes, Threads and List Prices.

Style.	Nos.	Stock Thread.	Diam. of Hex.	Diam. of Cap.	Per 100.
A	1	¼ in.—32V	¼ in.	5/16 in.	$7.00
	2	5/16 in.—32V	5/16 in.	7/16 in.	9.50
	3	⅜ in.—24V	⅜ in.	½ in.	10.70
	4	7/16 in.—24V	7/16 in.	9/16 in.	12.50
	5	½ in.—24V	½ in.	⅝ in.	16.00
D	1	¼ in.—32V	5/16 in.	11/32 in.	7.00
	2	5/16 in.—32V	⅜ in.	13/32 in.	9.50
	3	⅜ in.—24V	7/16 in.	½ in.	10.70
	4	7/16 in.—24V	½ in.	9/16 in.	12.50
	5	½ in.—24V	⅝ in.	11/16 in.	16.00
	6	½ in.—24V	¾ in.	⅞ in.	22.00
	7	¼ in. Pipe	13/16 in.	15/16 in.	30.00
	8	¼ in. Pipe	15/16 in.	1 1/16 in.	38.00

Style B.

Style N.

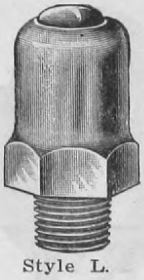
Style B is Self-Closing. Dust-proof Cap turns, allowing oil hole to be brought to any position for oiling. Style N is not Self-Closing. Made to use horizontal or oblique.

Sizes, Threads and List Prices.

Style.	Nos.	Stock Thread.	Diam. of Hex.	Diam. of Cap.	Per 100.
B	1	¼ in.—32V	⅜ in.	7/16 in.	$7.00
	2	5/16 in.—32V	⅜ in.	7/16 in.	9.50
	3	⅜ in.—24V	7/16 in.	½ in.	10.70
	4	7/16 in.—24V	½ in.	9/16 in.	12.50
	5	½ in.—24V	⅝ in.	¾ in.	16.00
	6	½ in.—24V	¾ in.	⅞ in.	22.00
	7	¼ in. Pipe	13/16 in.	15/16 in.	30.00
	8	¼ in. Pipe	15/16 in.	1 1/16 in.	38.00
N	0	No. 10—32V		5/16 in.	7.00
	1	¼ in.—32V		⅜ in.	7.00
	2	5/16 in.—32V		7/16 in.	9.50
	3	⅜ in.—24V		½ in.	10.70
	4	7/16 in.—24V		9/16 in.	12.50
	5	½ in.—24V		⅝ in.	16.00

Note.—Nickel Plated Cup with Stock Threads furnished unless otherwise specified.

Style K.



Style L.

Style C.

Push Valve Cups, Self-Closing, Dust-proof.

Sizes, Threads and List Prices.

Style.	Nos.	Stock Thread.	Diam. of Hex.	Per 100.
K	20	.291 in.—32V	5/16 in.	$4.00
	21	5/16 in.—32V	⅜ in.	4.70
	22	⅜ in.—24V	7/16 in.	5.30
	23	⅛ in. Pipe	½ in.	6.00
	24	¼ in. Pipe	⅝ in.	7.50
	25	⅜ in. Pipe	¾ in.	10.50
L	1	¼ in.—32V	5/16 in.	7.00
	2	.291 in.—32V	⅜ in.	9.50
	3	⅜ in.—24V	7/16 in.	10.70
	4	7/16 in.—24V	½ in.	12.50
	5	⅛ in. Pipe	9/16 in.	16.00

Style C Push Valve Cups have Shoulder at top, Style G (not illustrated) Push Valve Cups are similar to Style C but are driven in flush.

Sizes and List Prices.

Style.	Nos.	Diam.	Length.	Fit Hole	Per 100.
C	0	¼ in.	5/16 in.	¼ in.	$4.00
	1	5/16 in.	11/32 in.	5/16 in.	5.00
	2	⅜ in.	7/16 in.	⅜ in.	6.25
	3	7/16 in.	17/32 in.	7/16 in.	7.50
	4	½ in.	17/32 in.	½ in.	8.75
	5	9/16 in.	⅝ in.	9/16 in.	10.00
	6	⅝ in.	⅝ in.	⅝ in.	12.00
G	0	¼ in.	½ in.	¼ in.	4.00
	1	5/16 in.	½ in.	5/16 in.	5.00
	2	⅜ in.	¾ in.	⅜ in.	6.25
	3	7/16 in.	¾ in.	7/16 in.	7.50
	4	½ in.	¾ in.	½ in.	8.75
	5	9/16 in.	¾ in.	9/16 in.	10.00
	6	⅝ in.	¾ in.	⅝ in.	12.00

Note.—Styles K, L, C and G furnished Nickel Plated unless otherwise specified.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

OIL CUPS

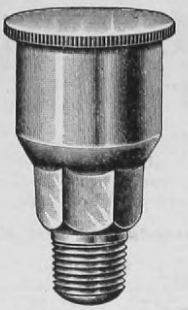
Style H with Wick.

Designed for use on Fans, Igniters, Small Motors, etc., where oil is to be fed steadily to the lower side of a shaft in motion.

Sizes, Threads and List Prices.

Style	Nos.	Stock Thread	Diam.	Clearance	Per 100
H	3	No. 10—32V	⅜ in.	$1\frac{1}{16}$ in.	$10.70
	4	$\frac{5}{16}$ in.—18V	½ in.	$1\frac{9}{16}$ in.	12.50
	5	$\frac{5}{16}$ in.—18V	⅝ in.	$1\frac{11}{16}$ in.	16.00
	6	$\frac{5}{16}$ in.—18V	¾ in.	$1\frac{13}{16}$ in.	22.00
	7	⅜ in.—16V	⅞ in.	2 in.	30.00

Note.—Polished Brass Cups furnished regularly.



Style 60 Screw Top Cups.

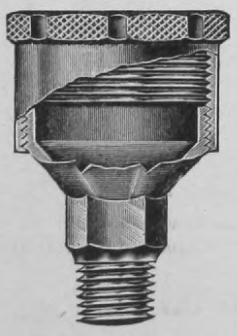
Drawn from sheet metal, practically indestructible.

Sizes, Threads and List Prices.

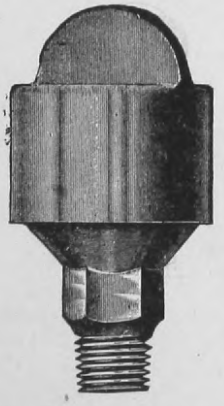
Style	Nos.	Stock Thread	Diam.	Clearance	Per 100
60	00	⅛ in. Pipe	⅝ in.	$1\frac{5}{16}$ in.	$25.00
	0	⅛ in. Pipe	¾ in.	1½ in.	30.00
	1	⅛ in. Pipe	⅞ in.	$1\frac{11}{16}$ in.	35.00
	2	¼ in. Pipe	1 in.	2 in.	40.00
	3	¼ in. Pipe	1¼ in.	2⅛ in.	60.00
	4	⅜ in. Pipe	1½ in.	$2\frac{7}{16}$ in.	90.00

Note.—Specify Brass or Steel as wanted. Brass Cups are Polished; Steel Cups are Rough Steel Finish.

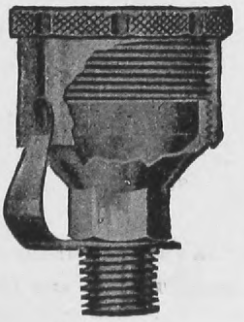
COMPRESSION GREASE CUPS



Style 200.



Style 201.



Style 224.

Styles 200 and 201 differ only in form of cap. They are made of sheet metal, strong and rigid.

Sizes, Threads and List Prices—Each.

Style	Nos.	Inside	Thread	Holds	Brass	Steel
200	000	¾ in.	⅛ in. Pipe	¼ oz.	$0.58	.40
or	00	1 in.	⅛ in. Pipe	½ oz.	.70	.50
201	0	1¼ in.	¼ in. Pipe	⅔ oz.	.90	.65
	1	1½ in.	¼ in. Pipe	1 oz.	1.15	.80
	2	2 in.	⅜ in. Pipe	2 oz.	1.50	1.05
	3	2½ in.	½ in. Pipe	3½ oz.	2.15	1.45
200	4	3 in.	½ in. Pipe	5 oz.	3.50	2.00
only	5	3½ in.	¾ in. Pipe	8 oz.	5.25	3.00

Note.—Polished Brass or Rough Steel furnished regularly. Dull Brass, Nickel Plated Brass or Blued Steel can be furnished at special prices.

Style 224 with **Lug** Cap and Outside Locking Spring.
Style 225 with **Wing** Cap and Outside Locking Spring.

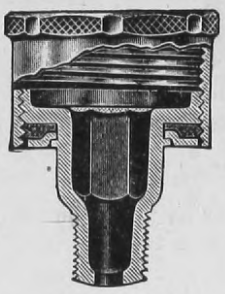
Sizes, Threads and List Prices—Each.

Style	Nos.	Inside	Thread	Holds	Brass	Steel
224	000	¾ in.	⅛ in. Pipe	¼ oz.	$0.93	.75
or	00	1 in.	⅛ in. Pipe	½ oz.	1.07	.87
225	0	1¼ in.	¼ in. Pipe	⅔ oz.	1.29	1.04
	1	1½ in.	¼ in. Pipe	1 oz.	1.57	1.22
	2	2 in.	⅜ in. Pipe	2 oz.	1.98	1.53
	3	2½ in.	½ in. Pipe	3½ oz.	2.73	2.03

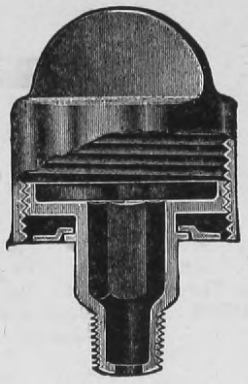
Note.—Polished Brass or Rough Steel furnished regularly. Dull Brass, Nickel Plated Brass or Blued Steel can be furnished at special prices.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COMPRESSION GREASE CUPS



Style 207



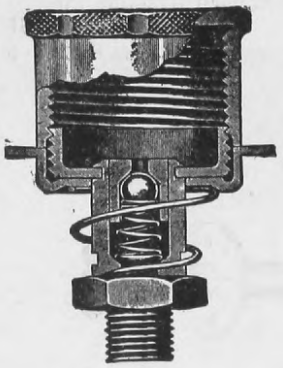
Style 208.

Styles 207 and 208 are fitted with Leather Washers and differ only in style of cap. The Leather Washer prevents leakage in warm places.

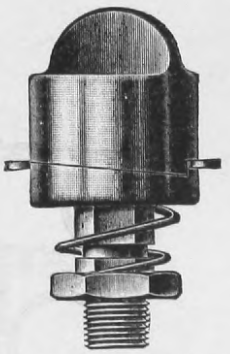
Sizes, Threads and List Prices—Each.

Style Nos.		Inside	Thread	Holds	Brass	Steel
207	000	¾ in.	⅛ in. Pipe	¼ oz.	$0.58	$0.40
or	00	1 in.	⅛ in. Pipe	½ oz.	.70	.50
208	0	1¼ in.	¼ in. Pipe	⅔ oz.	.90	.65
	1	1½ in.	¼ in. Pipe	1 oz.	1.15	.80
	2	2 in.	⅜ in. Pipe	2 oz.	1.50	1.05
	3	2½ in.	½ in. Pipe	3½ oz.	2.15	1.45
	4	3 in.	½ in. Pipe	5 oz.	3.50	2.00

Note.—Polished Brass or Rough Steel furnished regularly. Dull Brass, Nickel Plated Brass or Blued Steel can be furnished at special prices.



Style 211 Ratchet.

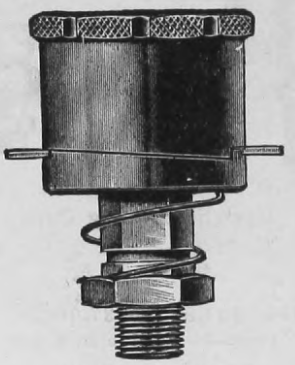


Style 212 Ratchet.

Styles Nos. 211 and 212 with Check Valve are designed for use on circulating pumps and other places where loss of water is apt to result from water backing up into a grease cup.

Style Nos.		Inside	Thread	Holds	Brass	Steel
211	000	¾ in.	⅛ in. Pipe	¼ oz.	$1.35	$1.00
or	00	1 in.	⅛ in. Pipe	½ oz.	1.55	1.10
212	0	1¼ in.	¼ in. Pipe	⅔ oz.	1.80	1.25
	1	1½ in.	¼ in. Pipe	1 oz.	2.20	1.45

Note.—Polished Brass or Rough Steel furnished regularly. Dull Brass, Nickel Plated Brass or Blued Steel can be furnished at special prices.



Style 209 Ratchet.

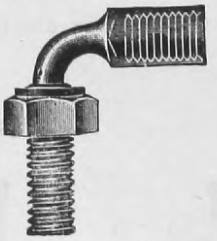
Styles 209 above and 210 (not illustrated) are alike except that 210 has **Wing** Cap. The Cap is locked at every half turn. The Spring Plate may be pushed down and locked in the groove in the shank, allowing the cap to be backed off for filling.

Sizes, Threads and List Prices—Each.

Style Nos.		Inside	Thread	Holds	Brass	Steel
209	000	¾ in.	⅛ in. Pipe	¼ oz.	$1.05	$0.70
or	00	1 in.	⅛ in. Pipe	½ oz.	1.25	.80
210	0	1¼ in.	¼ in. Pipe	⅔ oz.	1.50	.95
	1	1½ in.	¼ in. Pipe	1 oz.	1.90	1.15
	2	2 in.	⅜ in. Pipe	2 oz.	2.50	1.40
	3	2½ in.	½ in. Pipe	3½ oz.	3.40	2.00

Note.—Polished Brass or Rough Steel furnished regularly. Dull Brass, Nickel Plated Brass or Blued Steel can be furnished at special prices.

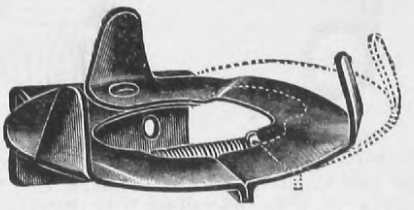
BALL SOCKET JOINTS



A Flexible Right Angle Joint for connecting carburetors and timers with levers on steering wheel.

No. 1—7/32-32 (Ford No. 3536).....Per 100, $ 8.00
No. 2—¼-28 .....Per 100, 11.00

OIL CAN HOLDERS



Pressed Steel, Japanned, Adjustable to fit cans of all sizes. Placed on dash under the hood. Holds can securely.

No. 150—Oil Can Holders.....Per Dozen, $1.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PRIMING CUPS

Nos. 1 and 2.

Nos. 5 and 6.

Upright Priming Cups

Nos.	1	2	5	6
Cup, inch	¾	¾	¾	¾
Pipe Thread	⅛	¼	⅛	¼
Polished..Per 100,	$31.80	37.00	29.20	32.00

Packed—Twelve in a Box.

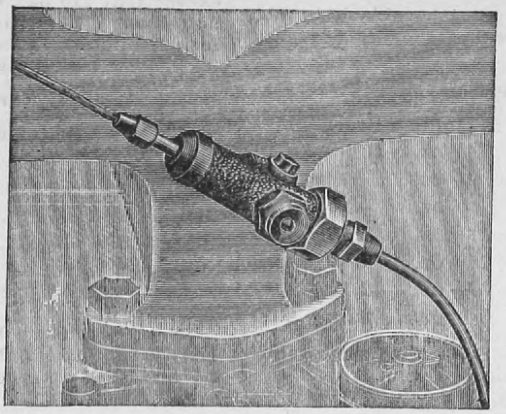
Nos. 7 and 8 short.
Nos. 3 and 4 long.

Angle Priming Cups

Nos.	3	4	7	8
Cup, inch	13/16	13/16	13/16	13/16
Pipe Thread	⅛	¼	⅛	¼
Polished..Per 100,	$34.00	43.00	35.00	42.00

Packed—Twelve in a Box.

COPLEY DASH PRIMERS



Copley Dash Primers for Easy and Quick Starting; Save Batteries. These Primers are capable of **Continuous Priming Action as Long as Held Open.** Operated by Nickel Plated Pull-Knob mounted on the dash or instrument board. Furnished complete with Pull-Knob, Cable, Pipe and Fittings ready to install. For ¼ inch Gasoline Pipe.

Copley Primers—Complete as described.. { Ford Special ..... Each, $5.00
Regular ..... Each, 5.00

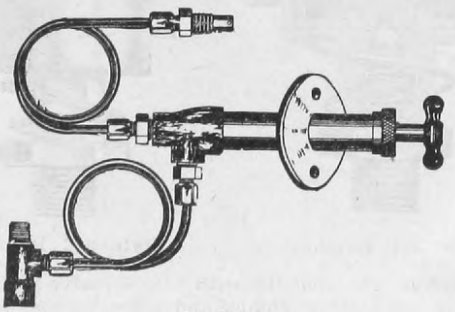
DASH PRIMERS

Model A.

Model B.

Models A and B, Special Ford Primers, can be attached to the dash of any car. Equipped with Needle Valves and Copper Tubing.

Model A—Nickel Plated..... Each, $1.75
Model B—Nickel Plated..... Each, 1.50



Model E.

Model E Dash Primers insure a positive feed with the proper amount of air for a perfect mixture injected into the manifold before starting the motor. Assuring absolutely an easy start in coldest weather. Furnished with Tubing and Connections to tap into Gas Line and Manifold, ready to install.

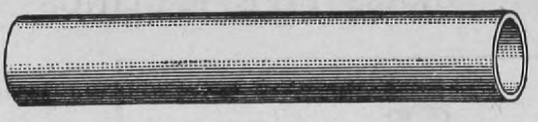
Model E—Nickel Plated..... Each, **$5.00**

Imperial—Similar to Model E, excepting that supply is drawn from Reservoir attached to Dash under Hood, allowing the use of High Test Gas for starting.

Imperial—Nickel Plated ..... Each, $6.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRASS AND COPPER TUBING

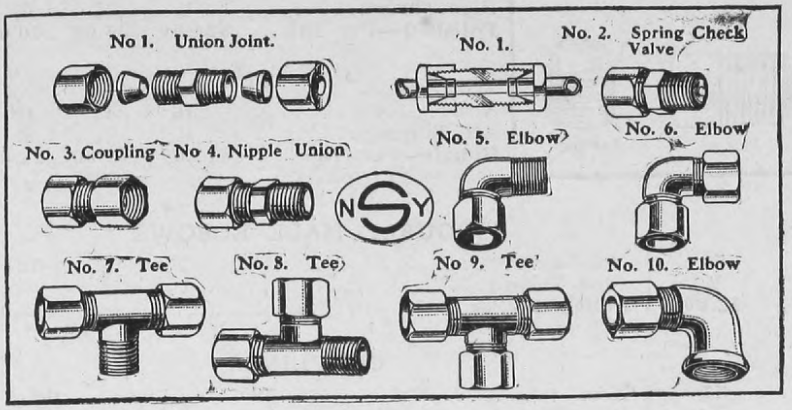


Soft Seamless Annealed Brass or Copper Tubing.

Outside Diameter, inch		¼	5/16	3/8
Brass	Per Foot,	$0.20	.25	.30
Copper	Per Foot,	.20	.25	.30

Note.—Specify Seamless Annealed Brass or Copper as wanted; also Diameter and Length, otherwise full coils (25 feet) will be sent.

SOLDERLESS COMPRESSION COUPLINGS



To Fit Brass or Copper Tubing, which is ¼, 5/16 or 3/8 inch Outside Diameter; ⅛ inch Pipe thread on ¼ and 5/16 inch; ¼ inch Pipe Thread on 3/8 inch.

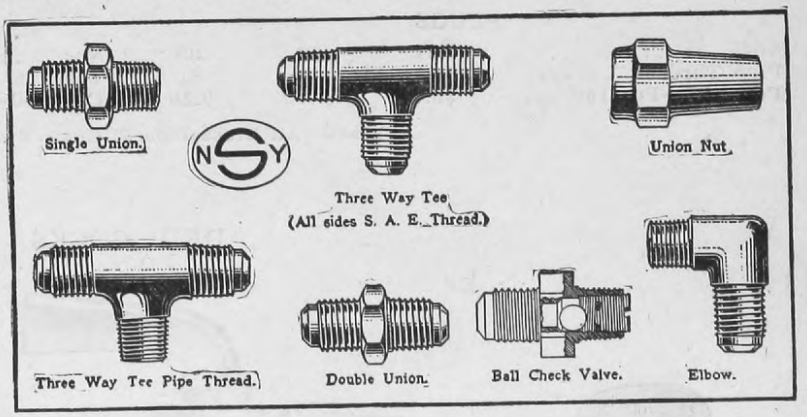
List Price Per 100.

Nos. Description	¼ in.	5/16 in.	3/8 in.
1—Union Joint ..	$16.40	20.00	28.00
2—Check Valve ..	16.50	19.00	24.00
3—Coupling	12.20	13.40	20.00
4—Nipple Union..	12.20	14.40	19.80
5—Elbow	12.80	14.80	19.00
6—Elbow	17.20	20.00	26.00
7—Tee	17.00	23.00	31.00
8—Tee	17.00	23.00	31.00
9—Tee	25.00	29.00	38.00
10—Elbow	14.50	16.50	18.00
Separate Nuts	4.00	5.00	7.00

Packed—Twenty-five in a Box.

S. A. E. FLARED TUBE FITTINGS

For use on Carburetor, Oil and Gasoline Pipe Lines. Carefully made and machined throughout.



UNION NUTS

Nos.	65	66	67
For Tube, inch.	¼	5/16	3/8
Tapped S. A. E..	7/16-20	½-20	5/8-18
Per 100	$11.00	15.00	19.00

SINGLE UNIONS

Nos.	68	69	70
For Tube, inch.....	¼	5/16	3/8
Iron Pipe Thread.....	⅛	⅛	¼
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$8.00	11.00	20.00

THREE WAY TEE, PIPE THREAD

Nos.	80	81	82
For Tube, inch.....	¼	5/16	3/8
Iron Pipe Thread.....	⅛	⅛	¼
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$13.50	15.00	27.00

ELBOWS

Nos.	77	78	79
For Tube, inch.....	¼	5/16	3/8
Iron Pipe Thread.....	⅛	⅛	¼
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$9.00	10.50	17.00

DOUBLE UNIONS

Nos.	71	72	73
For Tube, inch.....	¼	5/16	3/8
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$11.00	18.00	24.50

THREE WAY TEE, ALL S. A. E. THREAD

Nos.	83	84	85
For Tube, inch.....	¼	5/16	3/8
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$16.50	17.80	29.80

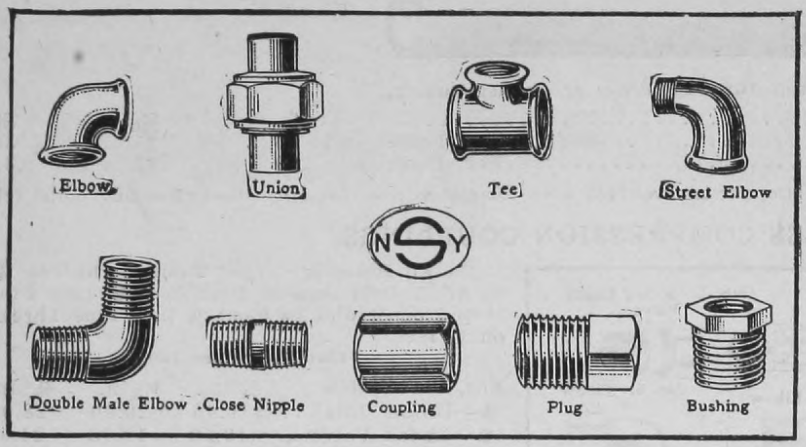
BALL CHECK VALVES

Nos.	74	75	76
For Tube, inch.....	¼	5/16	3/8
Iron Pipe Thread.....	⅛	⅛	¼
S. A. E. Thread.....	7/16-20	½-20	5/8-18
Per 100	$29.50	34.00	45.00

Packed—All Flared Tube Fittings Twenty-five in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRASS PIPE FITTINGS



Standard Iron Pipe Thread Made to Proper Specifications. For Gasoline or Steam.

ELBOWS

Nos.	40	41	42
Pipe Thread	⅛	¼	⅜
Rough—Per 100	$9.00	15.00	16.00

UNIONS

Nos.	43	44	45
Pipe Thread	⅛	¼	⅜
Polished—Per 100	$24.00	34.00	60.00

TEES

Nos.	46	47	48
All Threads	⅛	¼	⅜
Rough—Per 100	$12.00	18.00	24.00

STREET ELBOWS

Nos.	49	50
Pipe Thread	⅛	¼
Rough—Per 100	$8.50	12.00

DOUBLE MALE ELBOWS

No.	52
Pipe Thread	⅛
Polished—Per 100	$12.00

CLOSE NIPPLES

Nos.	55	56	57
Pipe Thread	⅛	¼	⅜
Polished—Per 100	$7.80	15.00	20.00

COUPLINGS

Nos.	58	59	60
Pipe Thread	⅛	¼	⅜
Polished—Per 100	$16.00	25.00	48.00

PLUGS

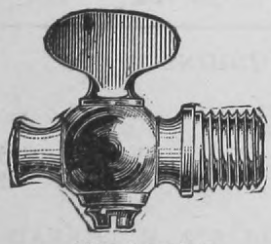
Nos.	61	62	63
Pipe Thread	⅛	¼	⅜
Polished—Per 100	$5.00	7.00	9.20

BUSHINGS

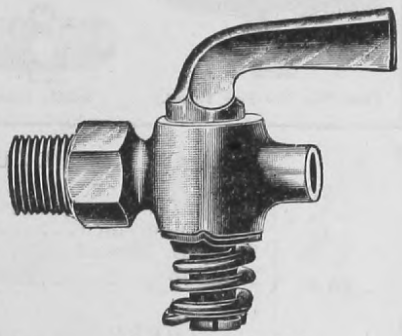
Nos.	64	65	66
Threads	⅛ x ¼	¼ x ⅜	⅛ x ⅜
Polished—Per 100	$6.00	10.50	12.00

Packed—All Brass Pipe Fittings, Twelve in a Box.

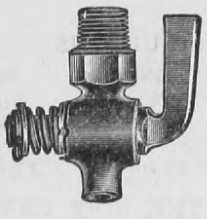
DRIP COCKS



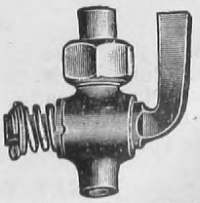
Nos. 1 and 2.



Nos. 630 and 640.



Nos. 72 and 73.



Nos. 172 and 173.

Nos. 1 and 2 Carburetor Drain Cocks

Nos.	1	2
Pipe Thread	⅛	¼
Polished—Per 100	$17.50	25.00

Nos. 72 and 73 Drip Cocks

Nos.	72	73
Pipe Thread	⅛	¼
Rough—Per 100	$20.00	24.00

Nos. 630 and 640 Drip Cocks

Nos.	630	640
Pipe Thread	⅛	¼
Polished—Per 100	$23.00	25.00

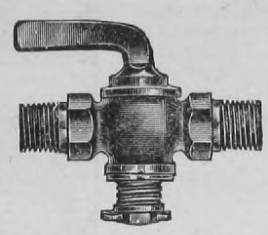
Nos. 172 and 173 Tubing Unions

Nos.	172	173
For Tubing, in	⅛	¼
Rough—Per 100	$40.00	40.00

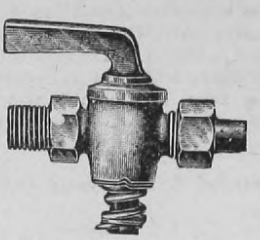
Packed—All Drip Cocks and Unions, Twelve in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

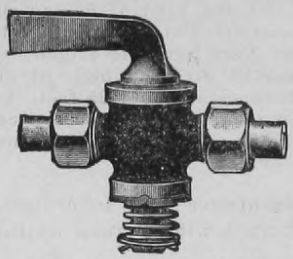
SHUT-OFF COCKS



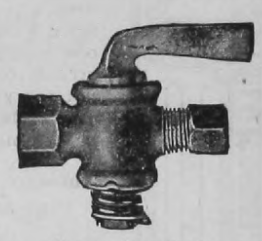
Nos. 8, 9, 12 and 13.



Nos. 10, 11, 14 and 17.



Nos. 110, 111 and 22.



Nos. 15 and 16.

Nos. 8 to 13 Shut-off Cocks

Nos.	Threads	Polished Per 100
8—⅛	in. P. T. and ½ in. S. A. E. Union Thread.	$48.00
9—¼	in. P. T. and ⅝ in. S. A. E. Union Thread.	53.00
12—⅛	in. Pipe Thread on both ends	50.00
13—¼	in. Pipe Thread on both ends	54.00

Nos. 10 to 17 Shut-off Cocks

Nos.	**10**	**11**	**14**	**17**
Pipe Thread	⅛	¼	⅛	¼
Tubing Unions	¼	5/16	5/16	⅜
Polished—Per 100	$58.00	62.00	66.00	70.00

Nos. 110 to 22 Shut-off Cocks

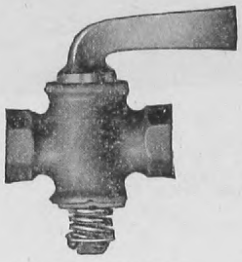
Nos.	**110**	**111**	**22**
Tubing Union	¼	5/16	⅜
Polished—Per 100	$68.00	68.00	80.00

Nos. 15 and 16 Shut-off Cocks

No. 15—⅛ in. P. T. Female, ¼ in. Compression Coupling ..... Per 100, $62.00

No. 16—⅛ in. P. T. Female, 5/16 in. Compression Coupling ..... Per 100, 62.00

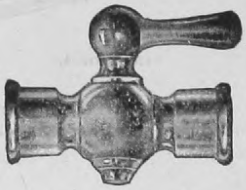
SHUT-OFF COCKS



Nos. 20 and 21.

Nos.	**20**	**21**
Pipe Thread, Female	⅛	¼
Polished—Per 100	$57.00	60.00

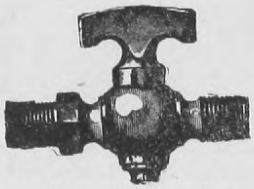
AIR COCKS



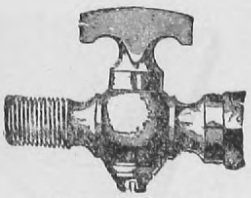
Nos. 37 and 38.

Nos.	**37**	**38**
Pipe Thread, Female	⅛	¼
Polished—Per 100	$55.00	58.00

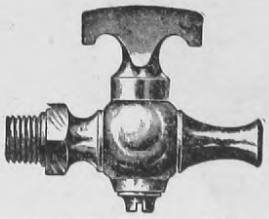
AIR COCKS



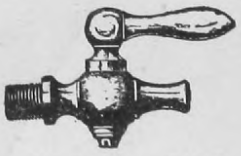
Nos. 18T and 19T.



Nos. 49 and 50.



Nos. 63T and 64T.



Nos. 63L and 64L.

Tee and Lever Handle Air Cocks

Nos.	**18-T**	**19-T**	**24-L**
Handle	Tee	Tee	Lever
Pipe Thread	⅛	¼	¼
Polished—Per 100	$37.00	44.00	58.00

Tee Handle Air Cocks

Nos.	**63T**	**64T**
Pipe Thread	⅛	¼
Polished—Per 100	$30.00	37.00

Tee Handle Air Cocks

Nos.	**49**	**50**
Pipe Thread	⅛	¼
Polished—Per 100	$50.00	58.00

Lever Handle Air Cocks

Nos.	**63L**	**64L**
Pipe Thread	⅛	¼
Polished—Per 100	$40.00	50.00

Packed—All Shut-off and Air Cocks, Twelve in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

Pyrene.

PYRENE FIRE EXTINGUISHERS

Pyrene, approved by the National Board of Fire Underwriters, is an Extinguisher that will put out any kind of fire as curtain fires, stove fires, automobile fires, chimney fires, etc. Size of the Extinguisher is 3 inches in diameter and 14 inches in length, weight filled 6 pounds. Very handy to attach to any motor-car. Used as a double acting pump of one quart capacity, strongly built of brass and white metal. Will throw a continuous stream to a distance of about 25 feet. Pyrene liquid, which is non-deteriorating and does not freeze at a temperature of 50 degrees below zero, is a combination of purely organic materials, contains neither acid, alkali nor salts and will not stain anything with which it may come in contact.

Automobile Insurance—All Insurance Companies reduce your fire premium 15% if car is equipped with Pyrene Extinguisher.

Pyrene Brass Fire Extinguisher including Bracket, filled for immediate use ..... Each, $15.00

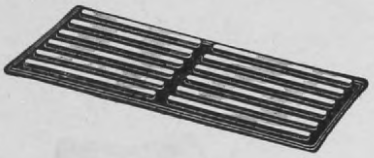
Pyrene Nickel Plated Fire Extinguisher including Bracket, filled for immediate use ..... Each, 16.50

Pyrene Liquid—In Quart Cans ..... Per Quart, ...

Pyrene Liquid—In Gallon Cans ..... Per Gallon, ...

Pyrene.

ACCELERATOR PLATES

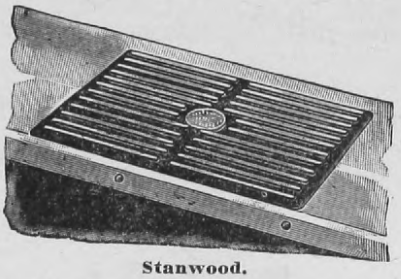


Stanwood.

Perforated Metal Plate entirely covered with rubber and provided with a series of longitudinal ribs firmly moulded to the metal plate.

No. 80—4x11½ inches ..... Each, $0.80

SAFETY STEP PLATES



Stanwood.

Perforated Metal Plate entirely covered with rubber, which is moulded with 24 longitudinal ribs securely to the plate. These Step Plates are serviceable and durable. Screws and bolts furnished with them.

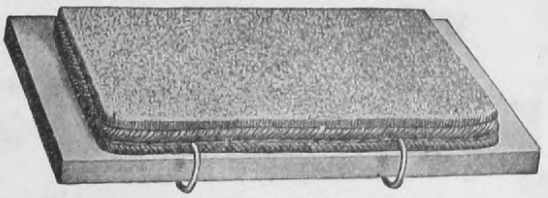
No. C—8x11½ inches ..... Each, $1.50

FOLDING PAILS

Best Grade Heavy Waterproof Army Duck with galvanized hoop in top and rustless valve in bottom. A pull on the string lets the water into the radiator.

No. 12—5 qt. Folding Pails ..... Per Dozen, $12.00

COCOA RUNNING BOARD MATS



Holdfast.

Size, 8½x15 inches.

"Holdfast" Running Board Mats are made of selected yarn, practically indestructible, and are not injured by moisture, heat or cold. Steel clips, furnished with each mat, hold them securely in place and yet allow their removal.

No. C—Holdfast Running Board Mats ..... Each, $1.45

Packed—Two Dozen in Bale. Half Dozen in a Package.

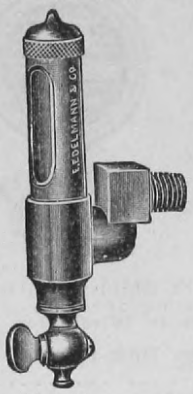
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GAUGES AND METERS

GASOLINE GAUGES

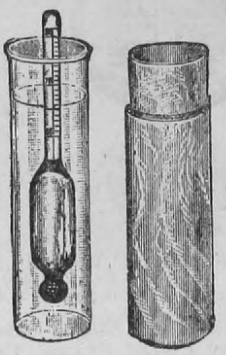
Eugene.

OIL GAUGES



No. 44.

GASOLINE HYDROMETERS



No. 5.

Eugene Ball-Bearing Gasoline Gauges

The Ball-Bearing Metallic Float eliminates all friction and registers accurately the amount of gasoline in the tank.

For Car	Ford	Chevrolet (490)	Maxwell (1916)	Reo (¾ Ton Truck)
Each	$1.00	1.25	2.00	1.50

Crank Case Oil Gauges for Ford Cars

Heavy Cast Brass Base, Tee Handle Drain Cock, Protected Glass.

No. 44—Oil Gauge, including cock ..... Each, $0.60

Gasoline Hydrometers

Tests the quality of gasoline at a glance.

No. 5—Complete with Test Tube and Wooden Case ..... Each, $0.30

BATTERY SYRINGE HYDROMETERS

Acid-Proof Rubber Tip, High Grade Red Rubber Bulb of large capacity. Large, Clear Scale is easily read. The red lines mark the charging points and battery condition on the scale.

Break-Not—9x1¾ inches ..... Each, $1.00

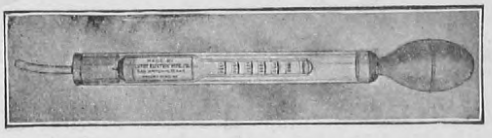
Packed—One in a Mailing Tube.

No. 8 Break-Not.

No. 8—In handsome Leatherette Case, otherwise the same as above ..... Each, $1.25

Extra Break-Not Parts.

Part	Bulb	Jar	Tip	Hydrometer
Each	$0.25	.20	.25	.25



Luthy.

A Non-Breakable Pure Celluloid Hydrometer. It is impervious to acid, durable, accurate and quickly read.
S. G. 1275 indicates a fully charged battery.
S. G. 1150 indicates a fully discharged one.

Luthy Hydrometers ..... Each, $1.25

No. 2 Test-O-Meters designed for Service Stations, have a Heavy Ribbed Red Rubber Bulb. Capacity 8 ounces.

No. 2—In wooden box, 14x3x4 inches ..... Each, $2.00

FREEZOMETERS

Determines the quantity of alcohol to keep the mixture from freezing.

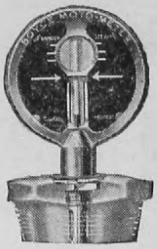
No. 1—Freezometer with directions for use .. Each, $0.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOTO-METERS

Standard.

Junior.



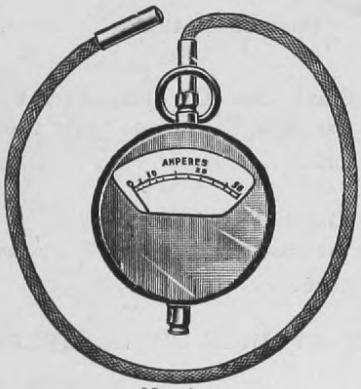
Midget.

Boyce Moto-Meter is the only instrument in the world which indicates that the unseen parts lack lubrication—if the cooling water is low—or if there is heat congestion anywhere throughout the mechanism of the car. Any of the three models can be attached to any radiator cap in 10 minutes.

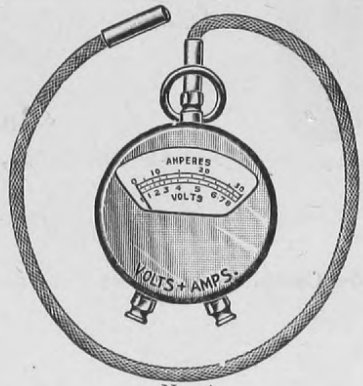
Standard—Black and Nickel Case, Beveled Glass, Dust Proof ..... Each, $10.00
Junior—Nickel Plated Frame, Protected Tube ..... Each, 5.00
Midget—Nickel Plated Frame, Strong and Accurate ..... Each, 2.50

POCKET AMMETERS

Buhl.



No. 1.



No. 4.

Buhl Pocket Ammeters—For Battery Testing. Accurate, reliable and dead-beat. Will register regardless of polarity. Nickel plated case with beveled glass front, 2 inches in diameter by ½ inch thick. The correct reading is shown almost the instant contact is made. Flexible conducting cord with tips furnished with each instrument.

Buhl Pocket Battery Ammeters, Scale 0 to 35 amperes ..... Each, $.....

Packed—Each in a Separate Box.

Read-Rite Pocket Ammeters—For Testing Batteries. An ammeter with light moving element and no springs. Extremely dead-beat. Indicates the direction of current. Simple, durable and accurate. Magnet of Tungsten steel, to insure proper retention of magnetism. Nickel Plated case 2 inches in diameter by 11/16 inch thick.

No. 1—Ammeter, Scale 0 to 30 Amperes... Each, $1.00
No. 4—Volt-Ammeter, 0-8 Volts, 0-30 Amperes ..... Each, 1.50

Packed—Each in a Separate Box.

POCKET VOLTAMMETERS

No. 021.

Hoyt Ultimate Voltammeters are magnetically dampened and are sensitive to small current changes which are instantly and accurately indicated. They are supplied with white cardboard dials.

No. 021—1¼ inch face ..... Each, $1.50

CURRENT INDICATORS

No. 1754.

Hoyt Type 175—Soft Iron Type Current Indicators are offered as the best to be obtained. They are furnished for either **flush** or **panel** mounting. The letter F placed after the number will indicate the flush type and the letter R the panel type.

No. 1754—15-0-15 Amperes ..... Each, $3.00
No. 1756—20-0-20 Amperes ..... Each, 3.00
No. 1758—30-0-30 Amperes ..... Each, 3.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPEEDOMETERS

Stewart

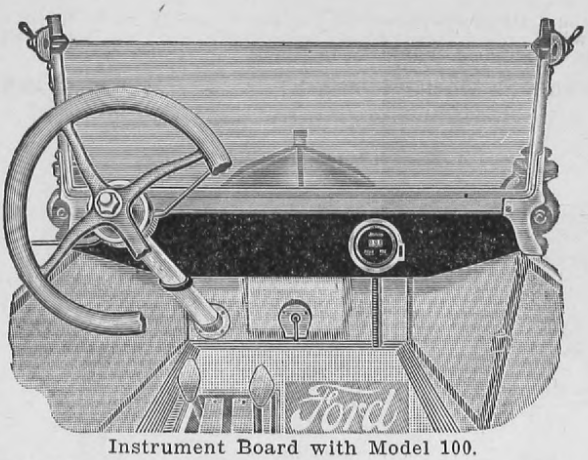
MAGNETIC TYPE

Models 100, 100A and 100C. Made with Rotating Speed Dial, 60 mile capacity; Stewart Odometer, consisting of 10,000 mile Season Register, and 100 mile Trip Register. Jeweled bearings, polished steel magnet, three inch etched dial face. Jet and Brass Finish.

Model 100.

Models 100A and 100C.

Model 100 —For Ford cars, complete with driving equipment ..... Each, $5.00
Model 100A—For any make of car, complete with driving equipment ..... Each, 5.00
Model 100C—For mounting flush on any make of car, complete ..... Each, 5.00



Instrument Board with Model 100.

This Instrument Board for Ford cars allows the convenient placing of the Speedometer where it is easily read. Easily installed by anyone without tools. Made of wood with black finish. Large enough to carry clock, starter control, oil gauge, etc.

Instrument Board—With Model 100 ..... Each, $11.25

Model 101.

Motorcycle Speedometer

Rigid Tube, Front Wheel Drive. The lower bearing bracket is attached only to the front wheel axle on which it works free. Made with Rotating Speed Dial, 2½ inch Dial Face, 75 mile capacity; Stewart Odometer, 10,000 mile Season and 100 mile Trip Registers.

Model 101—With front drive equipment ... Each, $10.00

Model 112A.

Model 112A has Rotating Speed Dial, 60 mile capacity; Stewart Odometer, consisting of 100,000 mile Season and 100 mile Trip Registers. It is furnished in a flush-type flange and with sixty degree integral sleeve.

Model 112A—As described ..... Each, $25.00

Model 67A Warner Auto-Meter.

Model 67A Magnetic Type Auto-Meter has 60 mile Rotating Speed Dial, 100,000 mile Season Odometer, 100 mile Trip Odometer, which can be easily reset. Mounted in a flange for flush-type mounting.

Model 67A—As described ... Each, $50.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPEEDOMETERS

SEARS-CROSS

Model F15.

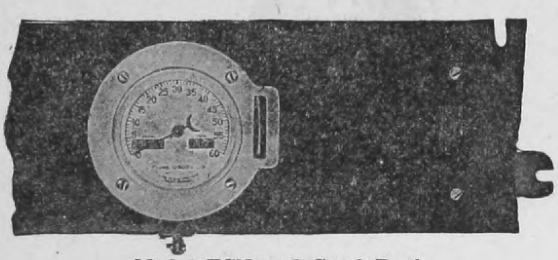
Model F15 Speedometer for Ford cars. Furnished with new style post which clamps around the new steering arm. Finished regularly in Black and Brass.

Model F15—Ready to attach.....Each, $8.00

Model FF16.

Model FF16 Speedometer for Ford cars is made to fit on the wind shield flush with the cowl dash where it is easily read. Furnished regularly in Black and Brass.

Model FF16—Ready to attach.....Each, $10.00

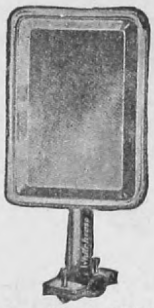


Model FCN and Cowl Dash.

For Ford cars. Speedometer setting flush. Nickel Plated Meter on Black Dash.

Model FCN and Cowl Dash—As shown.....Each, $12.00

MIRRORS



Nos. 99 and 100.

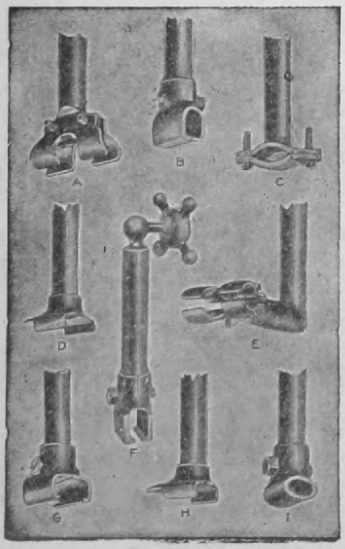
Nos. 98 and 101.

Nos. 102 and 202.

Beveled Plate Glass, Full Black Rubber Finish.

No. 99—4x6 inches	Each,	$2.00
No. 100—5x7 inches	Each,	2.50
No. 98—4x6 inches	Each,	2.00
No. 101—5x7 inches	Each,	2.50
No. 102—5 inches, Beveled Glass	Each,	2.50
No. 202—5 inches, Convex Glass	Each,	2.00

MIRROR CLAMPS



Cars	Use Clamp
Ford	A
Overland	E
Buick	I
Reo	B
Dodge	A, I
Maxwell	D
Chevrolet	A, C, I
Studebaker	D
Chalmers	A, C, I

Note.—Mirrors furnished with either clamp as specified on order.

No. 103.

No. 105.

No. 106.

Convex Glass, Full Black Rubber Finish.

No. 103—4 inches, Glass	Each,	$1.00
No. 105—5 inches, with Ball Joint	Each,	2.00
No. 106—5 inches, for all cars	Each,	1.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KLAXON

"THE PUBLIC SAFETY AUTO SIGNAL"

You push it from **BEHIND** *— the handy easy way to work a hand signal*

The famous KLAXON NOTE that has made Klaxons the most widely used signals in the world is found only in genuine Klaxons. Look for the Klaxon name-plate.

It CARRIES—more than half a mile ahead in the country; the right of way is always waiting for you when you get there. No annoying slow-downs, gear shifts and gas waste—while you wait for the car ahead to turn out.

It GETS HEARD. In noisy streets and congested traffic, the sharp, impelling Klaxon note never fails to get attention and action.

It means SAFETY—safety for you, safety for the car or pedestrian ahead. It's a FAIR warning—along straight roads or around dangerous turns. The man ahead is entitled to know—ahead of time—that you are coming.

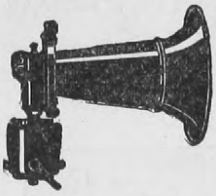
Klaxon Finishes

The smart finish is "KLAXON BLACK" black enamel throughout. It is not only the fashionable finish but the most practical as well—requires no polishing or attention. Unless otherwise specified Klaxons are supplied in this finish. To meet special requirements Klaxons can be had in black enamel and nickel and black enamel and brass.

Electric Klaxons

The Electric Klaxons (Klaxon-20, Klaxon-12, Klaxon-6) are supplied complete, ready for installation—with ten feet of double insulated wire and push button matching finish of instrument. Electric Klaxons are regularly wound for 6 volts. For special voltages up to 21 volts no extra charge is made.

ELECTRIC KLAXONS



No. 20-L—Klaxon.

The finest Automobile Warning Signal made. Penetrating tone, remarkable construction. Needs practically no attention whatever.

Each $25.00

No. 12-L—Klaxon.

As efficient as the Klaxon 20. Constructed for underhood installation.

Each $14.00

No. 12-S—Klaxon.

Same mechanical construction throughout as the Klaxon 12-L. The short projector makes practically no difference in tone.

Each $14.00

No. 6—Klaxon.

Slightly smaller in size than the Klaxon 12. Its construction is the crowning result of years of experience in building quality signals.

Each $7.00

No. 20-S—Klaxon.

Same mechanical construction throughout as the Klaxon 20-L. The short projector makes practically no difference in tone.

Each $25.00

No. 20-Deck—Klaxon.

Klaxon 20-L with swivel bracket. Constructed for installation on automobile running boards or for yachts and motorboats.

Each $27.50

No. 6-Deck—Klaxon.

Klaxon 6 with swivel bracket. Constructed for installation on automobile running boards or for yachts and motorboats.

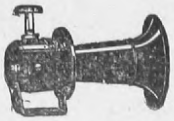
Each $8.50

HAND OPERATED KLAXONS

No. 3—Klaxon.

A hand-operated safety signal of the same quality and efficiency as the electrically-operated instruments. Horizontal push rod.

Each $4.00



No. 3-V—Klaxon.

Vertical push rod. In every other respect the same as Klaxon 3.

Each $4.00

MOTORCYCLE KLAXONS

No. 3-M. C.—Klaxon.

Same as Klaxon 3 but constructed with short projector for motorcycle use. **Furnished** with handlebar, frame or tank brackets.

Each $3.75

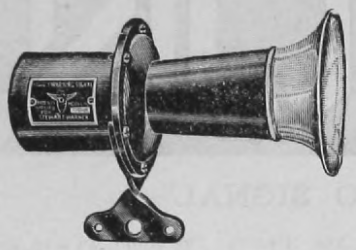
No. 3-V. M. C.—Klaxon.

Same as Klaxon 3-V, but constructed with short projector for motorcycle use. **Furnished** with handlebar, frame or tank brackets.

Each $3.75

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

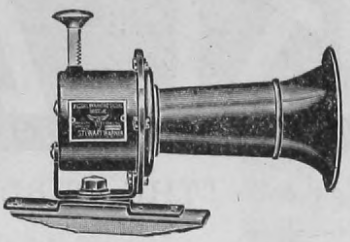
STEWART AUTO HORNS



Motor Driven.

A Warning Signal which contains a real motor; runs at highest speed with the smallest amperage; has superior bearings and ample lubricating so it will not stick. Operated by a Push Button of good size. Furnished complete with Button and wire.

Motor Driven—Black Enameled.....Each, $6.00

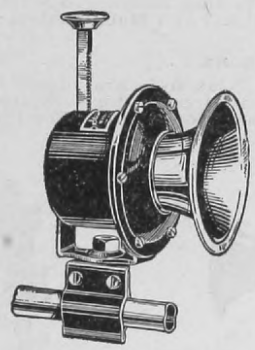


No. 114A. Hand Operated.

No. 114A Warning Signal is made with all parts riveted or bolted, thus insuring a long life of usefulness. The Gears are wide faced cut from solid metal and are case hardened. Each gear is supported on a shaft, both ends of which run in hardened steel bushings.

No. 114A—Black Enameled.....Each, $3.50

MOTORCYCLE MODEL



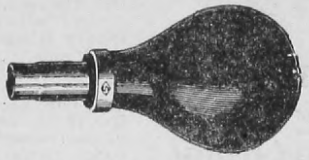
No. 115A.

Equipped with a double supporting bracket, so adjusted that the horn always points straight ahead directly in front of the car.

No. 115A—Black Enameled.....Each, $3.50

Packed—Each Horn in a Wooden Box.

HORN BULBS



Soft and Pliable yet Responding Quickly.

No. 14—4x6 ⅛ inches long.....Each, $0.72

Packed—One in a Box.

HORN REEDS

Taper—Reeds fit any size ferrule.....Per Dozen, $2.00

Ford—Double Threaded.....Per Dozen, $3.00

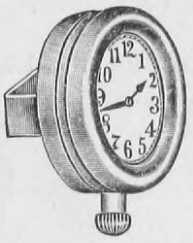
Packed—One Dozen in a Box.

ELECTRIC CLOCKS

The Hartford Self-Winding Clock tells **right time all the time.** The current from the storage battery creates a tension on the mainspring which winds the clock every minute. It has a 7 jewel movement which is insulated. It is immune to heat, cold and dust. It sets flush with the dash. Black Frame and Dial.

Hartford—Electric Clocks.....Each, $15.00

STEM WIND ONE DAY CLOCKS



Model F and D.

Designed for the Steering Wheel of Ford and Dodge Cars.

Model F and D—Stem Wind Clocks.....Each, $3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KEYLESS AUTO CLOCKS

No. 9.

Rim Wind—Rim Set.
Eight Day.
Black and Nickel Trimmings.

No. 9 —2¾ inch Dial.....Each, $12.00
No. 12B—2¼ inch Dial.....Each, 11.00

Packed—One in a Box.

No. 12B.

No. 12.

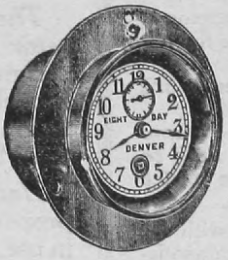
Rim Wind—Rim Set.
Eight Day.
Black and Nickel Trimmings.

No. 12—2¼ inch Dial. An Ideal Clock for the Cowl Board .....Each, $9.50
No. M. Jr.—2¼ inch Dial. The Best Clock for small cars .....Each, 9.50

Packed—One in a Box.

No. M. Jr.

KEY WIND AUTO CLOCKS



Denver Cowl.

Denver Cowl—Black and Nickel Trimmings, 2⅜ inch Dial, 8 Day .....Each, $6.50

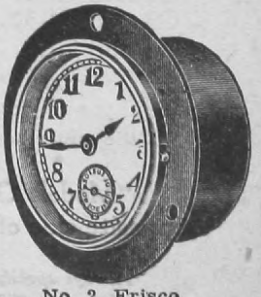
Packed—One in a Box.

No. 1. Frisco.

Rear Wind.
One Day.
Black and Nickel Trimmings.

No. 1 Frisco—2½ inch Dial.....Each, $2.50
No. 2 Frisco—2½ inch Dial.....Each, 3.25

Packed—One in a Box.



No. 2. Frisco.

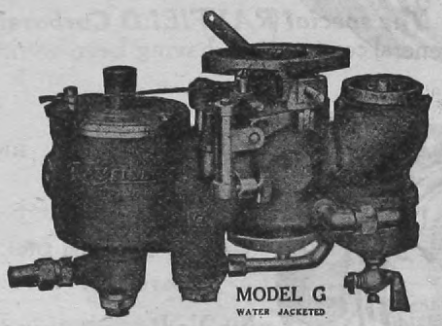
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RAYFIELD CARBURETORS

REPRESENT THE HIGHEST STANDARD OF CARBURETOR CONSTRUCTION

The RAYFIELD carburetor is guaranteed to increase the general efficiency of any motor, and at the same time save from 20% to 50% in fuel.

Construction and Operation:—The basic principle and general construction which has made the ***RAYFIELD*** known as "The World's Best Carburetor" is continued in accordance with the original design. From time to time refinements have been incorporated to accommodate the many improvements in modern motor construction and the constant deterioration in fuel.


MODEL G
WATER JACKETED

The "Model G" is a double jet water-jacketed carburetor. It has only two adjustments, which are simple and accessable; one for low speed and the other for high, both controlling the supply of gasoline.

The RAYFIELD has a dash pot construction which injects additional gasoline (only when it is needed) when the motor is accelerated. This makes it possible to use an extremely economical running mixture and still have the very fast get-away and maximum power for which the ***RAYFIELD*** is noted.

A Dash or Steering Post Control is furnished with all ***RAYFIELD*** carburetors. This control raises the nozzle needle, supplying a richer mixture for starting and for cold weather and cold motor conditions. When pulled up the entire distance it also engages the ***RAYFIELD*** Primer, built integral with the carburetor, making possible utmost ease in starting even in the coldest weather.

RAYFIELD GUARANTEE

Regardless of make of car or type of carburetor in use, the ***RAYFIELD*** is guaranteed to give the following results:

Easier starting;
Quicker pick-up;
More speed;
A lower throttled motor;
Greater power on hills;
A smoother, more flexible motor;
and at the same time, from 20% to 50% more miles per gallon.

All ***RAYFIELD*** Carburetors are sold with the understanding that if they do not give absolute satisfaction they may be returned prepaid at any time within thirty days and full purchase price will be refunded.

The RAYFIELD "Model G" is easily installed on any motor.

The "Model L" RAYFIELD carburetor is non-water-jacketed, otherwise the design and construction is the same as the Model G. It should be used only on thermo-syphon and air-cooled motors where the Model G gives no added advantage.

Heat to the carburetor is necessary to properly vaporize the low grade fuel now in use.

Both hot air and hot water should always be used. See ***RAYFIELD*** hot air outfit described on another page.

Model G (Water Jacketed)

Model	Size	Each
G2 and GL2	1"	$27.50
G3 and GL3	1¼"	32.50
G4 and GL4	1½"	37.50
G5	1¾"	45.00
G6	2"	50.00

If the motor has pump circulation the "Model G" ***must be used.***

Model L (Non-Water-Jacketed)

Model	Size	Each
L2 and LL2	1"	$25.00
L3 and LL3	1¼"	27.50

The above prices include standard type of ***dash or steering post control.***

The "Model L" carburetor is suitable only for use on thermo-syphon and air-cooled motors and is guaranteed on no other.

"Models G and L" are also furnished in sizes as listed above with the adjustments on the opposite side of carburetor. These models are left-hand and are known as GL and LL.

Always specify the make, model and year of car or motor when ordering. We will ship the necessary fittings for installation. Hot air outfits and other fittings are not included in the price of carburetor, and will be charged extra.

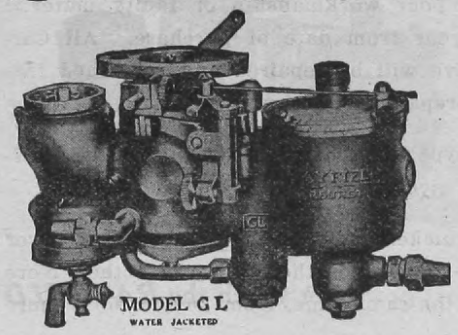
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THERE'S A RAYFIELD CARBURETOR FOR EVERY CAR

A RAYFIELD Carburetor, whether standard or special, installed on any car, will greatly increase its efficiency. It is guaranteed to make the car start easier, accelerate faster, throttle lower, develop more power and speed, and save from 20% to 50% in fuel.

BUICK SPECIAL RAYFIELD CARBURETORS

The special RAYFIELD Carburetor for Buick cars is the standard "Model G" ***RAYFIELD*** in general construction, having been worked out by competent engineers to be particularly applicable to ***Buick*** motors.



The ***Carburetor*** is arranged to be heated by exhaust gas, using the standard ***Buick*** connections.

The following prices include the ***Carburetor*** complete with all necessary fittings for quick installation:

"Buick Special" Model GL3 Carburetor	Each
Buick E 45-49 1918	$36.75
Buick D 44-45 1916 and 1917	36.75
Buick D 54-55 1916 and 1917	36.75
Buick C 54-55 1915	36.75
Buick B 54-55 1914	36.75

DODGE SPECIAL RAYFIELD CARBURETORS

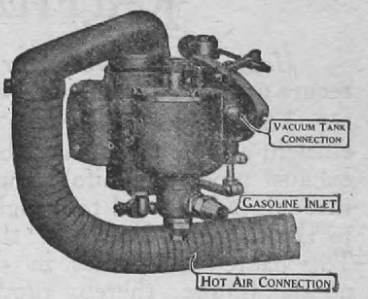
The special RAYFIELD Carburetor for the Dodge car is the standard "Model M" ***RAYFIELD,*** particularly suitable to the ***Dodge*** motor, insuring the greatest possible efficiency and economy.

A special ***RAYFIELD Carburetor*** on a ***Dodge*** car is guaranteed to make it start easier, accelerate faster, throttle lower, develop more power and speed, and save from 20% to 50% in fuel.

Hot air is used to heat the ***Carburetor.*** A hot air connection is provided to fit the motor without changes.

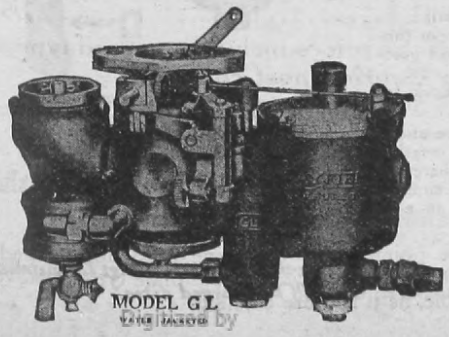
Price, complete with all necessary fittings.

"Dodge Special" Model MR3 Carburetor	Each
Dodge 1915, 1916, 1917, 1918	$28.10



REO SPECIAL RAYFIELD CARBURETORS

The RAYFIELD Carburetor on a Reo car produces greater all-around efficiency with less fuel than any other ***Carburetor.*** This ***Reo*** special is sold on the regular ***RAYFIELD*** guarantee. If it does not give the purchaser absolute satisfaction it is to be returned and money will be refunded.



The ***Reo*** special ***RAYFIELD Carburetor*** is the standard "Model G" in general construction, specially fitted to ***Reo*** motors.

It can be installed complete by anyone in less than three hours.

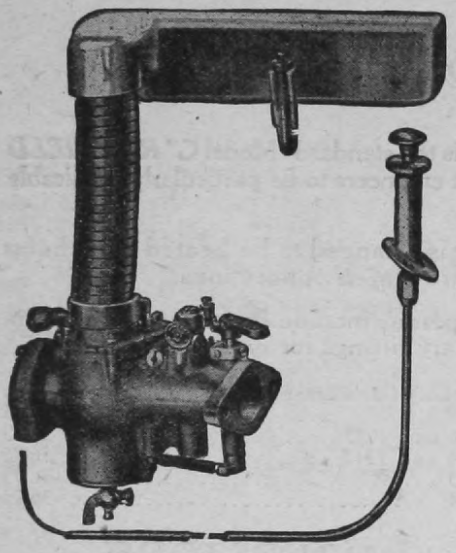
Prices, complete with all necessary fittings.

"Reo Special" Model GL3 Carburetor	Each
Reo "6" 1915, 1916 and 1917	$34.70
Reo "4" 1915, 1916 and 1917	28.65

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FORD SPECIAL RAYFIELD CARBURETOR

The RAYFIELD Carburetor for Ford cars is a complete Outfit as shown in the illustration, consisting of a special RAYFIELD Carburetor adapted to the Ford Motor, a special hot-air attachment and dash adjustment.



Special RAYFIELD Carburetor for Ford.

The Carburetor is packed complete in a box, ready for installation, which can be done quickly by any ordinary mechanic, as the Carburetor is **interchangeable** with that which comes standard with every Ford.

All RAYFIELD Carburetors are guaranteed against ordinary defects, such as poor workmanship or faulty material for a period of one year from date of purchase. All Carburetors found defective will be repaired and refinished free of charge on receipt prepaid at Factory.

Regardless of the type of Carburetor now in use, the RAYFIELD on a Ford will give the following results:

Easier starting; quicker pick-up; more speed; a lower throttled motor; greater power on the hills; a smoother, more flexible motor; and at the same time, from 20% to 50% more miles per gallon.

"Ford Special" Rayfield Carburetor, with fittings, Each, $20.00

RAYFIELD HOT AIR OUTFIT

Heat to the carburetor is necessary in order to properly vaporize low-grade fuel and to secure utmost efficiency and economy from your motor.

The RAYFIELD Hot Air Outfit is used to convey heat to the carburetor, it is most efficient and its merits have been thoroughly proven. A stove or housing is clamped around the exhaust pipe or manifold and is so constructed that the air passing through it is heated to a high temperature. The heat is conducted to the fixed air intake of the carburetor through flexible tubing. This heated air comes in direct contact with the gasoline at the nozzle intake, thereby producing perfect vaporization.

Installation is made by locating the stove just back of the last cylinder, when possible, in order that the highest degree of heat be secured from all cylinders. One end of the flexible tubing is fitted into the stove and the other end into the elbow attached to the fixed air opening of the carburetor.

LIST OF *RAYFIELD* HOT AIR STOVES

Baffle Plate Type:

Type	Length	Can be Bored	Size Tubing	Price
B3	6"	1½" to 2½"	1 1/16"	$1.65
B13	6"	2½" to 3½"	1 1/16"	2.30
B1	4"	1¼" to 2"	1 1/16"	1.15
B6	4"	2" to 3 3/16"	1 1/16"	1.85
B8	4"	2¼" to 2¾"	1 1/16"	1.75
B16	4"	1¾" to 2¼"	1 1/16"	1.30

Narrow Type:

Type	Length	Can be Bored	Size Tubing	Price
A1	1½"	1¼" to 1½"	1 1/16"	$1.00
A2	1½"	1¾" to 2½"	1 1/16"	1.00
A5	1½"	2 3/8" to 3 3/8"	1 1/16"	1.10

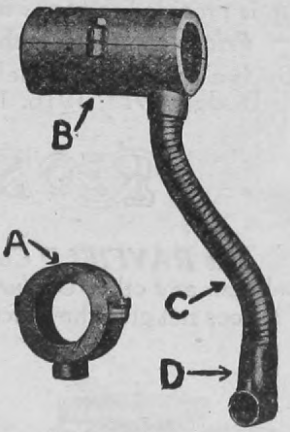
Hot Air Flexible Tubing:

No. 229-18 1 1/16" O. D. ... $0.30
No. 229-19 1 7/16" O. D. ... .40
No. 229-20 1 9/16" O. D. ... .50

Water Connections:

No. 229-15 5/16" copper tubing (for water and gasoline lines), per foot ... $0.30
No. 168 Shut-off Cock, for 5/16" tubing ... .70

Specify the type and bore of hot air stove, and length of tubing required. Where they are needed, we will supply them with carburetor, at **additional charge.**



A—Stove Narrow Type
B—Stove Baffle Plate Type
C—Flexible Tubing
D—Tubing Elbow

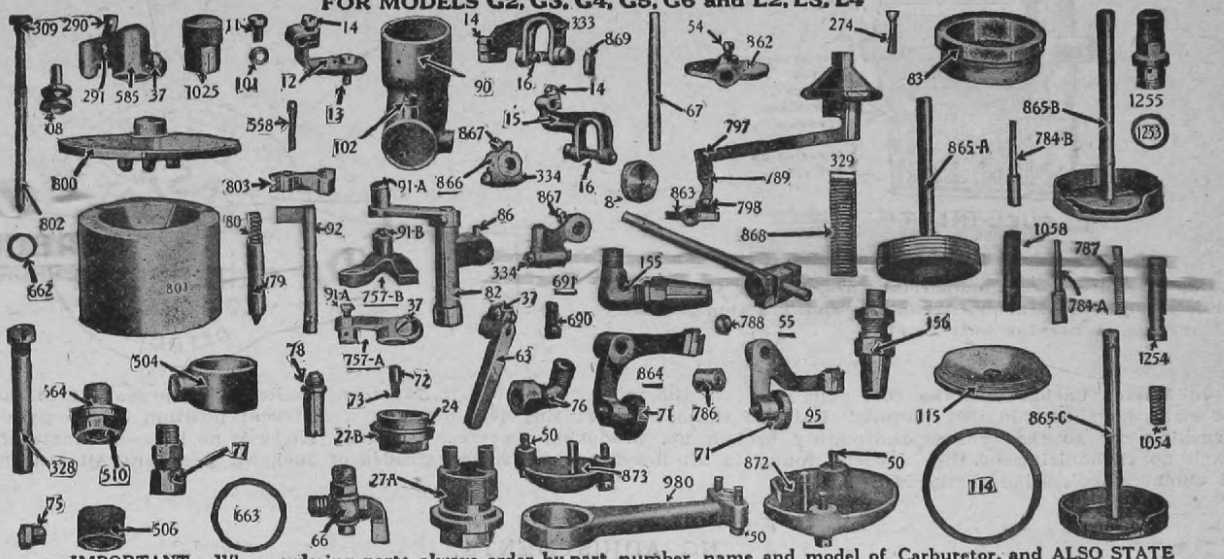
RAYFIELD
HOT AIR OUTFIT

When ordering, specify outside diameter of exhaust pipe at the point where the stove is to be attached. Give length of tubing required, making allowance for bends and turns. ***RAYFIELD*** baffle plate type of stove should always be used in preference to the narrow type where possible, as it is more efficient.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Rayfield Carburetor Parts and Price List

FOR MODELS G2, G3, G4, G5, G6 and L2, L3, L4



IMPORTANT: When ordering parts always order by part number, name and model of Carburetor, and ALSO STATE name, model and year of car on which it is used. TO AVOID MISTAKES: Select part required by number from illustration above. The same number, name of part, and price are shown below.

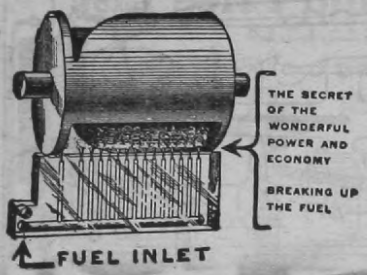
No.	Description	List Price
8	Core Plug	$0.30
11	Float Chamber Cover Screw	.05
12	Float Chamber Tubing Holder	.30
13	Float Chamber Tubing Holder Retaining Screw	.05
14	Float Chamber Tubing Holder Binding Screw	.05
14	Cam Shaft Tubing Holder Binding Screw	.05
15	Cam Shaft Tubing Holder	.50
16	Cam Shaft Tubing Holder Retaining Screw	.05
24	Drain Plug Gasket	.05
27A	Drain Plug for Float Chamber	1.00
27B	Drain Plug for Float Chamber	.45
37	Priming Cap Retaining Screw	.05
37	Throttle Lever Retaining Screw	.05
50	Flushing Pan Retaining Screw	.05
54	Throttle Butterfly Valve Retaining Screw	.05
55	Cam Shaft (Assembly)	2.00
63	Throttle Lever	.30
66	Drain Cock for Float Chamber	.45
66	Dash Pot Drain Cock	.45
67	Air Valve Shaft	.15
71	Low Speed Adjusting Screw	.35
72	Low Speed Adjustment Retaining Pawl	.10
72	Priming Cap Lever Pawl	.10
73	Low Speed Adjustment Retaining Pawl Spring	.05
73	Priming Cap Lever Pawl Spring	.05
73	Stop Arm Pawl Spring	.05
75	Water Plug (⅛-inch pipe thread)	.15
75	Drain Plug for Strainer	.15
76	Elbow Water Unions, (Specify Tubing Size)	.40
76	Gasoline Inlet Elbow, (Specify Tubing Size)	.40
77	Straight Water Union (Model "G" only)	.35
78	Spray Nozzle (specify size of drill)	.35
79	Spray Nozzle Needle Valve	.50
80	Spray Nozzle Needle Valve Spring	.10
82	Eccentric Shaft Arm Bearing (Assembly)	1.00
86	Eccentric Shaft Arm Bearing Taper pin	.05
90	Constant Air Elbow	.55
91	Dash Adjusting Arm Binding Post Screw	.05
92	Needle Lifter (Assembly)	.25
95	Needle Valve Arm (Assembly)	1.00
101	Float Chamber Screw Lock Washer	.05
102	Retaining Screw For Constant Air Elbow	.05
114	Dash Pot Cover Gasket	.15
115	Dash Pot Cover	.60
155	Elbow Water Union S. A. E. (specify tubing size)	.50
156	Straight Water Union S. A. E. (specify tubing size)	.50
274	Air Valve Cone Cotter Pin	.05
290	Priming Cap Lever	.10
291	Priming Lever Pivot Screw	.05
308	Gasoline Inlet Needle Sleeve	.40
309	Gasoline Inlet Needle Cap	.15

No.	Description	List Price
328	Gasoline Inlet Needle Seat	$0.60
329	Air Valve Cone Assembly	1.00
333	Cam Shaft Tubing Holder	.35
334	Stop Arm Screw	.10
504	Strainer Body (specify size of gasoline conn.)	.60
506	Strainer Gauze Assembled	.15
510	Strainer Retaining Plug	.60
558	Fulcrum Lever Pin	.05
585	Priming Cap (Assembly)	.75
662	Inlet Needle Seat Gasket	.05
663	Strainer Body Gasket	.10
664	Strainer Retaining Plug Gasket	10
691	Stop Arm Assembly	.35
690	Dash Pot Body Retaining Screw	.05
757A	Gas Arm (old)	1.25
757B	Gas Arm (new)	1.50
782	Dash Pot Assembly for G3, G4, GL3, GL4, L3, L4, LL3 Models	5.10
783	Air Valve Nut	1.00
784	Square Meter Pin (specify size)	.25
784B	Round Meter Pin (specify size)	.30
786	Meter Pin Tube Spray Cap	.10
787	Meter Pin Spring	.10
788	Meter Pin Spring Retaining Plug	.10
789	Valve Link	.10
797	Valve Link Pin (Upper)	.05
798	Valve Link Pin (Lower)	.05
800	Float Cover	.75
801	Float	1.00
802	Gasoline Inlet Needle Valve	.50
803	Fulcrum Lever, per pair	.35
862	Throttle Butterfly Valve	.35
863	Lower Butterfly Valve (Specify Size)	.35
864	Needle Valve Arm Assembly (Raised Throttle)	1.00
865A	Dash Pot Piston Assembly	1.25
865B	Dash Pot Piston Assembly	1.35
865C	Dash Pot Piston Assembly	1.35
866	Stop Arm Assembly (Raised Throttle)	.25
867	Stop Arm Retaining Screw	.05
868	Automatic Air Valve Spring (Dash Pot)	.25
869	Stop Arm Pawl	.05
872	Flushing Pan (Model G)	.40
873	Flushing Pan (Model L)	.30
980	Feed Pipe	.85
1025	Float Cover Cap	.25
1054	Priming Plunger Spring	.10
1058	Meter Pin Sleeve	.25
1136	Dash Pot Assembly for G2, GL2, L2, LL2 Models	5.10
1253	Priming Plunger Gasket	.10
1254	Priming Plunger Piston	.30
1255	Priming Plunger Nut	.40

NOTE: This list also applies to Models GL and LL.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MASTER CARBURETORS

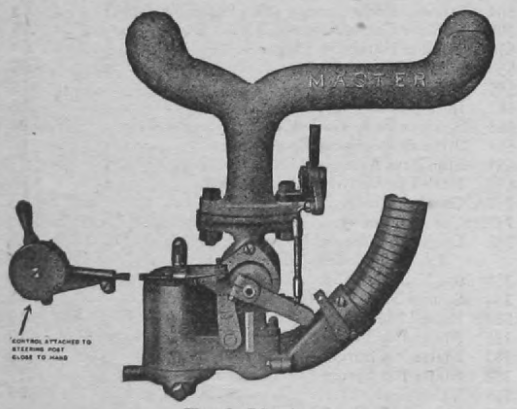


For Pleasure Cars, Commercial Cars, Racing Cars, Cycle Cars, Motorcycles, Marine, Aeroplane and Traction Engines. All one model varying only in size.

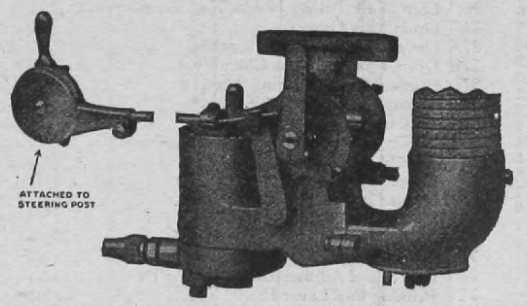
In **Master Carburetors** the fuel supply enters the mixing chamber in fourteen needle-point sprays (21 in the largest size), as shown in this picture. Each of these 14 to 21 tiny jets occupies a different position in the path of the inrushing air so that gas is thoroughly broken up, producing a perfect mixture. There is no loss—no waste of power—and no carbonizing of the kerosene found in all low-grade fuels. All grades of fuel, all weathers, all altitudes and all climates look alike to the MASTER.

NO ADJUSTMENTS

No priming—nothing to tamper with or get out of order. No springs to lose their tension, no cams or dash-pots. No butterfly valve. The Master is trouble-proof. The Steering Post Control by which the air damper is opened or closed to measure—increase or diminish the air supply, gives the driver absolute mastery of his mixture, at all times and under all conditions. From his seat, without raising the hood, he can enrich or rarefy his mixture at will, and instantly, to meet any conditions of the weather or atmosphere or for quick starting with a cold motor.



Ford Master.
Complete with Special Manifold, Control, Stove and Tubing.
Ford Master—Semi-Hot Air Type .....Each, $22.50
Ford Master—All Hot Air Type .....Each, 25.00



Masters for All Cars.

Complete with Control, Control Tube and Wire, Hot Air Stove and Flexible Tubing. Not more than 2 feet of flexible tubing is furnished with each carburetor.

MASTER CARBURETOR PRICES

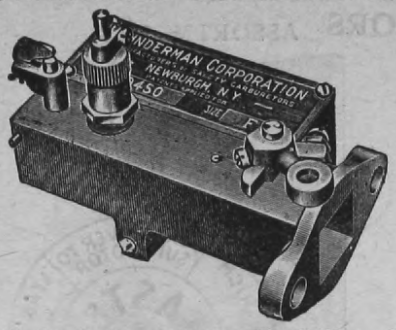
	Semi-Hot Air	All Hot Air		Semi-Hot Air	All Hot Air
¾ inch Baby		$15.00	**1½ inch Junior**	$30.00	32.50
¾ inch Motorcycle		15.00	**1½ inch Standard**	35.00	37.50
1 inch Ford and Manifold	$22.50	25.00	**1¾ inch Standard**	40.00	42.50
1 inch Standard	20.00	22.50	**2 inch Standard**	45.00	47.50
1¼ inch Junior	22.50	25.00	**2¼ inch Standard**	50.00	52.50
1¼ inch Standard	25.00	27.00	**2½ inch Standard**	60.00	62.50

EXTRA FLEXIBLE STEEL TUBING

Size, inch	⅞	1⅛	Size, inch	1¾	2¼
Per Foot	$0.30	.45	Per Foot	$0.60	.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SUNDERMAN CARBURETORS



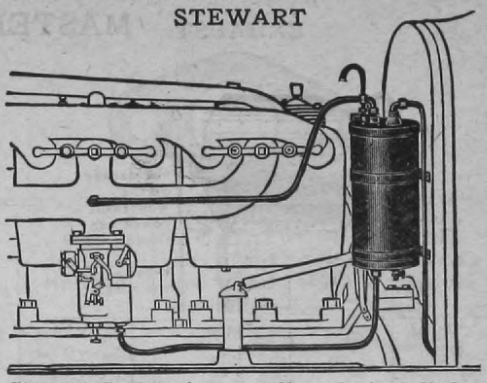
Perfect Carburization, Great Flexibility, Safety from Back-Fire, Less Gear Shifting, Less Trouble, No Gasoline Adjustment, although supply of gasoline is regulated. A pure explosive gas, free from particles of gasoline.

Sunderman Carburetor Prices

For Ford Cars.....Each, $6.00
For Metz Cars.....Each, 6.00
For All Other Cars with Regular Connecting Elbow
.....Each, 8.00

VACUUM GASOLINE SYSTEMS

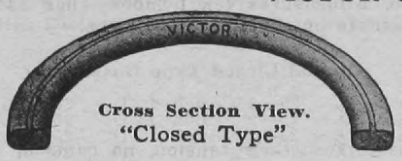
STEWART



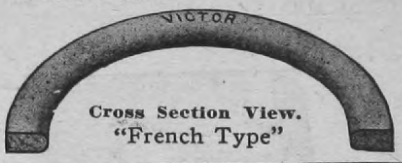
The Stewart System is a small tank, installed under the hood on dash or motor, connected to intake manifold, carburetor and gasoline supply. Saves 10% to 15% gasoline. No forcing gasoline through carburetor wastefully. Supplies gasoline unfailingly to carburetor, under all conditions on all grades because it is located close to, and above it. Can be installed easily on new or old cars at any garage.
Stewart Vacuum Gasoline Systems.....Each, $10.00

VICTOR COPPER ASBESTOS GASKETS

Standard Round Gaskets



Cross Section View.
"Closed Type"



Cross Section View.
"French Type"

Trade Nos.	Size, inches, Inside Diameter.	Size, inches, Outside Diameter.	List Price, Per 1,000.	Trade Nos.	Size, inches, Inside Diameter.	Approximate width of flange.	List Price, Per 1,000
101	1	1 1/4	$10.00	201	7/8	1/8	$14.00
102	1 1/16	1 5/16	11.60	202	15/16	1/8	14.00
103	1 1/8	1 3/8	12.40	203	1	1/8	14.80
104	1 3/16	1 7/16	12.80	204	1 1/16	1/8	15.20
105	1 1/4	1 1/2	14.00	205	1 1/8	1/8	16.40
106	1 1/4	1 5/8	16.40	206	1 3/16	1/8	16.40
107	1 5/16	1 1/2	16.40	207	1 1/4	1/8	16.40
108	1 3/8	1 5/8	16.40	208	1 5/16	1/8	17.60
109	1 1/2	1 13/16	17.20	209	1 3/8	1/8	20.00
110	1 7/16	1 11/16	17.20	210	1 7/16	1/8	22.40
111	1 1/2	1 3/4	17.20	211	1 1/2	1/8	22.40
112	1 9/16	1 13/16	17.20	212	1 9/16	1/8	24.40
113	1 5/8	1 7/8	17.20	213	1 5/8	1/8	24.40
114	1 11/16	1 15/16	17.60	214	1 11/16	1/8	25.60
115	1 3/4	2	17.60	215	1 3/4	1/8	25.60
116	1 15/16	1 15/16	18.00	216	1 13/16	1/8	26.00
117	1 15/16	2 1/16	18.80	217	1 7/8	1/8	26 00
118	1 7/8	2 1/16	18.80	218	1 15/16	1/8	26.40
119	1 7/8	2 1/8	18.80	219	2	5/32	26.40
120	1 15/16	2 3/32	19.60	220	2 1/16	5/32	26.40
121	1 61/64	2 7/64	19.60	221	2 1/8	5/32	27.20
122	2	2 1/4	19.60	222	2 3/16	5/32	30.00
123	2 1/16	2 1/4	19.60	223	2 1/4	5/32	31.60
124	2 1/16	2 5/16	20.00	224	2 5/16	5/32	31.60
125	2 5/64	2 15/64	20.00	225	2 3/8	5/32	32.00
126	2 3/32	2 7/32	22.00	226	2 7/16	5/32	32.00
127	2 3/32	2 7/32	22.00	227	2 1/2	5/32	33.60
128	2 1/8	2 3/8	22.80	228	2 9/16	5/32	37.20
129	2 3/16	2 7/16	22.80	229	2 5/8	5/32	37.20
130	2 1/4	2 7/16	22.80	230	2 11/16	5/32	38.00
131	2 1/4	2 1/2	22.80	231	2 3/4	5/32	38.00
132	2 9/32	2 17/32	23.60	232	2 13/16	5/32	39.20
133	2 3/4	2 5/8	23.60	233	2 7/8	5/32	40.80
134	2 13/32	2 19/32	23.60	234	2 15/16	5/32	40.80
135	2 7/16	2 11/16	23.60	235	3	3/16	40.80
136	2 1/2	2 3/4	25.20				

GASKET ASSORTMENTS

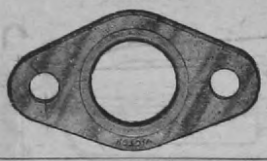
"Closed Type"
No. JV22—200 asst'd ½ to 2¼ inch....Per Ass't, $5.00
Packed—One Assortment in a Box.

"French Type"
No. JV24—100 asst'd selected sizes....Per Ass't, $4.75
Packed—One Assortment in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

VICTOR COPPER ASBESTOS GASKETS

EXHAUST



Trade Nos.	Size Center Holes	Size Bolt Holes	Distance from center to center of bolt holes	Size Gasket over all	List Price per 100
0	7/8	1/4	1 13/16	1 5/16 x 2 9/16	$3.00
1	15/16	11/32	1 7/8	1 1/2 x 2 1/2	3.00
2	1	3/8	2 1/8	1 9/16 x 2 7/8	3.40
3	1 1/16	5/16	2	1 3/8 x 2 5/8	3.60
4	1 1/8	13/32	2 1/8	1 11/16 x 3	3.60
5	1 3/16	13/32	1 7/8	1 3/4 x 2 5/8	3.80
6	1 1/4	3/8	2 1/8	1 13/16 x 2 13/16	3.80
7	15/16	3/8	2 3/8	1 7/8 x 3 1/8	4.00
8	1 3/8	13/32	2 11/16	2 1/8 x 3 1/2	4.20
9	1 7/16	11/32	2 3/8	2 1/8 x 3	4.20
10	1 1/2	7/16	2 3/8	2 x 3 1/4	4.40

ASSORTED

No. JV23—50 Assorted Victor Standard Gaskets, Exhaust Type .....Per Box, $4.75

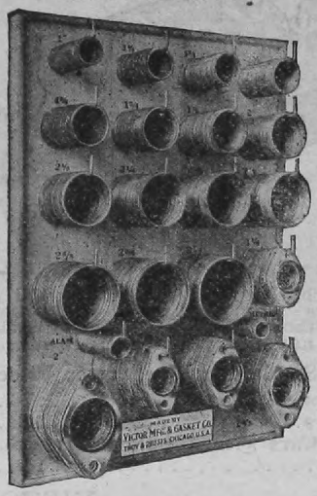
FORD GASKETS—IN SHORT SETS

120 Ford Victor Gaskets—12 Sets Less Head Gaskets .....Per Box, $3.20

FORD GASKETS—IN FULL SETS

132 Ford Victor Gaskets—12 Complete Sets in a Box .....Per Box, $12.00

ASSORTMENTS



Board No. 1 measures 15x21 inches, has 22 hooks and holds 550 gaskets of the following sizes:

Round Closed Type Gaskets.

25—1 -inch I. D.
25—1 1/4-inch I. D
25—1 3/8-inch I. D.
25—1 1/2-inch I. D.
25—1 5/8-inch I. D.
25—1 3/4-inch I. D.
25—1 7/8-inch I. D.
25—2 -inch I. D.
25—2 1/8-inch I. D.
25—2 1/4-inch I. D.
25—2 3/8-inch I. D.
25—2 1/2-inch I. D.
25—2 5/8-inch I. D.
25—2 3/4-inch I. D.
25—2 7/8-inch I. D.
25—A. L. A. M. Size.
25—Metric Size.

Exhaust Type Gaskets.

25—1 1/8-inch C. H.
25—1 1/4-inch C. H.
25—1 1/2-inch C. H.
25—1 3/4-inch C. H.
25—2-inch C. H.

No. 1—Assorted 550 Gaskets as above with Board .....Per Assortment, $9.50

Board No. 2 measures 17x26 inches, has 26 hooks and holds 650 gaskets of the following sizes:

Round Closed Type Gaskets.

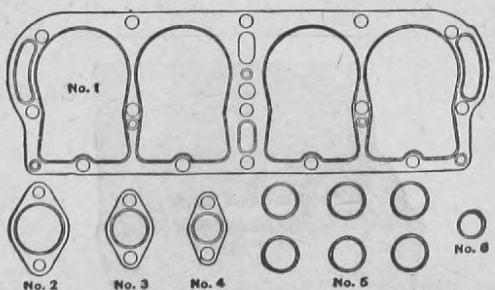
25—1 -inch I. D.
25—1 1/8-inch I. D.
25—1 1/4-inch I. D.
25—1 3/8-inch I. D.
25—1 1/2-inch I. D.
25—1 5/8-inch I. D
25—1 3/4-inch I. D.
25—1 7/8-inch I. D.
25—2 -inch I. D.
25—2 1/8-inch I. D.
25—2 1/4-inch I. D.
25—2 3/8-inch I. D.
25—2 1/2-inch I. D.
25—2 5/8-inch I. D.
25—2 3/4-inch I. D.
25—2 7/8-inch I. D.
25—3 -inch I. D.
25—3 1/8-inch I. D.
25—A. L. A. M Size.
25—Metric Size.

Exhaust Type Gaskets.

25—1 1/8-inch C. H.
25—1 1/4-inch C. H.
25—1 1/2-inch C. H.
25—1 3/4-inch C. H.
25—2 -inch C. H.
25—2 1/4-inch C. H.

No. 2—Assorted 650 Gaskets as above, with Board .....Per Assortment, $11.70

COMPLETE SET VICTOR GASKETS FOR FORD CARS



1 Victor Cylinder Head Gasket. 4 Victor Carburetor to In-take Manifold Gasket.
2 Victor Cylinder Head Outlet Gasket. 5 Victor Inlet and Exhaust Pipe Gaskets.
3 Victor Cylinder Head Inlet Gasket. 6 Transmission Drain Plug Gasket.

Ford—Victor Gaskets, not boxed..Per Single Set, $0.56

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASKETS

VICTOR FORD

Head Gaskets.

Head Gaskets—12 in a box.....Per Box, $ 9.60
Head Gaskets—In bulk .....Per 100, 40.00

ADVANCE FORD

Assortment No. 1.

Felt Washers and Gaskets for Ford cars.

No. 1—In sets of 23 pieces.....Per 100 Sets, $26.00
No. 1—Washers only, in sets of 6.Per 100 Sets, 6.00

TENOX LIQUID GASKETS

Ideal for attaching cylinder heads and assembling crank and gear cases on Automobiles and Motor Boats. Applied with a brush, like paint.

Size of Can.....	⅛ Pt.	½ Pt.	1 Pt.	1 Qt.
Liquid Gaskets...Per Can,	$0.20	.40	.60	1.00

SHIM STOCK

Strips of Sheet Brass or Steel 2½ inches wide, 50 inches long, assorted thicknesses, .002, .005, .010 and .015 inch. Specify metal wanted.

Square Inches of Metal.....	250	500
Shim Stock.....Per Can,	$0.50	1.00

ACCO CORK

Make tight joints, are impervious to oil, gasoline or water and do not shrink nor lose elasticity with age.

For Ford Cars.

Nos.	Description	Per 1,000
3363L	—Long	$ 9.00
3363S	—Short	6.00
3377	—Transmission Cover	102.50
3379	—Sloping Door	65.00
3279	—Magneto Contact	12.00
3102	—Crank Case, Lower Cover.....	115.00
3071	—Crank Case and Cyl., Right.....	60.00
3070	—Crank Case and Cyl., Left.....	60.00
2580	—Universal Ball Cap.....	38.00
3111	—Cyl. Valve Cover.....	35.00
In Sets (10 pieces).....Per 100 Sets,		75.00

CORK GASKET SHEETS

Size of Sheets 12x36 inches. Thickness, 1/16, 3/32 and ⅛ inch. Special price according to quantity.

LAMINUM SHIM STOCK

Laminum is composed of innumerable layers or laminations of thin smooth brass, all of which are held firmly together by a metallic binder. Perfect reduction can be made instantly, leaves smooth, uniform surface, saves time, labor and expense.

In Assortments.

Size of Strips 2x9 inches. 3 Strips in each Assortment.
No. 1—1 Strip 1/32 in., all .002 in. laminations.
1 Strip 1/16 in., half .002 in. laminations, half solid.
1 Strip ⅛ in., half .002 in. laminations, half solid.
.....Per Assortment, $3.00
No. 2—.003 in. laminations, otherwise the same as No. 1 Ass't.....Per Assortment, 2.75
No. 3—1/32 in., all .002 in. laminations.....Per Assortment, 2.00
No. 4—1/32 in., all .003 in. laminations.....Per Assortment, 2.00

Packed—One Asst. (3 Strips) in a Package.

LAMINUM CUT SHIMS

For Ford Cars.

Furnished either .002 or .003 inch laminated.

Thickness inch.....	1/64	1/32
No. 1—Crank Shaft Front Bearing...Each,	$0.08	.13
No. 2—Crank Shaft Center Bearing..Each,	.06	.09
No. 3—Crank Shaft Rear Bearing...Each,	.07	.10
No. 4—Connecting Rod .....Each,	.05	.06

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRONZE BUSHING

Cored-Bars

HIGH SPEED NON-GRAN BEARING BRONZE

For Bushings

Standard Size Non-Gran Bars

Code Word	O. D. in Inches	I. D. in Inches	Length in Inches	Average Weight, Lbs.
Ruisvoren	¾	Solid	12	1¾
A	⅞	Solid	12	2 1/16
B	1	½	12	2 3/16
Ruitveld	1⅛	½	12	3
Ruivaca	1⅛	⅝	12	2¾
Ruividao	1¼	½	12	3¾
C	1¼	⅝	12	3 1/16
Rujada	1¼	¾	12	3
Rukken	1⅜	⅝	12	4½
D	1⅜	¾	12	3 1/16
Rukwind	1⅜	⅞	12	3½
Rukless	1½	¾	12	5
E	1½	⅞	12	4 1/16
Rullianus	1½	1	12	4
Rullum	1⅝	⅞	12	5½
F	1⅝	1	12	4 1/16
Rumbosas	1⅝	1⅛	12	4¼
Rumboso	1¾	⅞	12	7
Rumecan	1¾	1	12	6¼
Rumemus	1¾	1⅛	12	5¾
Rumiabais	1⅞	1	12	7½
Rumiadora	1⅞	1⅛	12	6¾
Rumiantes	1⅞	1¼	12	5¾
Rumiaria	2	1	12	9
Rumiaron	2	1⅛	12	8¼
Rumicina	2	1¼	12	7¼
Rumifices	2¼	1¼	12	10½
Rumigero	2¼	1⅜	12	10
Ruminal	2¼	1½	12	8½
Ruminalis	2½	1⅜	12	13
Ruminator	2½	1½	12	12
Ruminavit	2½	1⅝	12	11
Rumitabis	2¾	1⅝	12	15
Rumitavi	2¾	1¾	12	13½
Rumoerig	2¾	1⅞	12	12
Rumorejar	3	1⅞	12	16¼
Rumoren	3	2	12	15¼
Rumoribus	3	2⅛	12	14
Rumorosa	3¼	1⅞	12	20
Rumourous	3¼	2⅛	12	18
Rumpissa	3¼	2⅜	12	15

Any Other Sizes to Order

The list price on Non-Gran Bronze is $. . . .per pound.
The Net price on Non-Gran Bars to the Repair Trades is. . . . per pound.

Instructions for Ordering

As all Non-Gran Bars are cast, it is necessary to allow sufficient stock for turning down to the finished size of the bushing. This applies to both inside and outside diameters, and on both, stock should be allowed for at least a 1/8-inch cut **all around.** For example: To make a bushing 1¼ inches O. D. and 1 inch I. D., you would need a bar 1⅜ inches O. D. and ⅞ inch I. D. When ordering a solid bar, add the word "solid" to any of the code words applying to the particular outside diameter you want.

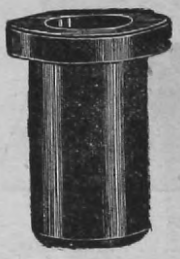
The Non-Gran "6-54" Assortment

answers every bushing need to fit any possible shaft diameter up to 1¼ inches.

This Assortment exactly meets the demands of the Automobile Repairman. It contains one each of Bar sizes A, B, C, D, E and F (see table above).
Net weight of Assortment, 20½ pounds. Net Trade price per Assortment, $. . . . .
We carry these "6-54" Assortments in stock for immediate shipments. Also all Standard Size Non-Gran Bars as above.
We recommend Non-Gran because its use gives the longest possible life and therefore adds prestige to any overhauling job. Also because Non-Gran Bars are flawless.

BRONZE BUSHINGS

For Ford Cars.



No. 2713.

No. 2714.

High Quality High Speed Bearing, Bronze. Guaranteed to fit perfectly in the places for which they are intended.

No. 2713—Front Axle Spindle. . . . . Per 100, $15.00
No. 2714—Front Axle Arm. . . . . Per 100, 7.00

SELF FLUXING WIRE SOLDER

Kester Crystal Core Solder

Kester Self-Fluxing Wire Solder is **Ready to Use.** It is a seamless tube of solder the core of which is a Soldering Flux or acid that flows as solder is used. The solder tube is guaranteed non-leakable. Tube is made in wire form and is a series of cells. Each cell is filled with the proper amount of flux and as one cell is separated from the others no excess flux can flow out. This feature is found only in Kester Self-Fluxing Wire Solder.

1 Lb. Coils—One coil in a carton. . . . . Per Pound, $1.00
5 Lb. Spools. . . . . Per Pound, 1.00
10 Lb. Spools. . . . . Per Pound, 1.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RADIATORS

LIVINGSTONE

Bulldog.

Livingstone Bulldog Combination Radiator and Streamline Hood is absolutely guaranteed to cool the motor of the Ford car, under most severe conditions. The core or section of the Livingstone Ford type radiator is full 3 inches deep. The solid one-piece pressed steel shell of the Bulldog encloses a complete brass radiator and insures strength and rigidity. There is an air space between the radiator and shell, which protects the enamel finish from heat of water coming from the motor. The respective models of the Bulldog are interchangeable with the radiator and hood of any 1915, 1916 or 1917 Ford car.

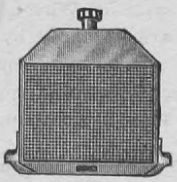
Weight 46 pounds; weight for shipping 95 pounds.
Water capacity 3½ gallons. Extended Starting Crank included.

Bulldog Combination Radiator and Hood

Black Enamel Finish.....Each, $45.00
Nickel Plated Radiator.....Each, 50.00

Note.—Specify year of car's model on orders.

Pointed Front.



Straight Front.

For all Models of Ford cars prior to 1917.

Pointed Front Radiators

Weight 41 pounds. Water Capacity 4½ gallons.

Polished Brass.....Each, $40.00
German Silver.....Each, 45.00

Straight Front Radiators

Weight 34 pounds. Water Capacity 2¾ gallons.

Polished Brass.....Each, $35.00
German Silver.....Each, 40.00

RADIATOR CAPS

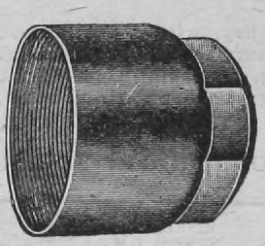
FORD

No. 54.

No. 57R.

No. 54-B—Polished Cast Brass.....Each, $0.40
No. 54-N—Nickeled Cast Brass.....Each, .50
No. 57R—Composition Rubber .....Each, .35

HUB CAPS



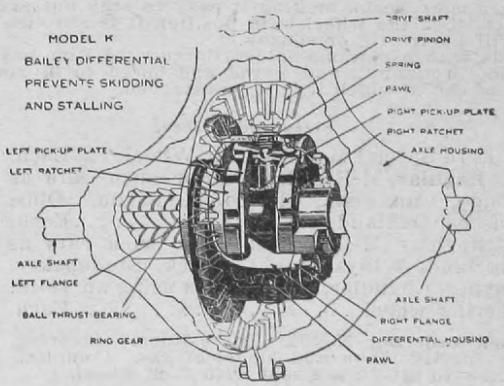
No. 1. Ford No. 2819.

Threaded to fit all models of Ford cars.

No. 1-B—Polished Brass.....Per 100, $25.00
No. 1-S—Brass Plated Steel.....Per 100, 15.00

NON-STALL DIFFERENTIALS

Bailey.



Prevents Skidding and Stalling. For Pleasure Cars, Trucks and Tractors. Positive drive to both wheels on straightaway. Automatically throws all power into wheel which has the better traction, thus eliminating spinning, skidding, slipping, side-sway and stalling, making driving easy and safe in mud and snow, on icy or wet pavements.

Model K—For Ford and Chevrolet 490's (equipped with ball thrust bearings).....Each, $15.00

Model O—For Overland Cars, Models 38, 45, 46, 49, 50, 51, 58, 59, 65, 69-R, 70, 80, 81, 83 Each 20.00

Model C—For Overland Cars, Models 40, 41, 42, 44, 52, 54, 55, 60, 69-T, 69-F, 69-TC..Each 20.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEERING WHEELS

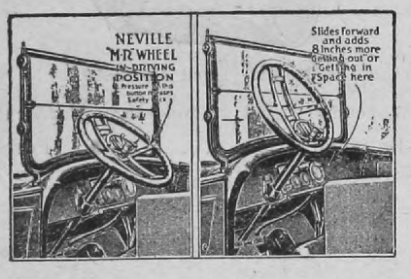
GEMCO

Nos. 3 and 4.

Gemco Tilting and Stationary Steering Wheels for Ford Cars. These Steering Wheels replace regular Ford wheels without any mechanical changes. The Spiders are properly machined to fit standard Ford Steering Columns.

Nos.	Weight	Each
1—17-in. Stationary, with plain rim....	5¼ lbs.	$2.80
2—17-in. Stationary, with cor. rim.....	5½ lbs.	3.40
3—17-in. Tilting, with plain rim.....	6½ lbs.	3.65
4—17-in. Tilting with cor. rim.....	6¾ lbs.	4.50

NEVILLE "MORE ROOM" STEERING WHEELS



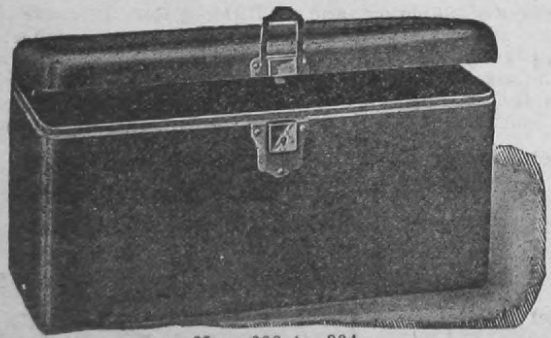
With a slight pressure on a release button the driver is enabled to slide this wheel up and out of the way, providing 8 inches more room, making it easy to step out and in the car, yet when the wheel is in position it is absolutely rigid and will not rattle or squeak.

Made with Aluminum Spider, Corrugated Rim, beautifully finished throughout, and keyed and bored to fit make and model of car to which it is to be attached.

Sizes and Prices.

17-in. Ford Special M-R Steering Wheel....	Each.	$ 9.00
17-in. Regular M-R Wheel. For such cars as Dodge, Maxwell, Chevrolet, Saxon, Olds, Briscoe, Oakland, etc.....	Each,	11.00
18-in. Regular M-R Wheel. For such cars as Overland, Willys-Knight, Buick, Studebaker, Haynes, Chandler, and all cars using an 18-in. steering wheel	Each,	12.00

When ordering Neville "More-Room" Steering Wheels simply specify make and model of car. Complete instructions how to attach are sent with each wheel.



Nos. 622 to 824.

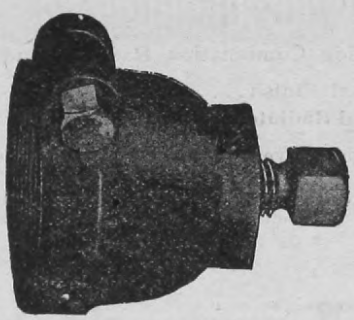
Gemco E-Z Tilt and Stationary Steering Wheels.

For Chevrolet "490" Cars.

Conveniently and quickly tilted. No time is required for releasing nor for relocking. Gemco Steering Wheels measure 17 inches in diameter, compared to the 15 inch wheel furnished by the Chevrolet Motor Co. If a Stationary Wheel of a 17 inch diameter is desired, use the Nos. SW109 or SW110 Stationary Steering Wheel as listed below.

Nos.	Weight	Each
SW109—17-in. Stationary, with plain rim	5¼ lbs.	$3.50
SW110—17-in. Stationary. with cor. rim.	5½ lbs.	4.00
SW111—17-in. E-Z Tilt, with plain rim..	6½ lbs.	5.00
SW112—17-in. E-Z Tilt, with cor. rim..	6¼ lbs.	5.50

WHEEL PULLERS



No. 2 (Ford No. 1933X).

Adjustable Wheel Pullers for Ford cars with taper rear axles are adjusted by a bolt on one side of cap for either under size or over size hub threads. Arrangement for adjusting prevents stripping of threads and gives firm grip on hub. They are well made and do satisfactory work.

Wheel Pullers ..... Each, $0.40

TOOL BOXES

Fitted with Yale Locks

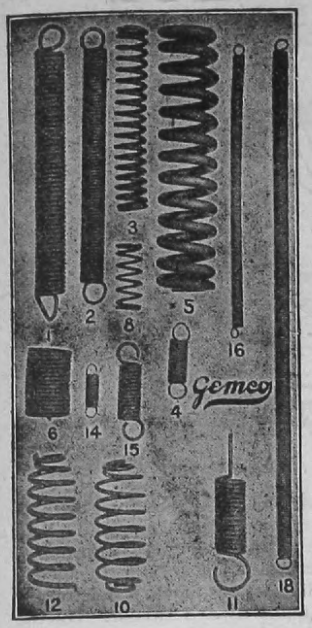
Heavy Wrought Steel, 19 ga. Lid, 20 ga. Body. 22 and 24 inch Boxes have 2 Suit Case Catches. All are handsomely finished in Black Japan .

Nos. Dimensions.	Cartons Contain.	Each.
622—Ford 22x9x7¼ in.	4	$3.30
816—16x8x10½ in.	4	2.80
818—18x8x10½ in	4	2.90
820—20x8x10½ in.	4	3.10
822—22x9x10½ in.	4	3.40
824—24x10x10½ in.	3	3.80

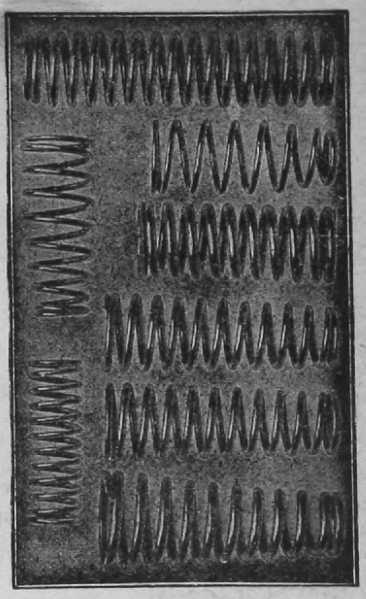
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OIL TEMPERED COIL SPRINGS

GEMCO



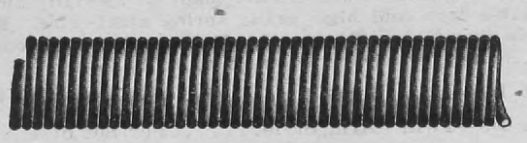
Nos.—Size in.	Gauge Wire	Per 100
S- 1—5 ½ x ⅝	11	$3.60
S- 2—5x ½	17	2.80
S- 3—3 ½ x ⅝	11	1.60
S- 4—1 ½ x ⅜	16	1.05
S- 5—4 ½ x 1 ⅛	4	7.00
S- 6—1 ½ x 1	12	1.80
S- 8—1 ¼ x ½	14	1.20
S-10—2 ½ x 1	11	2.10
S-11—3x ⅝	11	2.55
S-12—2 ½ x 1	9	2.40
S-14—1 ⅛ x ¼	20	1.70
S-15—2x 7/16	13	1.70
S-16—6x ¼	21	2.70
S-18—8 ½ x 5/16	18	4.00
25—25 Assorted sizes		Per Asst., $0.75



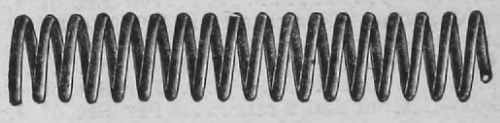
Valve Springs for Standard Cars.

Nos. Car	Inches	Gauge	Per 100
S-100—Ford	2 ⅞	12	$4.80
S-101—Overland Intake	3	11	5.25
S-102—Overland Exhaust	3 5/32	10 ½	5.70
S-103—Mitchell	3 9/16	7	6.60
S-104—Chalmers	4	9	6.80
S-105—Chalmers	4	6	9.50
S-106—Cadillac	5 ⅜	8	10.00
S-107—Reo	2 ⅜	10 ½	5.25
S-108—Buick	3 ⅞	11	6.00

TUCK STEEL COIL SPRINGS



Extension Spring.



Compression Spring.

Adapted for use in many places on Automobiles, Farm and Other Machinery.

Outside Diameter, Inch	¼	5/16	⅜	7/16	½	9/16	¾	⅞	1	1 ⅛
24 In. Long—Per Dozen $	...	...	...	...	...	...	...	...	...	...

Packed—One Dozen in a Box.

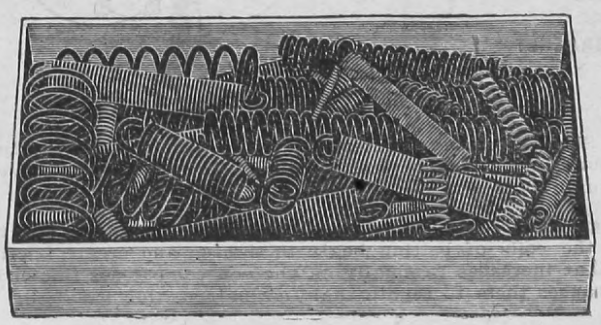
Note.—Always specify on orders whether Extension or Compression Springs are wanted.

TUCK COIL SPRING ASSORTMENTS

Each Assortment contains about 40 feet of high grade oil tempered steel springs mounted on a neat sample board. One half of these springs are coiled open tension and the other half are coiled close tension making them available for all general purposes.

No. 8—Assorted, 8 sizes, from ¼ to ⅞ inches Outside Diameter, 24 inches long—Per Assortment $.....

No. 10—Assorted, 10 sizes, from ¼ to 1¼ inches Outside Diameter, 24 inches long—Per Assortment .....



Nos. 2A, 3 and 4.

These Assortments, useful in every garage, consist of a variety of oil tempered cut-out, brake, valve, etc., springs, from 1 to 12 inches long and from ⅛ to 1 inch in diameter.

No. 2A— 20 Assorted Springs in a Box.....Per Box, $....

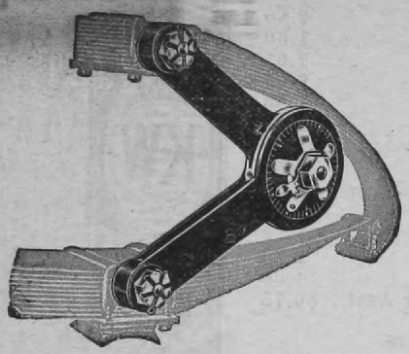
No. 3 — 50 Assorted Springs in a Box.....Per Box, ...

No. 4 —100 Assorted Springs in a Box.....Per Box, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHOCK ABSORBERS

HARTFORD

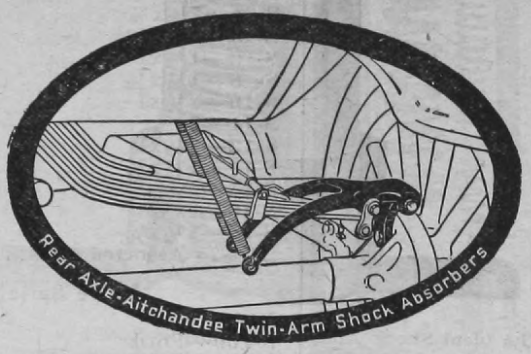


Hartford.

The Hartford makes every road a boulevard. It is reserve spring power held in readiness for the unusual bump or bad road. It makes for comfort and pleasure, it furnishes security from breaking springs and more tire mileages. Each set is complete, ready to apply. It includes special fittings, bolts, spring washers, etc., also a blue print showing the method of application.

Heavy Car Type—For cars over 4,000 lbs. Three Degree Automatic	Per Set of 4,	$60.00
Heavy Car Special	Per Set of 4,	60.00
Average Car Type—For cars from 3,000 to 4,000 lbs.	Per Set of 4,	50.00
Medium Car Type—For cars from 2,000 to 3,000 lbs.	Per Set of 4,	40.00
Light Car Type—For cars up to 2,000 lbs.	Per Set of 4,	30.00
Ford Sets—1 front and 2 rear	Per Set of 3,	22.50

H. & D.



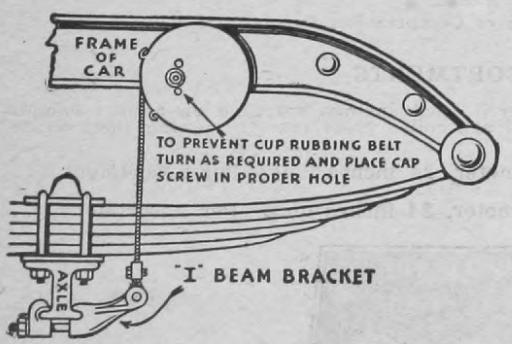
For Ford Cars.

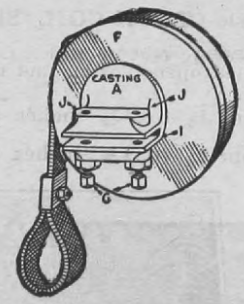
H. & D. Shock Absorber is built on the Cantilever principle and affords great relief from vibration and road shock. It puts comfort into a Ford Car. It eliminates side-sway and makes steering safe and easy at high speeds and prevents rebounds. It has that long sought for different tension between the upward and downward thrust. By the added resiliency it prevents the breakage of springs.

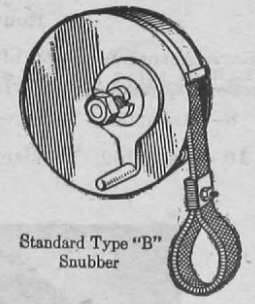
H. & D. Shock Absorbers are made of specially annealed malleable iron and high grade spring steel wire. Finish: Double dipped baked enamel. Each set is complete with arms, bolts and springs all ready to apply.

H. & D.—Single Arm Style	Per Set of 4,	$10.00
H. & D.—Twin Arm Style	Per Set of 4,	12.00

GABRIEL







Standard Type "B" Snubber

Gabriel Rebound Snubbers or Shock Absorbers protect the car by eliminating vibration. They prolong the life of tires by keeping the wheels on the ground and giving perfect traction. They save gasoline and time by making it unnecessary to slow down for cross walks, rough spots, etc.

In operation, as the car springs compress, the spring within the coil expands and takes up the slack in the belting, then as the rebound commences, the coils of belting begin to tighten and create friction on the band of brass between them, thus forming a resistance that increases gradually as the coil compresses the spring within it. This action steadies and controls the car springs and causes them to regain their normal position gradually without jerk or abrupt stop.

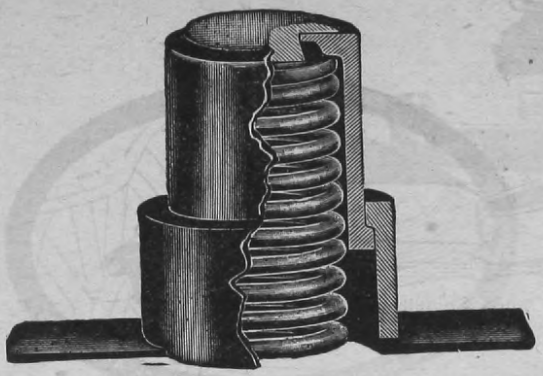
No. 1—1½x4⅞ inch Cup, for cars up to 2,000 lbs	Per Set of 4,	$18.00
No. 2—1½x5⅝ inch Cup, for cars from 2,000 to 3,200 lbs	Per Set of 4,	24.00
No. 3—1¾x5⅝ inch Cup, for cars over 3,200 lbs. and light trucks	Per Set of 4,	30.00
No. 4—2⅜x7 inch Cup, for trucks of 2 to 5 tons	Per Set of 4,	36.00

Note.—State on orders, name, model and year of car for which Snubbers are wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SHOCK ABSORBERS

IDEAL



The Ideal Shock Absorber or Spring Recoil is thoroughly practical, making a substantial substitute for Rubber Bumpers.

They are fastened to spring by means of spring shackles and are never out of order.

Ideal—Bumpers .....Per Set, $0.90

K-W

K-W Shock Absorbers or Road Smoothers consist of a Vanadium Steel Helical Spring which effectively takes up the shock; an anti-rebound air chamber and anti-side motion links. Standard for Ford Cars.

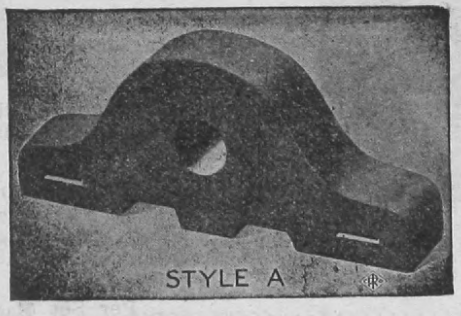
K-W—Road Smoothers.....Per Set of 4, $15.00

RUBBER BUMPERS

Round Style C.

Carefully Compounded Rubber.

No. 2—3x2 ¾ x1 ½ in. wide.....Each, $0.40



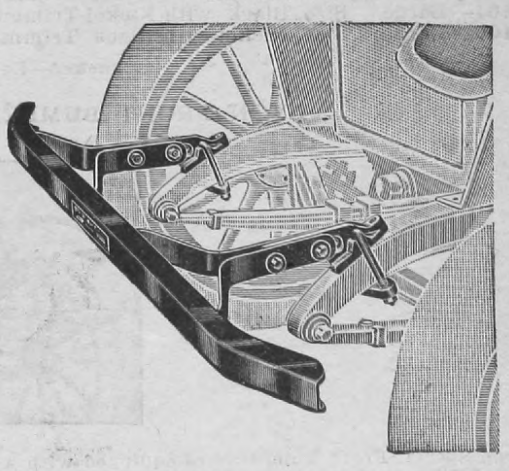
Arched Style A.

Carefully Compounded Rubber.

No. 3—8 ¾ x4 x1 ¾ in. wide	Each,	$1.35
No. 4—8 ¼ x3 ½ x1 ½ in. wide	Each,	1.00
No. 5—6 ¾ x2 ⅞ x1 ⅜ in. wide	Each,	.50

AUTOGUARD BUMPERS

Stewart.



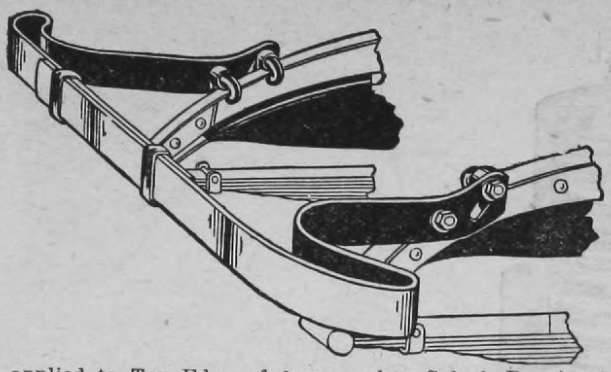
Stewart Autoguard Bumpers guard the car, save the fenders, wheels and springs from many hard knocks which cannot be avoided. Made of High Carbon Steel with few parts and with large radius. Universal brackets furnished with them allow installation on any make of car. Can be adjusted to an absolute fit.

Stewart—Bumpers, complete.....Each, $9.00

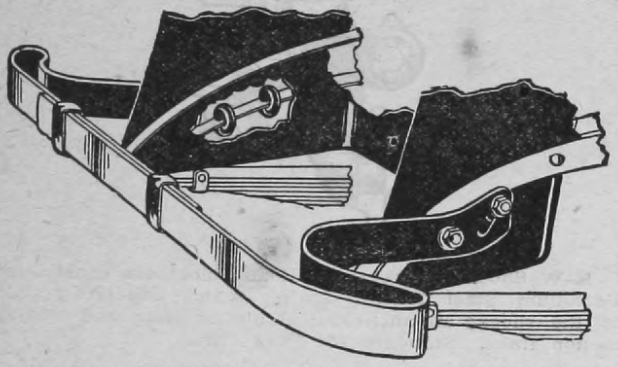
Stewart—Special Ford Model.....Each, 7.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

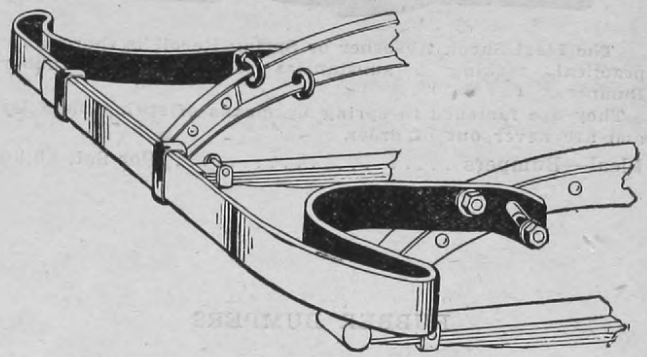
LYON "THREE-WAY" BUMPERS



As applied to Top Edge of frame, when Splash Pan is at Bottom as on Reo, Overland, Etc.



As applied to Bottom Edge of frame, when Mud Guard and Splash Pan extend to the frame end.



As applied to Both Top and Bottom Edges of frame, when there is no Splash Pan to interfere. The Bumper is here inverted.

Lyon Three-Way Bumpers are made in two sections, of flat oil tempered springs, which overlap in the front, doubly strengthening the bumper so that it **absorbs the shock of a collision at 15 miles per hour without damage.**

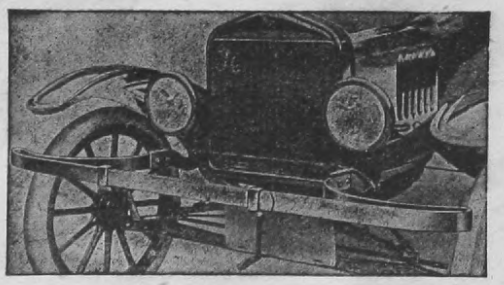
The Lyon Three-Way Bumpers are applicable to practically all cars having the regular goose neck frame, regardless of the model or the year in which built.

They can be applied as shown above on the **top edge** or **bottom edge** of the car frame, or completely inverted they can be applied to **both** the **top** and **bottom edges.** The Three-Way attachment eliminates the necessity of carrying in stock a great variety of special bumpers for various types of car, special brackets, special fitting U Bolts, etc., avoiding frequent delays, extra packing, mistakes etc.

No. 101—Medium Size, Black with Nickel Trimmings, 2 inches.....Each, $10.50
No. 102—Medium Size, Nickel with Black Trimmings, 2 inches.....Each, 12.00
No. 104—Large Size, Black with Nickel Trimmings, 2¼ inches.....Each, 12.50
No. 105—Large Size, Nickel with Black Trimmings, 2¼ inches.....Each, 14.50

Packed—Each one in a Separate Box.

LYON FRONT BUMPER—FORD, CHEVROLET, SAXON SIX



Lyon Special Front Bumpers are equipped with a **strong bracket**, two feet long which can be firmly attached under the car, acting as a lever to support and balance the bumper. The Lyon Bumper for Ford Cars won't rattle. It consists of just 30 pounds of the highest quality steel, scientifically constructed into a perfect bumper.

No. 7—Lyon-Ford Bumper. Black with nickel trimmings ..... Each $8.75
No. 8—Lyon-Ford Bumper. Nickel with black trimmings ..... Each 10.50
No. 17—Lyon-Chevrolet 490 Bumper. Black with Nickel Trimmings ..... Each 9.00
No. 18—Lyon-Chevrolet 490 Bumper. Nickel with Black Trimmings ..... Each 10.50
No. 25—Lyon-Saxon Six Bumper. Black with Nickel Trimmings ..... Each 10.50
No. 26—Lyon-Saxon Six Bumper. Nickel with Black Trimmings ..... Each 12.00

Packed—Each one in a Separate Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LYON FRONT BUMPERS

REGULAR

Nos. 1 to 5.

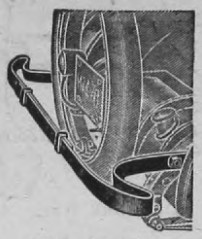
Regular Lyon Bumpers are used on cars having gooseneck frames, not provided with extended mud guards and splash pans. It fits all of the old models and some of the new ones. Use it where the Three-Way Bumper can not be installed on account of obstructions.

No. 1—Medium size; Black with Nickel Trim.... $10.50
No. 2—Medium size; Nickel with Black Trim.... 12.00
No. 4—Large size; Black with Nickel Trim.... 12.50
No. 5—Large size; Nickel with Black Trim.... 14.50

Packed—Each One in a Separate Box.

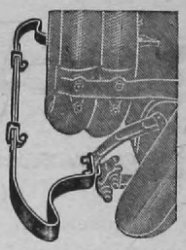
LYON REAR BUMPERS

FRAME CLAMP



Nos. 51 and 52.

SPRING CLAMP



Nos. 41 and 42.

Frame Clamp Rear Bumpers are for use on all cars having a frame extension in the rear.

No. 51—Black with Nickel Trimmings....Each $ 9.00
No. 52—Nickel with Black Trimmings....Each 10.00

Spring Clamp Rear Bumpers are for use on all cars having ¾ elliptic springs.

No. 41—Black with Nickel Trimmings....Each $10.50
No. 42—Nickel with Black Trimmings....Each 12.00

Packed—Each One in a Separate Box.

SPECIAL REAR BUMPERS

No. 34—For Buick Small Six. Black with Nickel Trimmings ..... Each $10.50
No. 35—For Buick Small Six. Nickel with Black Trimmings ..... Each 12.00
No. 61—For Cadillac. Black with Nickel Trimmings..... Each 13.00
No. 62—For Cadillac. Nickel with Black Trimmings..... Each 14.50
No. 71—For Willys Knight 1917. Black with Nickel Trimmings ..... Each 10.50
No. 72—For Willys Knight 1917. Nickel with Black Trimmings ..... Each 12.00

Packed—Each One in a Separate Box.

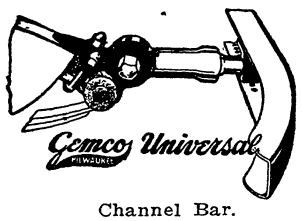
LIST OF CARS AND LYON BUMPERS TO FIT

Name of Car	Front First Choice	Front Second Choice	Rear
Buick Four	3-Way	Regular	3-Way
Buick, Large 6	3-Way	Regular	
Buick, Small 6	Regular		Special
Cadillac	3-Way		Special
Chalmers	3-Way	Regular	Frame
Chevrolet 490	Special		
Chevrolet Baby	3-Way		1916 Spring
Chevrolet Royal	3-Way		1916 Spring
Cole 8	3-Way		Frame
Cole 6	3-Way		Spring
Dodge	3-Way		Spring
Elgin	3-Way		
Empire	3-Way		Spring
Ford	Special		
Franklin	Special		
Grant	3-Way		
Haynes	3-Way	Regular	
Hudson	3-Way	Regular	Frame
Hupmobile	3-Way		Frame
Interstate	3-Way	Regular	Spring
Jeffery	3-Way		Spring
King	3-Way		
Kissel	3-Way		Spring
Lexington	3-Way		1916 Spring
Locomobile	3-Way 1917	Regular 1916	
Marmon	Regular		
Maxwell	3-Way	Regular	Spring
McFarlan	Regular		Frame
Mitchell	Regular	3-Way	Frame
Oakland 4	3-Way	Regular	Spring
Oakland 6	3-Way	Regular	Frame
Oakland 8	3-Way		Spring
Oldsmobile	3-Way	Regular	Spring
Overland	3-Way	Regular	
Packard	Special		
Paige	3-Way	Regular	
Peerless	Regular		
Premier	3-Way		Frame
Reo 4	3-Way	Regular	Spring
Reo 6	3-Way	Regular	
Saxon 6	Special		
Scripps B 8	3-Way		
Studebaker	3-Way		Spring
Stutz	3-Way	Regular	
Willys-Knight	3-Way	Regular	Special
Winton	Regular		Spring

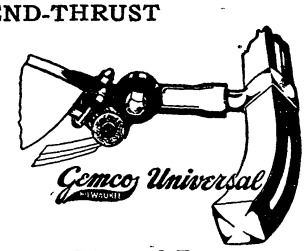
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GEMCO BUMPERS

UNIVERSAL END-THRUST



Channel Bar.



Diamond Bar.

Universal End-Thrust Bumpers are adaptable to the popular cars, equipped with heavy castings and toothed clutch which permits horizontal adjustment.

Nos.	Size and Kind of Bar.	Finish.	Each.
U 5N	—2 in. Channel.	Nickel	$ 9.20
U 6B	—2 in. Channel.	Black	7.94
U 9N	—1¾ in. Diamond.	Nickel	12.00
U10B	—1¾ in. Diamond.	Black	10.00

SPECIAL END-THRUST

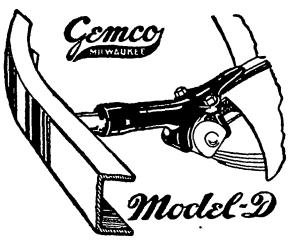
Channel Bar.

Diamond Bar.

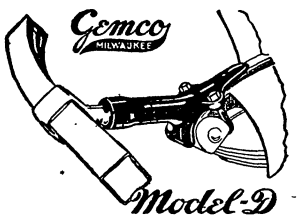
Special End-Thrust Bumpers are somewhat more simple and the brackets are smaller than the Universal Model. The famous toothed clutch is also included.

Nos.	Size and Kind of Bar.	Finish.	Each.
S52N	—2 in. Channel.	Nickel	$ 7.48
S53B	—2 in. Channel.	Black	6.78
S56N	—1¾ in. Diamond.	Nickel	10.92
S57B	—1¾ in. Diamond.	Black	9.20

MODEL D END-THRUST



Channel Bar.

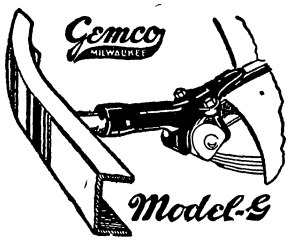


Diamond Bar.

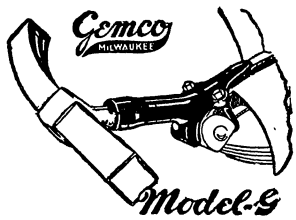
Model D is necessary to fit the frame ends of many cars as shown by list on following page.

Nos.	Size and Kind of Bar.	Finish.	Each.
D127N	—2 in. Channel.	Nickel	$ 7.48
D128B	—2 in. Channel.	Black	6.78
D131N	—1¾ in. Diamond.	Nickel	10.92
D132B	—1¾ in. Diamond.	Black	9.20
D133N	—1½ in. Diamond.	Nickel	9.78
D134N	—1½ in. Diamond.	Black	8.52
D134BN	—1½ in. Diamond.	Black and Nickel	8.98

MODEL G END-THRUST



Channel Bar.

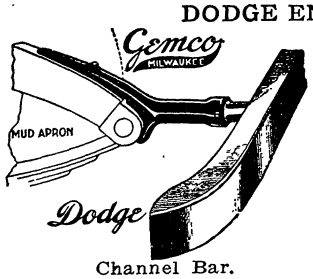


Diamond Bar.

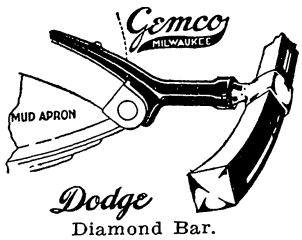
Model G is necessary for cars which other models will not fit. For list of cars using Model G see following page.

Nos.	Size and Kind of Bar.	Finish.	Each.
G102N	—2 in. Channel.	Nickel	$ 7.48
G103B	—2 in. Channel.	Black	6.78
G106N	—1¾ in. Diamond.	Nickel.	10.92
G107B	—1¾ in. Diamond.	Black	9.20
G108N	—1½ in. Diamond.	Nickel	9.78
G109B	—1½ in. Diamond.	Black	8.52
G109BN	—1½ in. Diamond.	Black and Nickel	8.98

DODGE END-THRUST



Channel Bar.

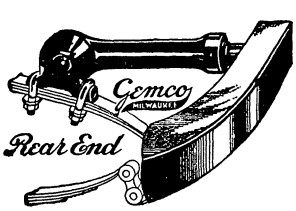


Diamond Bar.

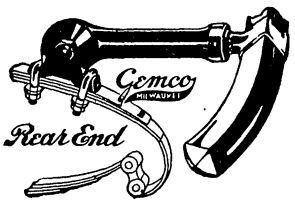
Dodge. Designed for 1917 and 1918 Dodge cars. No drilling or alterations are necessary. One bolt in the bracket only is required.

Nos.	Size and Kind of Bar.	Finish.	Each.
K502N	—2 in. Channel.	Nickel	$ 7.48
K503B	—2 in. Channel.	Black	6.78
K506N	—1¾ in. Diamond.	Nickel	10.92
K507B	—1¾ in. Diamond.	Black	9.20
K508N	—1½ in. Diamond.	Nickel	9.78
K509B	—1½ in. Diamond.	Black	8.52
K509BN	—1½ in. Diamond.	Black and Nickel	8.98

REAR CLAMP-ON



Channel Bar.



Diamond Bar.

Gemco Rear Clamp on Bumpers designed for cars with three quarter and semi-elliptic springs. State if car is equipped with 1 or 2 tire carrier.

Nos.	Size and Kind of Bar.	Finish.	Each.
R77N	—2 in. Channel.	Nickel	$ 8.62
R78B	—2 in. Channel.	Black	7.94
R81N	—1¾ in. Diamond.	Nickel	12.08
R82B	—1¾ in. Diamond.	Black	10.36
R83N	—1½ in. Diamond.	Nickel	10.92
R84B	—1½ in. Diamond.	Black	9.66
R84BN	—1½ in. Diamond.	Black and Nickel	10.12

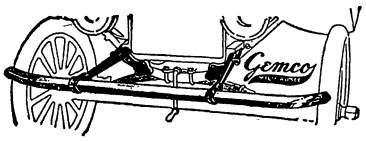
Note.—Cars on which the above bumpers fit are listed on page 786.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GEMCO BUMPERS

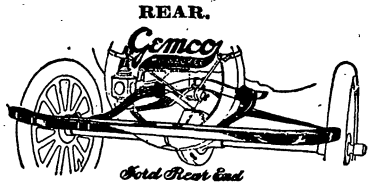
FORD CLAMP-ON

FRONT.



Nos. F479 to F484.

REAR.



Nos. F529 to F534.

REAR WITH CARRIER.

Nos. F604 to F609.

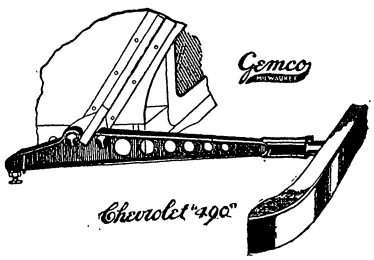
Gemco Front Clamp-on Bumpers for **Ford** Cars are attached to the cross member of the frame with one hook on each side engaging the lamp fork for reinforcing.

Gemco Rear Clamp-on Bumpers, either with or without the tire carrier, add to the appearance and apparent length of the car and are popular.

Nos.	Description.	Size and Kind of Bar.	Finish	Each
F479N	Front Clamp-On	1¾ in. Channel	Nickel	$7.48
F480B	Front Clamp-On	1¾ in. Channel	Black	6.78
F483N	Front Clamp-On	1½ in. Diamond	Nickel	10.36
F484B	Front Clamp-On	1½ in. Diamond	Black	9.08
F529N	Rear Clamp-On	1¾ in. Channel	Nickel	8.06
F530B	Rear Clamp-On	1¾ in. Channel	Black	7.36
F533N	Rear Clamp-On	1½ in. Diamond	Nickel	10.92
F534B	Rear Clamp-On	1½ in. Diamond	Black	9.66
F604N	Rear with Tire Carrier	1¾ in. Channel	Nickel	14.06
F605B	Rear with Tire Carrier	1¾ in. Channel	Black	13.36
F608N	Rear with Tire Carrier	1½ in. Diamond	Nickel	16.92
F609B	Rear with Tire Carrier	1½ in. Diamond	Black	15.66

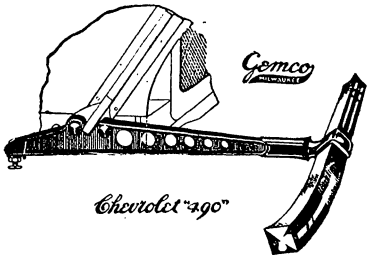
CHEVROLET 490

FRONT END-THRUST.



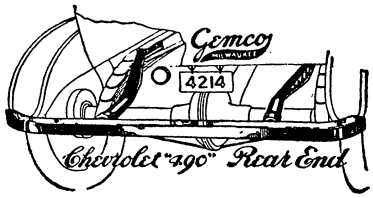
Nos. C454N and C455B.

FRONT END-THRUST.



Nos. C458N and C459B.

REAR.



Nos. C554N and C555B.

Gemco Front End-Thrust Bumpers for **Chevrolet 490** cars are attached firmly to the side of the car with two bolts in a manner that insures rigidity.

Gemco Rear End Bumpers match perfectly those for the front and the Combination Rear Bumper and Tire Carrier differs only in the attachment for tires.

Nos.	Description.	Size and Kind of Bar.	Finish	Each
C454N	Front Bumper	1¾ in. Channel	Nickel	$ 8.06
C455B	Front Bumper	1¾ in. Channel	Black	7.36
C458N	Front Bumper	1½ in. Diamond	Nickel	10.92
C459B	Front Bumper	1½ in. Diamond	Black	9.66
C554N	Rear Bumper	1¾ in. Channel	Nickel	8.06
C555B	Rear Bumper	1¾ in. Channel	Black	7.36
C558N	Rear Bumper	1½ in. Diamond	Nickel	10.92
C559B	Rear Bumper	1½ in. Diamond	Black	9.66

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LIST OF CARS AND GEMCO BUMPERS TO FIT

Name of Car	Front			Rear
	First Choice	Second Choice	Third Choice	First Choice
Buick Four, 1917-18	Universal	Model G	Gemco Special	Clamp On
Buick Little 6 and Big 6 1917-18	Universal	Model D	Gemco Special	Rear Frame
Cadillac	Special Cadillac	.....	.....	Special Cadillac
Chalmers 1917-18	Universal	Special	Model G	* Clamp On
Chevrolet 490, 16-17-18	Special Chevrolet	.....	.....	Special Chevrolet
Cole 1917-18	Special Cole	.....	.....	* Clamp On
Dodge 1916	Universal	Model D	Gemco Special	Clamp On
Dodge 1917-18	Dodge	.....	.....	Clamp On
Elgin 1917	Side Clamp On	Universal	Model G	.....
Elgin 1918	Write for Particulars,	.....	.....	.....
Empire	Universal	Model G	Gemco Special	Clamp On Long 2 in. Yokes
Ford	Special Ford	.....	.....	Special Ford
Franklin	Special Franklin	.....	.....	Franklin Rear
Grant 1917	Universal	Model D	Gemco Special	Rear Clamp On
Haynes	Universal	Model G	Gemco Special	* Clamp On
Hudson 1917-18	Universal	Model D	Gemco Special	Hudson Rear
Hupmobile	Splash Pan Wide Bracket	Side Clamp On Wide Bracket	Gemco Special	Clamp On Long 2 in. Yokes
Interstate 1917-18	Universal	Model G	Gemco Special	Clamp On
Jeffery 1917-18	Splash Pan	Side Clamp On	.....	Clamp On 15 in. Sleeve
King Model EE	Universal	Model G	Gemco Special	.....
Kissel 1917-18	Overland Front	Side Clamp On	Gemco Special	Rear Frame
Lexington	Universal	Model D	Gemco Special	Clamp On
Locomobile	Side Clamp on 2" Long Yokes.	.....	.....	.....
Marmon	Universal	.....	.....	.....
Maxwell 1916-17	Universal	Model G	Gemco Special	Rear Clamp On
McFarlan	Universal	Model D	.....	.....
Mitchell 1917-18	Universal	Model D	Gemco Special	Clamp On Long 2 in. Yokes
Oakland "6" 32-34	Universal	Model G	Gemco Special	Clamp On
Oakland "8" 32-34	Universal	Model D	.....	Clamp On
Oldsmobile	Splash Pan Wide Bracket	Side Clamp On Wide Bracket	Model G	Clamp On 15 in. Sleeve
Overland	Special Overland	Universal	Gemco Special	Overland Rear
Packard 1916-17-18	Special Packard Specify year of model	.....	.....	* Rear Clamp On Model 1918 Only
Paige	Universal	Model G	Gemco Special	.....
Peerless	Universal	Model D	Gemco Special	.....
Premier	Universal	Model G 2 in. Yoke	Gemco Special	* Clamp On
Reo 4 and 6	Universal	Model D	Gemco Special	Clamp On
Saxon 6	Special Saxon 6	.....	.....	.....
Scripps Booth 1918	Universal	Model G	Gemco Special	.....
Studebaker 1917-18	Model D Stud Yokes	Side Clamp on	Gemco Special	Clamp On 15 in. Sleeve
Stutz	Universal	Model G	Gemco Special	Clamp On 2 in. Yokes
Willys-Knight	Special Overland	Universal	Gemco Special	.....
Winton	Universal	Model D Long 2 in. Yoke	Gemco Special	* Clamp On

* Long 2 in. Yokes. 15 in. Sleeve.

Note.—Other Gemco Bumpers can be supplied for practically all American cars—Send for Gemco Bumper Catalog.

GEMCO BUMPER DISPLAY STANDS

The **Gemco Bumper Stand** makes a very attractive exhibit. Holds in natural position a variety of **Gemco Bumpers,** clamped to adjustable supports patterned after an automobile frame.

This stand is finished throughout with our celebrated hard rubber enamel, except the Gemco trade-mark at the top, which is in bright red enamel.

We have a plan whereby progressive dealers may secure the use of this substantial, attractive fixture at no cost whatever. Our Sales Department will promptly furnish full information.

Gemco Bumper Display Stands..... Each, $.....

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

TIRE HOLDERS

CHEVROLET

"Gemco" Running Board Tire Carrier.

For Chevrolets and other cars using the smaller tires.

Chevrolets and other small cars, equipped with 3 and 3½ inch tires, can use this "Torpedo" Type Tire Carrier most conveniently. Either the No. 27 or No. 28 is strong enough for one demountable rim or two.

No. 27 accommodates one and No. 28 accommodates two tires. Straps are furnished with every one.

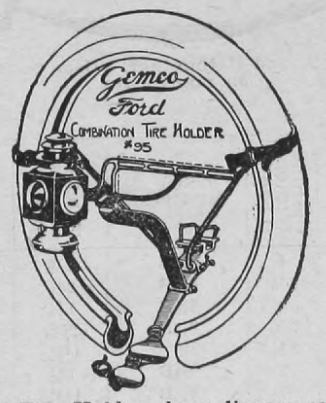
	Each
No. 27—8 lbs. for **one** tire, complete with straps...	$3.50
No. 28—9 lbs. for **two** tires, complete with straps..	3.80

FORD

No. 94 Ford Tire Holders have license and lamp holders, also provision for use of padlock. Attached with clamps.

No. 94—Ford Combination .....Each, $5.50

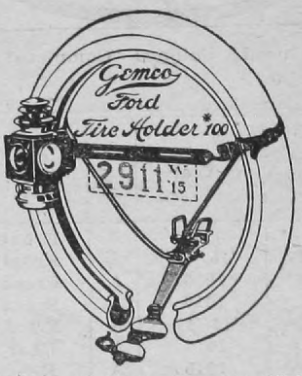
FORD



No. 95 Ford Tire Holders have license and lamp holders. Attached at intersection of frame and spring by clamp.

No. 95—Ford, with Straps.....	Each, $5.50
No. 105—Extra Heavy for Demountable Rims..	Each, 6.00

FORD



No. 100 Ford Tire Holders, like No. 95 but carries license on a Tie Rod. Both carry either one or two tires.

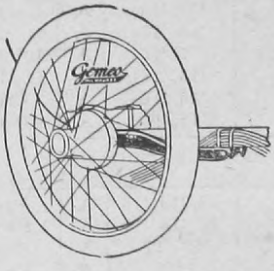
No. 100—Ford, with Straps.....	Each, $5.50
No. 103—Extra Heavy for Demountable Rims..	Each, 6.00

FORD

No. 106 Ford Tire Holders, like No. 100 but with additional provision for use of lock. Pad locks are **not** furnished.

No. 106—Ford, with Straps.....Each, $5.00

FORD



No. 102 Ford Wire Wheel Holder, capable of carrying one or two Demountable Wire Wheels.

No. 98—Ford Wire Wheel Holder.....Each, $5.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HARVEY BOLTLESS AUTO SPRINGS

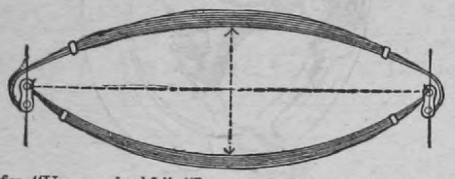
HARVEY PATENT PROCESS

Study the descriptions and order accurately.

TYPE A, HALF ELLIPTIC

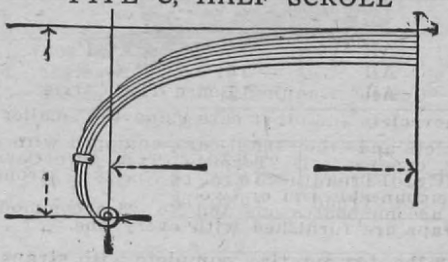
The most common type for front equipment.

TYPE B, SCROLL ELLIPTIC

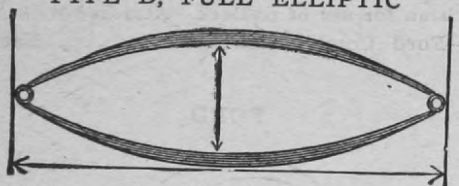


Specify "Upper half," "Lower half" or "Complete."

TYPE C, HALF SCROLL



TYPE D, FULL ELLIPTIC



Seldom used. Shipped "Complete" only

¾ SCROLL ELLIPTIC

Showing types A and C together. Used as a rear spring on many cars.

Buick Springs

Stock Number	Model	Year	Type	Location	Width	Leaves	Length Without Load	Length of Ends	Opening Without Load	Size of Eyes.	Thickness at Center	Weight	Each
A50	C24, C25	1915	A	Front	2	6	35	15½ & 19½	4	9/16B	1½	23	$ 4.60
A51	C55, D54-55	'15, '16	A	Front	2¼	7	40	17⅝ & 22⅜	3¼	9/16B	2⅛	36	7.20
A52	D45-47	1916	A	Front	2	8	35	16½ & 18½	3	9/16B	1⅞	28	5.60
A58	D44-46	1916	A	Front	2	11	35⅜	16 11/16 & 18 11/16	2⅝	9/16B	2 5/16	34	6.80
A56	D34-35	'16, '17	A	Front	1¾	7	33¼	15⅛ & 18⅛	3⅛	9/16	1 11/16	21	4.20
A40	C24	1915	A	Rear	2	6	45	20¾ & 24¼	7	9/16B	1½	31	6.20
A41	C25	1915	A	Rear	2	7	45	20½ & 24½	7	9/16B	1 13/16	35	7.00
A42	C36	1915	A	Rear	2¼	7	44½	21¾ & 22¾	6½	9/16B	1 11/16	36	7.20
A43	C37	1915	A	Rear	2¼	7	45	22½ & 22½	7½	9/16B	1 13/16	39	7.80
*A53	D45-47	1916	A	Rear	2½	8	45	22½ & 22½	3½	9/16B, ⅝B	2 11/16	62	12.40
*A54	C55, D54-5	'15, '16	A	Rear	3	8	49½	24¾ & 24¾	3½	⅝B, ¾B	3	88	17.60
A57	D35T	'16, '17	A	Rear	2	7	46½	23¼ & 23¼	5¾	9/16, ⅝	1¾	32	6.40
A44	C24	1915	C	Rear	2	5	20	.....	10	9/16B	1 5/16	16	4.80
A45	C25	1915	C	Rear	2	6	20	.....	10	9/16B	1⅝	18	5.40
A46	C36	1915	C	Rear	2¼	6	19½	.....	11	9/16B	1⅝	20	6.00
A47	C37	1915	C	Rear	2¼	6	20½	.....	12	9/16B	1¾	21	6.30

Cadillac Springs

B13	51-53	'15, '16	A	Front	2	9	41¼	18⅝ & 22⅝	4	⅝B, ⅞B	2 9/16	41	8.20
B14	51-53R	'15, '16	A	L. Rear	2	8	51¾	21⅞ & 29⅞	7⅜	⅝B, ⅞B	2⅛	45	9.00
B20	51-53R	'15, '16	A	R. Rear	2	9	51¾	21⅞ & 29⅞	7⅜	⅝B, ⅞B	2 7/16	50	10.00
B15	51-53T	'15, '16	A	L. Rear	2	10	51¾	21⅞ & 29⅞	7⅜	⅝B, ⅞B	2¾	55	11.00
B17	51-53T	'15, '16	A	R. Rear	2	11	51¾	21⅞ & 29⅞	7⅜	⅝B, ⅞B	3	61	12.20
B18	51-53R	'15, '16	A	Cross	2	8	38	19 & 19	4¾	⅝B	2 9/16	35	7.00
B19	51-53T	'15, '16	A	Cross	2	9	38.	19 & 19	4¾	⅝B	2 7/16	39	7.80

Chalmers Springs

F11	26A-26B	'14, '15, '16	A	Front	1¾	8	35¼	16½ & 18¾	3½	½B, ⅝B	2 5/16	28	5.60
F21	32A-B, 6-53	'15, '16, '17	A	Front	1¾	7	37⅜	17 11/16 & 19 11/16	3⅜	½B, 9/16B	2⅛	25	5.00
F31	35A-K, 5-15	'16, '17	A	Front	1¾	7	37¾	17⅜ & 20⅜	2¼	½B	2 1/16	25	5.00
F33	7-22	1917	A	Front	1¾	7	37¼	15⅜ & 21⅞	3¼	½B	2	26	5.20
F23	26	'14, '15, '16	A	Rear	2	7	44	20 & 24	8¾	⅝B	1⅞	33	6.60
F26	32B, 6-53	'16, '17	A	Rear	2	8	55	27½ & 27½	6⅜	9/16B	2⅜	47	9.40
F30	35A-K, 5-15	'16, '17	A	Rear	2	7	51½	25¾ & 25¾	6¾	9/16B, ¾B	2⅛	41	8.20
F28	24-29	'14, '15	C	Rear	2¼	9	21	.....	14¼	⅝B	2⅜	29	8.70
F29	26	'14, '15, '17	C	Rear	2	7	19¼	.....	11⅞	⅝B	1 15/16	20	6.00

* Note—For Nos. A53 and A54 specify number of plates.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

HARVEY BOLTLESS AUTO SPRINGS

CHEVROLET SPRINGS

Stock Number	Model	Gear	Type	Location	Width	Leaves	Length	Length of Ends	Opening Without Load	Size of Eyes	Thickness at Center	Weight	Each
E 1	Baby, Royal	'13 to '16	A	Front	1¾	6	35½	16¾ and 18¾	3¾	9/16	1 9/16	20	$4.00
E 8	490	1916	..	Front	1¾	8	21½	.....	....	.....	....	9	2.70
E10	490	1917	..	Front	1¾	10	22½	.....	....	.....	....	22	4.40
E 5	Royal Mail	'15, '16	A	Rear	1¾	6	46¾	20⅜ and 26⅜	4¾	½ B	1 11/16	28	5.60
E 2	Baby Grand	'13 to '16	A	Rear	1¾	7	46¾	20⅜ and 26⅜	4¾	½ B	2	32	6.40
E 9	490	'16, '17	..	Rear	2	9	30	.....	....	.....	....	29	5.80
E 4	Baby Grand	'15, '16	C	Rear	1¾	7	22¾	.....	12½	½ B	2 1/16	19	5.70

DODGE SPRINGS

X 1	All	'15, '16	A	Front	1¾	6	35	15 and 20	3¾	½ B	1½	19	$3.80
X 2	All	'15, '16	A	Rear	2	7	41¾	19⅞ and 21⅞	4½	½ B, ⅝ B	1 13/16	31	6.20
X 3	All	'15, '16	C	Rear	2	5	16¼	.....	9½	½ B	1 5/16	13	3.90

FORD SPRINGS

C 1	T	'10 to '16	A	Front	1½	7	31¼	15⅝ and 15⅝	4½	9/16B	1¾	17	$3.40
C 2	T Std. Tread	'10 to '16	A	Rear	2	8	44½	22¼ and 22¼	11¼	9/16B	2¼	50	10.00
C 3	T Sou. Tread	'10 to '16	A	Rear	2	8	48½	24¼ and 24¼	11¼	9/16B	2¼	54	10.80

MAXWELL SPRINGS

M 7	25	'14-'15-'16	A	Front	1¾	5	31½	14¾ and 16¾	3	9/16	1½	16	$3.20
M23	25	'16-'17	A	Front	1¾	6	31½	14¾ and 16¾	2¾	9/16	1 9/16	17	3.40
M14	25	'14, '15, '16	A	Rear	1¾	6	38¾	18⅜ and 20⅜	4½	9/16, ⅝ B	1 9/16	23	4.60
M27	25 R'dster	Late '16, '17	A	Rear	1¾	5	44½	20¼ and 24¼	5	9/16, ⅝ B	1 5/16	22	4.40
M24	25 Touring	Late '16, '17	A	Rear	1¾	6	44½	20¼ and 24¼	5	9/16, ⅝ B	1 9/16	26	5.20
M20	25	'15, '16	C	Rear	1¾	5	16	.....	8½	9/16	1 5/16	10	3.00
M25	25	Late '16, '17	C	Rear	1¾	5	18½	.....	8⅞	9/16	1⅜	11	3.30

OVERLAND SPRINGS

O20	80	1915	A	Front	1¾	7	35¼	16⅝ and 18⅝	3½	⅝ B	1⅞	24	$4.80
O25	81-83	'15, '16	A	Front	1¾	7	35¼	16⅝ and 18⅝	3½	½ B	1⅞	25	5.00
O35	84 W-K	'15, '16	A	Front	1¾	7	35¼	16⅝ and 18⅝	3	⅝ B	1⅞	25	5.00
O41	84 B-WK	'16, '17	A	Front	1¾	9	34⅞	16 7/16 and 18 7/16	4	⅝ B	2⅛	26	5.20
O28	82-86	'15, '16	A	Front	2	8	37½	17¾ and 19¾	3	⅝ B	2 1/16	32	6.40
O37	75-75-B	16, '17	A	Front	1¾	6	35¼	16⅝ and 18⅝	3¼	½ B	1 9/16	20	4.00
O42	85-4, 85-6	'17	A	Front	1¾	10	35½	16¾ and 18¾	2¾	½ B	2⅜	29	5.80
O31	81 R'dster	'15	A	Rear	1¾	6	44	21 and 23	5¼	½ B	1½	24	4.80
O26	81	'15	A	Rear	1¾	7	44	21 and 23	6¼	½ B	1⅞	30	6.00
O34	80 R'dster	'15	A	Rear	2	6	45½	20½ and 25	5¾	⅝ B	1 9/16	30	6.00
O23	80	'15	A	Rear	2	8	45	20½ and 24½	7¼	⅝ B	2⅛	40	8.00
O36	84 W-K	'15, '16	A	Rear	2	8	45½	20¾ and 24¾	6½	⅝ B	2⅛	39	7.80
O43	84 B-WK	'16, '17	A	Rear	2	10	47½	22¾ and 24¾	7¼	⅝ B	2⅜	51	10.20
O29	82-86	'15, '16	A	Rear	2	9	50	23 and 27	6	⅝ B	2 7/16	48	9.60
O33	83	'16	A	Rear	1¾	7	45¼	21⅞ and 23⅜	5½	½ B	1⅞	31	6.20
O38	75 R'dster	'16	A	Rear	2	7	41	18½ and 22½	3 5/16	⅝ B	2 1/16	33	6.60
O39	75 Touring	'16, '17	A	Rear	2	8	41	18½ and 22½	3½	⅝ B	2 7/16	40	8.00
O40	85-4	'17	A	Rear	2¼	9	47	23½ and 23½	4	⅝ B	3	60	12.00
O27	81-83	'15, '16	C	Rear	1¾	5	18¼	.....	11	½ B	1 5/16	13	3.90
O24	80-84 WK	'15, '16	C	Rear	2	7	21½	.....	13¼	⅝ B	1⅞	21	6.30
O44	84 B-WK	'16, '17	C	Rear	2	7	22¾	.....	14⅜	⅝ B	1⅞	23	6.90
O30	82-86	'15, '16	C	Rear	2	7	19½	.....	12½	⅝ B	1⅞	21	6.30

REO SPRINGS

R 9	4 Cyl.	1916	A	Front	2	7	37¼	16⅛ and 21⅛	3¾	⅝ B	1¾	27	$5.40
R 4	6 Cyl.	'15, '16	A	Front	2	9	37¼	16⅛ and 21⅛	3⅝	⅝ B	2 3/16	33	6.60
R 5	6 Cyl.	1915	A	Rear	2¼	7	50¼	21⅜ and 28⅞	4⅝	⅝ B	2 9/16	58	11.60
R 8	6 Cyl.	1916	A	Rear	2¼	8	50¼	21⅜ and 28⅞	4¾	⅝ B	2 15/16	61	12.20
R10	4 Cyl.	1916	C	Rear	2	7	24¾	.....	11	½ B	1¾	21	6.30

SAXON SPRINGS

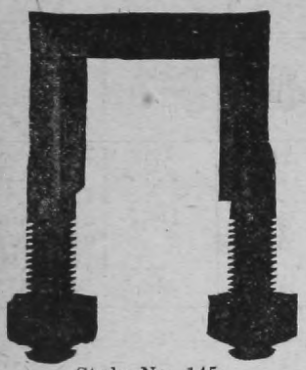
EE 1	4	1915	¼	Front	1½	7	21	.....	....	.....	1 13/16	12	$3.00
EE 3	6	'15, '16	¼	Front	2	9	27½	.....	....	.....	2½	28	5.60
EE 2	4	1915	¼	Rear	1½	7	22	.....	....	.....	1⅝	12	3.00
EE 4	6	'15, '16	¼	Rear	2	12	30	.....	....	.....	3	32	6.40

STUDEBAKER SPRINGS

S10	6	1915	A	Front	2	6	37	16¼ and 20¾	4	9/16B	1⅝	26	5.20
S 9	4	1916	A	Front	2	7	37½	16½ and 21	3⅛	9/16B	1⅞	28	5.60
S11	6	1916	A	Front	2	7	37½	16½ and 21	3⅛	9/16B	2	31	6.20
S12	4	1915	B	Rear	2	6	36	.....	14	9/16B	1 9/16	52	10.40
S13	4 and 6	1916	A	Rear	2	8	47½	22¼ and 25¼	8⅜	9/16B	2 3/16	41	8.20
S16	4 and 16 x17	1916	A	Rear	2	9	47¾	22⅜ and 25⅜	8	9/16B	2½	44	8.80
S15	4 and 6	1916	C	Rear	2	5	18⅜	.....	12¾	9/16B	1 5/16	15	4.50
S17	4 and 6x17	1916	C	Rear	2	7	18⅛	.....	13¾	9/16B	1⅞	18	5.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO SPRING CLIPS



Style No. 145.
Size Nos. 150A to 250E.
Complete with Hexagon Nuts.

Style of Box.

FOR 1½ INCH SPRINGS

Size Nos.	Flat in.	Stem in.	Over all in.	Per 100
150A	1	3/8	3	$30.00
150C	1	7/16	2 1/2	34.00
150D	1 3/16	7/16	2 5/8	34.50
150E	1 7/16	7/16	3	35.00

FOR 1¾ INCH SPRINGS

175B	1	7/16	2 3/4	$36.50
175C	1 3/16	7/16	3	37.00
175F	1 1/2	7/16	3 1/4	37.50
175P	1 3/4	7/16	3 7/8	39.00
175H	2	7/16	3 1/2	38.00
175J	2 1/2	7/16	4	39.00

FOR 2 INCH SPRINGS

200B	1 3/16	7/16	3 1/4	$39.50
200E	1 1/2	7/16	3 1/4	39.50
200G	1 3/4	7/16	3 7/8	41.00
200H	1 15/16	7/16	4 1/4	41.50
200HH	2 1/4	7/16	4 1/2	42.00
200L	1 1/2	1/2	3 1/2	45.40
200N	1 7/8	1/2	3 3/4	46.00
200BB	1 15/16	1/2	4 1/2	47.80
200P	2 3/8	1/2	4 1/4	47.80
200V	1 1/2	9/16	4	63.00
200KK	2	9/16	4	63.00
200ZZ	2 1/2	9/16	4 3/4	69.00
200AA	2	5/8	4 1/2	79.00

FOR 2¼ INCH SPRINGS

225C	1 5/8	1/2	4	$48.60
225B	2	1/2	4	48.60
225D	1 5/8	9/16	4	64.50
225P	2 1/8	5/8	4 1/2	83.00

FOR 2½ INCH SPRINGS

250D	2	1/2	4 1/2	$54.80
250C	2 3/4	1/2	6 1/8	68.00
250M	1 3/4	9/16	4 1/4	70.25
250E	2 3/4	5/8	4 3/4	91.00

Packed—25 in a Wooden Box.

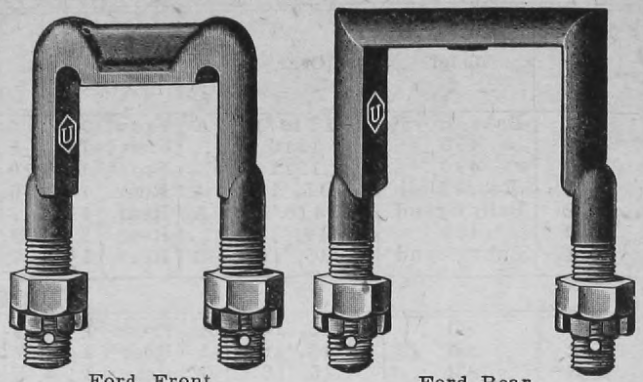
CLIP ASSORTMENTS

Assortment contains 6 clips of each size.

Size Nos.	Spring, in.	Flat, in.	Stem, in.	Over all, in.
150D	1 1/2	1 3/16	7/16	2 5/8
175C	1 3/4	1 3/16	7/16	3
175F	1 3/4	1 1/2	7/16	3 1/4
175H	1 3/4	2	7/16	3 1/2
200B	2	1 3/16	7/16	3 1/4
200G	2	1 3/4	7/16	3 7/8
206L	2	1 1/2	1/2	3 1/2
200BB	2	1 15/16	1/2	4 1/2
225B	2 1/4	2	1/2	4
225D	2 1/4	1 5/8	9/16	4
250D	2 1/2	2	1/2	4 1/2
250M	2 1/2	1 3/4	9/16	4 1/4

No. U72—72 Clips, Assorted.....Per Ass't, $33.50

Packed—One Assortment in a Wooden Box.



Ford Front. Ford Rear.

Drilled for cotter pins and equipped with 2 Castellated Nuts for each clip.

FOR MODEL T FORD CARS

Front .....Per 100, $75.00
Rear .....Per 100, 75.00

Packed—25 in a Wooden Box.

CLIP ASSORTMENTS

100 Ford Clips: 50 Front, 50 Rear.

No. F100—100 Clips.....Per Assortment, $75.00

Packed—One Assortment in a Wooden Box.

FU60—1915 ASSORTMENT

60 Clips; 2 Ford sizes, 12 other sizes.

Quantity	Size Nos.	Spring, in.	Flat, in.	Stem, in.	Over all, in.
10	Ford Front	.....	.....	.....	.....
10	Ford Rear	.....	.....	.....	.....
4	150D	1 1/2	1 3/16	7/16	2 5/8
4	175C	1 3/4	1 3/16	7/16	3
4	175F	1 3/4	1 1/2	7/16	3 1/4
4	175H	1 3/4	2	7/16	3 1/2
4	200B	2	1 3/16	7/16	3 1/4
4	200G	2	1 3/4	7/16	3 7/8
4	200L	2	1 1/2	1/2	3 1/2
4	200B	2	1 15/16	1/2	4 1/2
2	225B	2 1/4	2	1/2	4
2	225D	2 1/4	1 5/8	9/16	4
2	250D	2 1/2	2	1/2	4 1/2
2	250M	2 1/2	1 3/4	9/16	4 1/4

No. FU60—A Good Repair Shop Assortment.....Per Assortment, $33.50

Packed—One Assortment in a Wooden Box.

QS32 ASSORTMENT

32 Clips; 14 Sizes, No. 145 Clips Assorted

Quantity	Size Nos.	Spring, in.	Flat, in.	Stem, in.	Over all, in.
4	Ford Front	.....	.....	.....	.....
4	Ford Rear	.....	.....	.....	.....
2	150D	1 1/2	1 3/16	7/16	2 5/8
2	175C	1 3/4	1 3/16	7/16	3
2	175F	1 3/4	1 1/2	7/16	3 1/4
2	175H	1 3/4	2	7/16	3 1/2
2	200B	2	1 3/16	7/16	3 1/4
2	200G	2	1 3/4	7/16	3 7/8
2	200L	2	1 1/2	1/2	3 1/2
2	200BB	2	1 15/16	1/2	4 1/2
2	225B	2 1/4	2	1/2	4
2	225D	2 1/4	1 5/8	9/16	4
2	250D	2 1/2	2	1/2	4 1/2
2	250M	2 1/2	1 3/4	9/16	4 1/4

No. QS32—Assortment.....Per Assortment, $18.75

Packed—One Assortment in a Wooden Box.

OVERLAND ASSORTMENT

60 Clips complete with nuts; 2 for each model are Front, "Rear lower" and "Rear upper" respectively making total of six.

No. OV60—Assorted 6 Clips for each model 59, 60, 61, 69, 71, 79, 80, 81, 82 and 83.....Per Ass't, $30.00

Packed—One Assortment in a Wooden Box.

UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

AUTO CLIP YOKES

Cold Made.

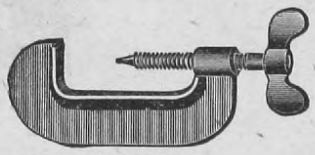
Nos.	Between Holes, in.	Holes, in.	Per 100
38A	1½	⅜	$13.00
38B	1½	7/16	13.00
38C	1¾	7/16	14.00
38D	2	7/16	16.00
38E	1¾	½	16.00
38F	2	½	20.00
38G	2¼	½	21.00
38H	2½	½	22.00
38J	2	9/16	23.00
38K	2¼	9/16	24.00
38L	2½	9/16	30.00
38M	2	⅝	32.00
38N	2¼	⅝	33.00
38P	2½	⅝	34.00
38R	3	⅝	48.00
38S	3	¾	52.00

FORD CLIP YOKES

For Model T **Rear** Spring Clips.

No. 3835—Drilled and Reamed.....Per 100, $10.00

SPRING LEAF SPREADERS

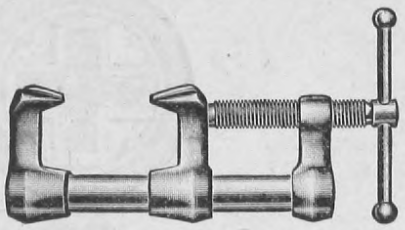


Hargreave.

Hargreave Spreaders are made of malleable iron with a pointed chrome nickel steel screw hardened and drawn in oil. Adjustable to fit springs from 1¼ to 3 inches wide.

No. 562—Leaf Spreaders.....Per Dozen, $3.00

Packed—One Dozen in a Box.



Knowlson.

Knowlson Spreaders are strong practical tools made of drop forgings, handsomely nickel plated and polished. Easily operated and adjustable to any size of auto spring. Spreads the leaves of a spring just enough to insert the lubricant without marring the paint.

Knowlson Leaf Spreaders.....Each, $1.50

SPRING LUBRICANTS

Dann Inserts.

Dann Inserts consist of a strip of Perforated Bronze with the perforations filled with Graphite, which furnishes the spring leaves with the necessary lubricant where it is needed and all of the time. Dann Inserts can be installed on any car.

Car and Model	Year	Class	Per Set
Buick D44-5-6-7 Little 6.....	1916	N12	$19.50
Buick D55 Big 6 Touring.....	1916	S1	21.55
Buick D54 Roadster.....	1916	S	24.75
Buick D35 Four Cyl	1916	K6	11.65
Buick Little 6 D44-5-6-7.....	1917	N2	18.50
Buick Little 4.....	1917	K11	17.35
Buick Little 6, 124 in. base...	1917	N9	19.65
Cadillac 8 Cyl.....	1916	C4	21.00
Cadillac 8 Cyl. 55.....	1917	C5	23.00
Chalmers 32B Semi-Rear.....	1916	K	16.55
Chalmers 30 No. 3400.....	1916	K7	13.65
Chalmers 7-22 (7 Pass.).....	1917	K	16.55
Chalmers 5-15 (7 Pass.).....	1917	K	16.55
Chalmers 6-30, 122 in. base...	1917	K11	17.35
Chalmers 6-30, 115 in. base...	1917	K11	17.35
Chevrolet 4-90	1916	K10	11.15
Chevrolet 8 Cyl.....	1917	J9	14.50
Chevrolet Baby Grand.....	1917	JJ	14.60
Chevrolet 490	1917	K10	11.15
Dodge Bros.	1916	K	16.55
Dodge Bros.	1917	K	16.55
Ford All Model T.....	.....	.....	7.60.
Maxwell 25	1916	B	10.20
Maxwell 4 Cyl.....	1917	B1	12.00
Overland 83	1916	B2	13.90
Overland 83B	1916	B2	13.90
Overland 75	1916	K7	13.65
Overland 6 Cyl. 86.....	1916	C4	21.00
Overland Knight 84.....	1916	K1	19.50
Overland 75B	1917	K11	17.35
Overland 6 Cyl.....	1917	U4	22.15
Overland 90 T.....	1917	K7	13.65
Overland 90 C. Club.....	1917	K7	13.65
Overland 6-85 T.....	1917	U3	22.00
Reo 6 Cyl.....	1916	N2	18.50
Reo 4 Cyl.....	1916	C2	17.00
Reo 6-45, 7 Pass.....	1917	J1	19.90
Reo 4 Cyl., 5 Pass.....	1917	C3	19.00
Saxon	1916	A	7.65
Saxon Big 6, M. F.-4.....	1917	J	16.75
Saxon Little 4, M. B5-9.....	1917	AA	5.95
Studebaker 4 Cyl. 40.....	1916	C2	17.00
Studebaker 6 Cyl. 50.....	1916	C3	19.00
Studebaker 6, Series 18.....	1917	C3	19.00
Studebaker 4, Series 18.....	1917	C3	19.00

DANN INSERT ASSORTMENTS

Contents

Width, inches ..	1¼	1½	1¾	2	2¼	2½	2¾
Feet	75	105	125	115	95	50	60

Dann Assortments.....Each, $98.00

Packed—One in Handsome Counter Case.

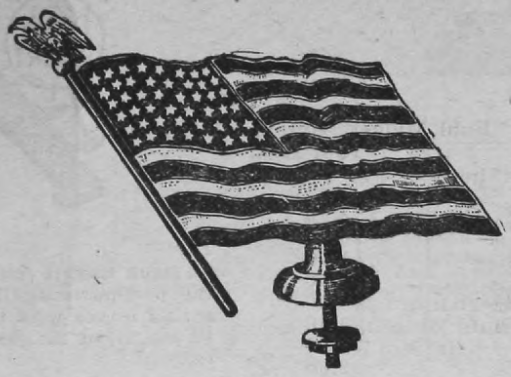
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTO RADIATOR ORNAMENTS AND EMBLEMS

No. 8006.

America First, 3½x5 inches. Nickel or Gold with Colored Enamel Design.

No. 8006—With Bolt..Each, $2.00



No. 8240.

American Flag, 4½x8½ inches. Nickel or Gold with Colored Enamel Design.

No. 8240—With Bolt.....Each, $2.00

No. 8395F. Flag.

American Flag, 4¾x3¾ inches. Any three initial letters will be inserted.

No. 8395F—Nickel Plated with Bolt .....Each, $4.00

No. 8079

National Shield 6x4 inches. Nickel or Gold with Colored Enamel Design.

No. 8079—With Bolt....Each, $2.00

No. 6395.

Winged Wheel, 3½x4½ inches. Nickel or Gold.

No. 6395—With Bolt...Each, $2.00

No. 5803.

Eagle, 5x6 inches. Nickel or Gold Finished.

No. 5803—With Bolt....Each, $1.70

No. 8059.

B. P. O. E. 4¼x3¼ inches. Nickel or Gold with Colored Enamel Design.

No. 8059—With Bolt....Each, $2.00

No. 8065.

Shriner Tiger Claw, 4x2¾ inches. Nickel or Gold, Colored Enameled Design.

No. 8065—With Bolt....Each, $2.00

No. 8063.

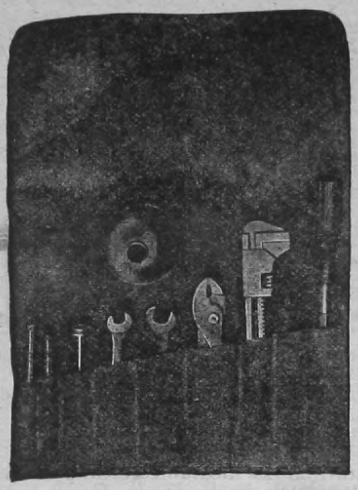
Doctor's Cross, 4x3 inches. Nickel or Gold with Colored Enamel Design.

No. 8063—With Bolt....Each, $2.00

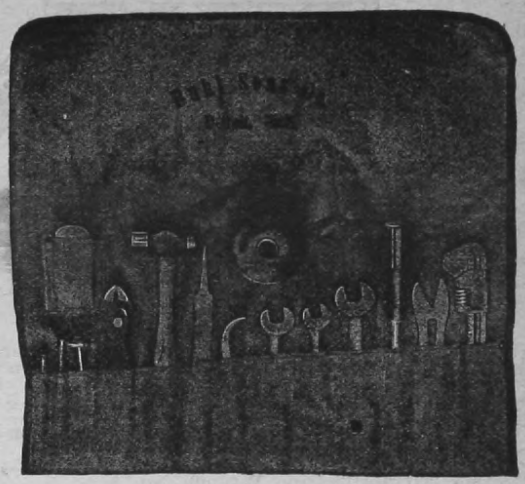
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE REPAIR TOOL KITS

"BUHL MIDGET"



"BUHL GENERAL"



"Buhl Midget" Automobile Repair Tool Kits.

This Kit consists of one ten-compartment Canvas Bag and eight accessories for small Cars; **One** each as follows: 9 inch Adjustable Mottled Auto Wrench, 5 inch Buhl Square Shank Screw Driver, Copperized Steel Oiler, Nos. 23 and 25 Double End Drop Forged Wrenches, 6 inch Combination Pliers, Cold Chisel and Machinist's Punch.

"Buhl Midget" Automobile Repair Tool Kits.....Each, $1.90

"Buhl General" Automobile Repair Tool Kits.

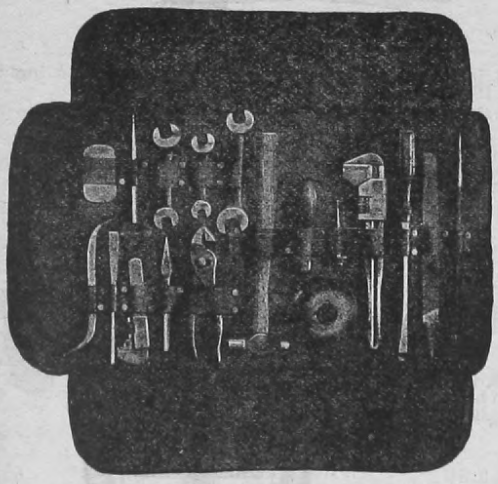
This Kit consists of one Canvas Bag, with sixteen pockets, thirteen of which contain tools, and another a box of assorted high grade Cotter Pins. This Kit is used extensively in medium priced Cars, and contains **One** each of the following accessories: 9 inch Adjustable Mottled Auto Wrench, Copperized Oiler, Nos. 725B, 729B and 27B Drop Forged Wrenches, 6 inch Combination Pliers, ⅜ inch Cold Chisel, ⅜ inch Machinist's Punch, 5 inch Buhl Square Shank Screw Driver, Ball Pein Auto Hammer, Special Double End Alligator Wrench, box assorted Cotter Pins, 8 inch Mill Bastard File and Cotter Pin Extractor.

"Buhl General" Automobile Repair Tool Kits.....Each, $2.40

Tool Kit Bags Only.

"Buhl Midget" Canvas Bags only, with 10 Compartments.....Each, $0.26
"Buhl General," Canvas Bags only, with 16 Compartments.....Each, .50
"Buhl Standard," Canvas Bags only, with 17 Leather Strap Compartments.....Each, .80
"Buhl Special," Canvas Bags only, with 30 Leather Strap Compartments and a pocket in each flap for carrying wiping waste.....Each, 2.50

"BUHL STANDARD"



"BUHL SPECIAL"

"Buhl Standard" Automobile Repair Tool Kits.

This Kit is an eighteen piece Kit, high grade in all respects, including a seventeen leather strap compartment bag, riveted similar to our "Buhl Special," and **One** each of the following accessories: Copperized Steel Oiler, 5 inch Square Shank Screw Driver, 8 inch Flat File, 8 inch Round File, 4 inch Nicholson File Handle, ⅜ inch Machinist's Punch, ⅜ inch Cold Chisel, 6 inch Combination Pliers, No. 8 Bicycle Wrench, ⅜ inch Cape Chisel, 9 inch Auto Wrench, Nos. 23, 25 and 27 Semi-Finish Drop Forged Wrenches, Cotter Pin Extractor, Automobile Hammer, box Cotter Pins.

"Buhl Standard" Automobile Repair Tool Kits.....Each, $4.00

"Buhl Special" Automobile Repair Tool Kits.

This Kit comprises thirty-one pieces. The bag is made of very heavy Brown Duck, bound with leather; has thirty leather strap compartments, all securely and artistically riveted, two Pockets, one in each Flap, for carrying wiping waste, and **One** each of the following accessories: 1/16 inch Machinist's Punch, Center Punch, 1/32 inch Machinist's Punch, Plain Prick Punch, Cold Chisel, Cape Chisel, Soft Solder, Coiled; Nos. 16 and 18 Copper Wire, Coiled; Nos. 3 and 4 Nicholson File Handles, Soldering Copper, 6 inch Taper File, 8 inch Round File, 8 inch Square File, 8 inch Flat Mill File, 6 inch Side Cutting Pliers, 6 inch Combination Pliers, 9 inch Automobile Wrench, Automobile Hammer, 8 inch Stilson Wrench, Nos. 23, 25 and 27 Semi-Finish Drop Forged Wrenches, Bearing Scraper, Cotter Pin Puller, "Perfect Handle" Machinist's Screw Driver, "Perfect Handle" Round Shank Screw Driver, box Soldering Flux and box Assorted Cotters.

"Buhl Special" Automobile Repair Tool Kits.....Each, $9.90

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOSSBERG SOCKET WRENCH SETS

No. 14.

The largest and most complete Socket Wrench Set, especially adapted for machinists, auto repair men and marine engineers. It contains:

One 10 inch Mossberg Ratchet Wrench No. 350 and Extension Bar.

One Mossberg No. 340 Take-down Handle and Extension Bar.

One Mossberg No. 320 Offset Socket Wrench.

One "Gripsall" Pipe Wrench No. 470.

One No. 100 Sterling finest nickeled Plier.

One No. 1 General Service Double End Wrench Set, 10 different openings.

One Universal Joint.

Three Screw Driver Bits.

One Cotter Pin Extractor No. 1 and 23 Hexagon Sockets as follows: $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{13}{32}$, $\frac{7}{16}$, $\frac{15}{32}$, $\frac{1}{2}$, $\frac{17}{32}$, $\frac{9}{16}$, $\frac{19}{32}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{11}{16}$, $\frac{23}{32}$, $\frac{3}{4}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{27}{32}$, $\frac{7}{8}$, $\frac{29}{32}$, $\frac{15}{16}$, 1, $1\frac{1}{32}$, $1\frac{1}{16}$, $1\frac{3}{32}$, $1\frac{1}{8}$, $1\frac{5}{32}$.

11 Square Sockets as follows: $\frac{13}{32}$, $\frac{15}{32}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{21}{32}$, $\frac{23}{32}$, $\frac{25}{32}$, $\frac{29}{32}$, $1\frac{1}{32}$, $1\frac{5}{32}$, $1\frac{9}{32}$.

Three Special Spark Plug Sockets, sizes $\frac{29}{32}$, inch, $1\frac{1}{32}$ inches and $1\frac{5}{32}$ inches.

No. 14—Socket Wrench Set.....Each, $12.00

Packed—Each Set in a Wooden Case.

No. 9.

This is an ideal repair assembly set of Socket Wrenches for factory work. It contains:

One 10 inch Mossberg Ratchet Socket Wrench Handle No. 350.

One 9½ inch Extension Bar No. 351.

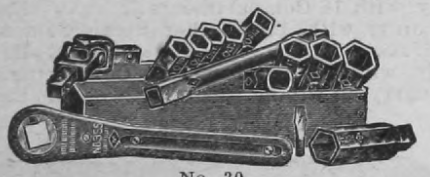
Universal Joint No. 336.

Two Screw Driver Bits and 19 hexagon sockets as follows: $\frac{1}{16}$, $\frac{1}{8}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{13}{32}$, $\frac{7}{16}$, $\frac{15}{32}$, $\frac{1}{2}$, $\frac{17}{32}$, $\frac{9}{16}$, $\frac{19}{32}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{11}{16}$, $\frac{23}{32}$, $\frac{3}{4}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{27}{32}$, $\frac{7}{8}$, $\frac{29}{32}$, $\frac{15}{16}$, 1, $1\frac{1}{32}$, $1\frac{3}{32}$, $1\frac{5}{32}$, $1\frac{9}{32}$.

7 Square Sockets as follows: $\frac{13}{32}$, $\frac{17}{32}$, $\frac{19}{32}$, $\frac{21}{32}$, $\frac{23}{32}$, $1\frac{1}{32}$, $1\frac{5}{32}$.

No. 9—Socket Wrench Set.....Each, $7.00

Packed—Each Set in a Wooden Case.



No. 30.

The most popular **Ford** Socket Wrench Set. It contains:

One No. 355 8 inch Ratchet Socket Wrench, dead black finish.

One No. 351 Extension Tube, 9¼ inches long, nickeled finish.

One No. 302 Screw Driver Bit.

One No. 336 Universal Joint and 7 hexagon sockets as follows: $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$.

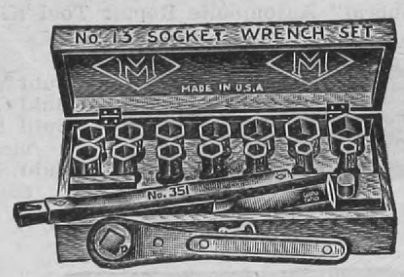
One square socket $\frac{1}{2}$ inch.

One Oval Socket to fit main bearing nuts and bolts of Ford models up to 1915.

One Spark Plug Socket, $\frac{13}{16}$ inch, to fit the "Champion X" plug now in common use.

No. 30—Socket Wrench Set for **Ford** Cars..Each, $4.00

Packed—Each Set in a Fibre Board Case.



No. 13.

This Set includes all important Hexagon Sockets including Spark Plug Sockets. It contains:

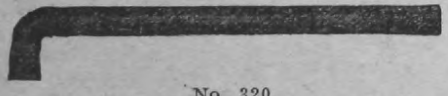
One 8 inch Mossberg Ratchet Socket Wrench Handle No. 355.

One Extension Tube No. 351, 9½ inches long, and 14 hexagon sockets as follows, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1, $1\frac{1}{32}$.

One $\frac{29}{32}$ inch Hexagon Spark Plug Socket, 4 inches long.

No. 13—Socket Wrench Set.....Each, $3.50

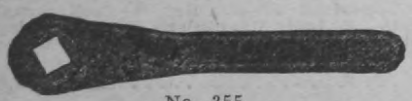
Packed—Each Set in a Wooden Case.



No. 320.

Holds sockets by ball friction. Length 10 inches.

No. 320—Offset Socket Wrench Handle ..... Each, $0.20



No. 355.

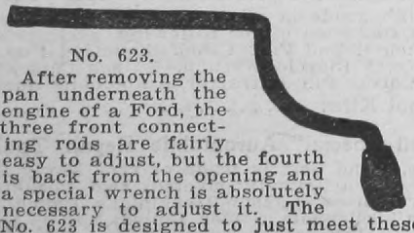
An inexpensive ratchet socket handle for use with all standard sockets. The socket shank fits the square opening and is firmly held by a tension spring. Is reversible by turning over. Steel construction, finished in **dead black.**

No. 355—8 inch Ratchet Socket Wrench Handle...Each, $1.00

No. 330.

This Wrench to be used with Mossberg sockets on machinery in which bolts, nuts, etc., are in an inaccessible position.

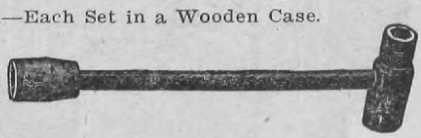
No. 330—Socket Wrench Handle .....Each, $0.30



No. 623.

After removing the pan underneath the engine of a Ford, the three front connecting rods are fairly easy to adjust, but the fourth is back from the opening and a special wrench is absolutely necessary to adjust it. The No. 623 is designed to just meet these conditions.

No. 623—Connecting Rod Wrenches .....Each, $0.30



No. 630.

The large socket on the double-end gives high powered leverage to start or tighten cylinder head nuts. The single end socket "twirls" these nuts rapidly after they are loosened. The small socket on the double-end tapered to fit nuts on rear axle housing.

No. 630—Rear Axle Housing Nut Wrenches .....Each, $0.35

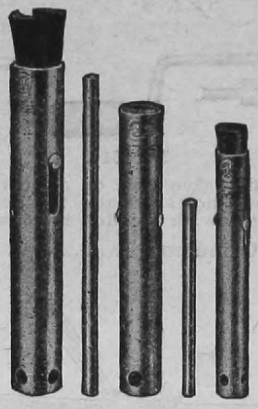
No. 350.

Made of finest quality steel, finished in full **nickel** plated.

No. 350—10 inch Ratchet Socket Wrench Handle.Each, $2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UNIVERSAL WRENCHES

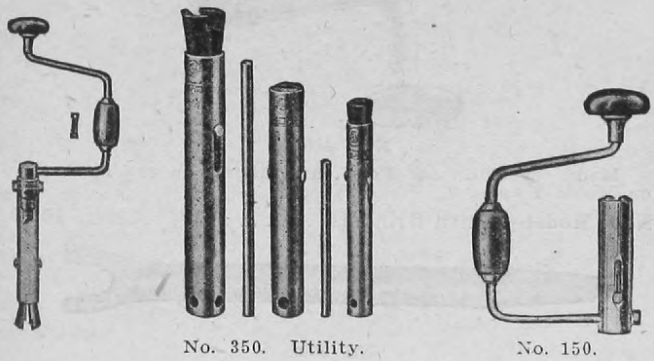


No. 250. Utility.

Adjusts itself automatically. No screws to operate or parts to get out of order. Can be applied to all shapes of nuts. It will grasp all sizes of Hexagon Nuts from 5/16 to 7/8 inch inclusive and all sizes of Square Nuts from 1/4 to 13/16 inch inclusive. Unexcelled in removing nuts on demountable rims. A nut can be placed in the jaws and applied to bolt or screw when same is not accessible to the hands. Made of High Grade Cold Rolled Steel Tubing. Jaws are Drop Forged and Case Hardened.

No. 250—Complete as illustrated.....Per Set, $2.50

Packed—One Set in a Canvas Bag.



No. 350. Utility. No. 150.

No. 350 Utility Universal Wrench Sets consist of one No. 250 Wrench Set and a Special Brace which can be operated in the same manner as a bit brace.

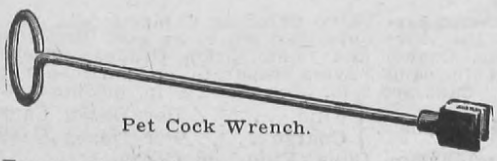
No. 350—Utility Wrench Sets.....Each, $3.50

WRENCH BRACES

Wrench Braces or Rim Wrenches can be used as described above or for removing all nuts in connection with all kinds of demountable rims.

No. 150—Wrench Braces.....Each, $1.50

PET COCK WRENCHES

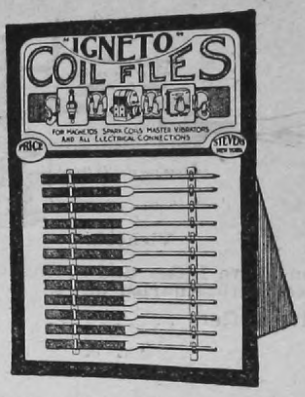


Pet Cock Wrench.

For opening pet cock to ascertain oil level.

Pet Cock Wrenches—24 inches long.....Each, $0.20

IGNETO COIL FILES

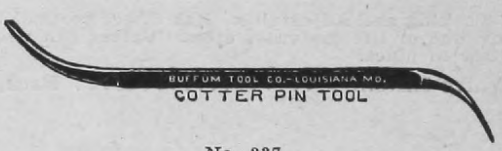


Igneto Platinum Coil Files take the place of emery cloth for cleaning the surface of contact points on Circuit Breaker Parts, Spark Plugs, Spark Coils and Magnetos.. The fine teeth "square" the surface of the point, removing only a film of Platinum.

Igneto—Coil Files.....Per Dozen, $.....

Packed—One Dozen on an Easel Card.

COTTER PIN EXTRACTORS



No. 237.

Special Steel Forged, Hardened and Tempered, Black Body and Polished Points.

No. 237—5/16 in. x 7 in. long.....Per Dozen, $3.00

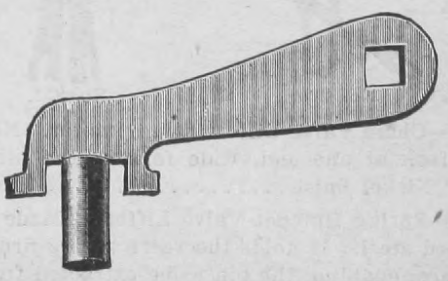
Packed—One Dozen in a Box.

Cotter Pin Puller.
E-Z

E-Z Cotter Pin Pullers operate at any angle and do not break or distort the loop. The pin is straightened and retained in the tool so it may be used again.

E-Z Extractors .....Each, $0.50

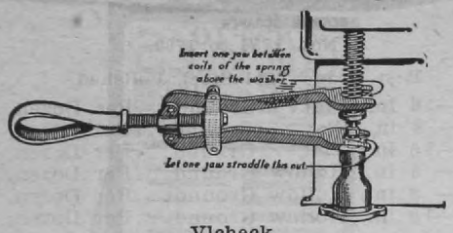
SWITCH KEY LEVERS



No. 4731—For Ford cars.....Each, $0.20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

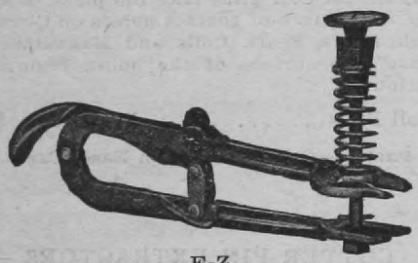
VALVE LIFTERS



Vlcheck.

Combination Valve Lifter and Spring Compressor. Made of Pressed Steel with Knurled Jaws.

Vlcheck—Valve Lifters ..... Each, $.....



E-Z.

Self-Locking and Adjustable. Has direct vertical lift and does not bind or lift the valve stem. Valves can be ground with lifter in place.

E-Z—Valve Lifters ..... Each, $0.75

Auburn.

Simple and Practical, fitting all cars. No hooks, chains or springs to get out of order.

Auburn—Valve Lifters ..... Each, $0.75

No. 200.

No. 201.

No. 200—Chain Valve Lifters fit any motor. Narrow fork at one end, wide fork at the other end. Nickel finish..... Each, $0.45

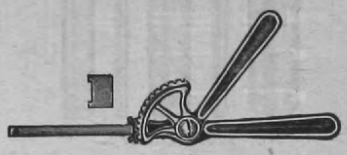
No. 201—Spring Ratchet Valve Lifters. Made of pressed steel. It holds the valve spring firmly in place, enabling the pin to be extracted from the stem. Back Enamel Finish..... Each, $0.42

VALVE GRINDERS

No. 610.

Adjustable to fit valve tops on all cars, whether slotted or drilled with two holes. Made 21 inches long of finest steel, finished bright with wooden handles.

No. 610—Valve Grinders ..... Each, $1.00



E-Z.

Designed to give the proper reciprocating motion necessary to grind a perfect seat. A full swing of the handle gives one complete turn of the valve.

E-Z—Valve Grinders ..... Each, $1.50

New Model.

Made especially for Ford cars, fitting on the last valve on Model T cars.

New Model—Valve Grinders .....Each, $0.20

No. 2008.

Drop Forged Steel. Polished and Hardened. Pins are Milled. Distance between pins ½ in.

No. 2008—5 in. Valve Grinding Bits..Per Dozen, $3.20

VALVE GRINDING COMPOUND

Carborundum Valve Grinding Compound is uniform and grinds the valve quickly down to an even firm seat. Made in Fine, Coarse and Combination Grades. The latter is packed in cans having separate compartments for each grade. Cans are 2 in. high and 2½ in. in diameter.

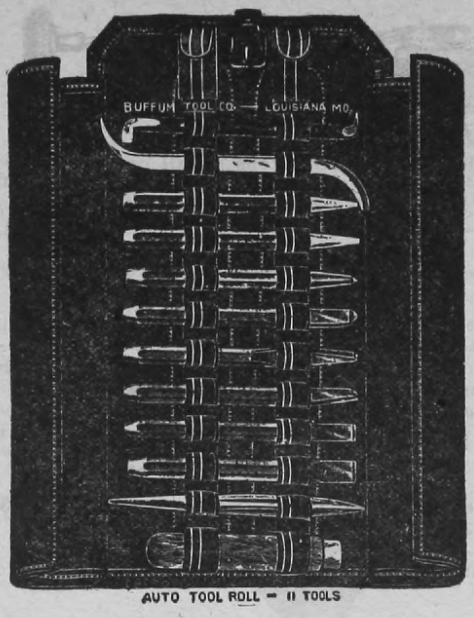
In 1 Lb. Cans.. { Fine ..... Per Dozen Cans, $6.00
Coarse ..... Per Dozen Cans, 6.00

In Combination Cans, Fine and Coarse.....
..... Per Dozen, 3.00

Packed—1 lb. Cans in Open Stock.
Combination Cans—One Dozen in a Display Carton.

Digitized by UNIVERSITY OF MICHIGAN
Digitized by UNIVERSITY OF MICHIGAN

AUTO TOOL ROLLS



Ever-Ready.

Ever-Ready Auto Repair Tools in Rolls. Solid Forged Steel, Oil Finished Tools, Black Canvas Case with Center Strap inside and with Leather Strap outside. Each roll contains 10 tools.

Description	Shape	Steel		
		Size	Length	Point
1 Offset Screw Driver	Round	¼	5 in.	
1 Cotter Pin Puller	Square	5/16	6 in.	
1 Machinist's Punch	Octagon	½	6 in.	3/32
1 Machinist's Punch	"	½	6 in.	7/32
1 Center Punch	"	5/16	5 in.	⅛
1 Diamond Point Chisel	"	5/16	5 in.	3/16
1 Cape Chisel	"	5/16	5 in.	3/16
1 Cold Chisel	"	5/16	5 in.	3/16
1 Cold Chisel	"	5/16	6 in.	5/16
1 Three Cornered Scraper	"	⅝	3½ in.	
1 Handle for same				

Ever-Ready Tool Rolls, complete.....Each, $2.25

BEARING SCRAPERS

Nos. 1754 and 1755.

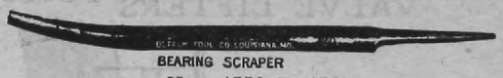
Best Grade Tool Steel Blades, Hollow Ground and Sharpened ready for use. Hardwood Mahogany Stained Handles on No. 1754. No. 1755 is unhandled.

No. 1754—3½ in. Blade, 7/16 in. Face...Per Dozen, $3.00

No. 1755—8 in. Blade, ⅝ in. Face...Per Dozen, 4.20

Packed—Half Dozen in a Box.

BEARING SCRAPERS



Nos. 1756 to 1763.

Best Grade Tool Steel, Polished.

No. 1756— 6 in., Flat Ground...Per Dozen, $ 4.80
No. 1757— 8 in., Flat Ground...Per Dozen, 6.00
No. 1758—10 in., Flat Ground...Per Dozen, 9.00
No. 1761— 6 in., Hollow Ground...Per Dozen, 7.20
No. 1762— 8 in., Hollow Ground...Per Dozen, 9.00
No. 1763—10 in., Hollow Ground...Per Dozen, 12.00

No. 1774.

Best Grade Tool Steel, Full Polished. Made special for end scraping where the space is limited. One Round and one Square Edge, 1 in. wide.

No. 1774—10 in. long, ½ in. Oct. Steel..Per Dozen, $9.00

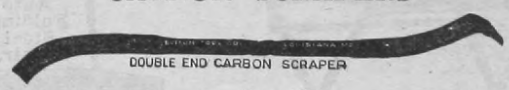
Nos. 1765 to 1768

High Grade Steel, Hollow Ground, Polished Ends, Sharpened ready for use. Hardwood Handles with Nickel Plated Ferrules.

No. 1766—3 in. Curved Blade, ⅜ in. wide.... .....Per Dozen, $ 4.20
No. 1767—3½ in. Curved Blade, ¾ in. wide.... .....Per Dozen, 6.00
No. 1768—4 in. Curved Blade, ¾ in. wide.... .....Per Dozen, 7.80
No. 1765—Sets of 3, one of each size..... .....Per Dozen Sets, 18.00

Packed—Sets Only, One Set in a Box.

CARBON SCRAPERS



No. 1773.

Special Pattern Double End Scrapers, made from ¼ inch Steel, finished Black.

No. 1773—14 inches long.....Per Dozen, $3.60

No. 1771.

Curved Carbon Scrapers, 16 inches long, in sets of three, one Out Turn End, one In Turn End and one Curved End. Hardwood Handles with Brass Ferrules. Blades finished in Oil.

No. 1771—Sets of 3 as described..Per Dozen Sets, $7.20

Packed—One Set in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE TRAILERS

No. 301.

These Trailers can be attached to any car, increasing its usefulness. They provide a way to haul at a low cost while preserving the appearance of a car.

Body. Extra well ironed and braced. 40x84 inches outside measurements, with 10 inch panels. Hardwood sills and hardwood rails on top of the panels. The bottom of the body is protected by strips of iron, running lengthwise. Drop end gate at both front and rear. 5 inch flare boards. **Springs**—1⅜ inches, 5 and 6 leaf platform springs, hung under axle. **Track**—Narrow 4 feet, 8 inches, or wide 5 feet, 2 inches. **When ordering, state width desired. Wheels**—Sarven patent. Absolutely best grade hickory, 1⅜ inch spokes, 32 inches high, 1¼ inch riveted rims. No. 13 flange. Corrugated hubs. **Tires**—Best 5/16 inch oval edge steel. 1¼ inch wide. **Axle**—Ball bearing axle. **Painting**—Dark green. **Capacity**—800 pounds. Shipping weight, about 375 pounds.

No. 301 —Two wheel Trailer as described with 1¼ inch Solid Rubber Tires.....Each, $ 81.00
No. 303A—The same as No. 301 but with 2 inch Solid Rubber Tires on Ford type Artillery wheels and 1½ inch 6 leaf springs.....Each, 89.70
No. 303B—The same as No. 303A but with 3 inch Clincher Pneumatic Tires.....Each, 101.20

Extras

Extra Hitches—Plate End Universal.....Each, $ 6.40
Extra Hitches—Ford Spring.....Each, 6.40
Top—With curtains all around.....Each, 16.60

FOLDING STEEL CHAIRS

No. 211.

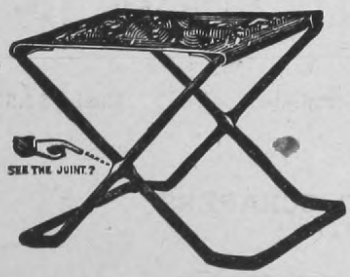
No. 213.

Oval Steel Frames, Black Japan Finish, seat and back rest padded with felt and upholstered in black water-proof art leather. Built for strength and safety as well as for convenience and comfort.

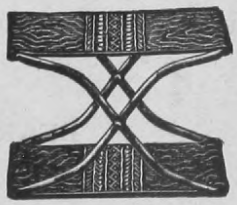
No. 211—Adult size. Height of seat 16 in.; seat 11x12 in.; back 12½x3½ in. Folded, size 12½x20x2 in. Weight per dozen, 120 lbs. .....Per Dozen, $20.00

No. 213—Child's size. Height of seat 12 in.; seat, 9x12 in.; back, 10½x3½ in.; folded, size 11x16x2 in. Weight per dozen, 100 lbs. .....Per Dozen, $17.00

STEEL THIRD SEATS



No. 134.



No. 138.

Oval Steel Frames, Black Japan Finish, seats of carpet strongly attached to frame. Adaptable for automobiles or carriages. Useful in the house as a footstool or child's seat. In the No. 138 the carpet bottom prevents any slipping and positively will not scratch or mar the cushions or the upholstery of the car.

No. 134—Height of seat, 8 in.; seat 8½x10 in. Weight per dozen, 40 lbs.....Per Dozen, $8.00

No. 138—Height of seat, 8 in. Seat 8½x10 in. Weight per dozen, 34 lbs.....Per Dozen, $6.70

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOCK WASHERS

TYPE B PLAIN PATTERN

Reliance Lock Washers are guaranteed to be commercially perfect in material and workmanship and when the proper section of steel is selected for the purpose for which the washer is intended, satisfaction is assured for holding nuts from vibrating off and for holding moving parts in their position.

Light

Nos.	80	99	125	146	166	190	204	219	271	302	337
For Bolt, in.	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Size of Steel	1/16x3/64	5/64x1/16	1/8x1/16	1/8x1/16	5/32x1/16	3/16x1/16	3/16x3/32	3/16x3/32	1/4x1/8	1/4x1/8	1/4x1/8
Per 1,000	$1.35	2.70	4.35	5.00	6.35	7.70	10.00	11.00	17.00	19.35	22.00

Medium

Nos.	80	99	127	148	167	191	205	220	272	304	344
For Bolt, in.	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Size of Steel	1/16x3/64	3/64x1/16	1/8x3/32	1/8x3/32	5/32x3/32	3/16x3/32	3/16x1/8	3/16x1/8	1/4x3/16	17/64x3/16	5/16x1/4
Per 1,000	$1.35	2.70	5.00	5.70	7.00	9.00	11.35	12.35	19.70	22.70	33.00

Heavy

Nos.	81	100	128	149	171	189	208	223	273	305	345
For Bolt, in.	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Size of Steel	1/16x1/16	5/64x5/64	1/8x1/8	1/8x1/8	11/64x11/64	11/64x11/64	13/64x13/64	13/64x13/64	1/4x1/4	17/64x17/64	5/16x5/16
Per 1,000	$1.70	3.00	5.70	6.35	11.00	11.70	15.35	16.35	22.35	26.70	37.35

Packed—1,000 in a Box. Extra Charge for Boxes of 500, 10%; Boxes of 250, 15%; Boxes of 100, 20%.

Note.—Light Washers shipped unless weight is specified. **Type D**—Positive Pattern to order.

LOCK WASHER ASSORTMENTS

Reliance Lock Washers, Plain Type, Auto Sizes, Assorted for Bolts, 3/16 to 3/8 inch.

No. 39B—39 Washers: 3 each 3/16, 7/16, 1/2 and 5/8 in. and 9 each 1/4, 5/16, and 3/8 inch.....Per Dozen Assts., $3.15

Packed—One Assortment in a Round Paper Carton with metal bottom and screw cap.

SPRING COTTER ASSORTMENTS

No. 1.

For the Agricultural trade, assorted as follows:

Ten each, 3/32x3/4 and 1, 1/8x1 and 1 1/4, 3/16x1 1/4 and 1 1/2, 1/4x1 3/4 and 2, and 5/16x2 and 2 1/2. Put up in a neat Pasteboard Box.

No. 1—Assortment, 100 assorted sizes in a box.

.....Per Dozen Boxes, $.....

No. 5.

For the Automobile trade, assorted as follows:

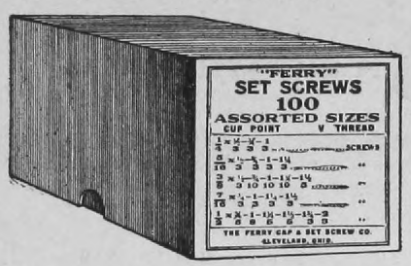
Ten only, 1/16x1/2; 20 only, 1/16x1 1/4; 15 only, 3/32x1/2; 10 each, 3/32x3/4, 1 and 1 1/4; 15 only, 1/8x3/4; 10 only, 1/8x1 inches. Put up in a round, metal bound, heavy Pasteboard Box with Screw Top.

No. 5—Assortment, 100 assorted sizes in a box.

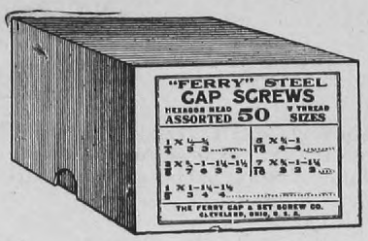
.....Per Dozen Boxes, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ASSORTED SET SCREWS



ASSORTED CAP SCREWS



Assortment of Steel Set Screws

Square Head, Cup Point, Case Hardened, U. S. Standard Thread.

Contents.

Size, inches.....	¼ x ½, ¾, 1	5/16 x ½, ¾, 1, 1¼	⅜ x ½	⅜ x ¾, 1, 1¼	⅜ x 1½
Number in Box...	3	3	3	10	5
Size, inches.....	7/16 x ¾, 1, 1¼, 1½	½ x ¾	½ x 1	½ x 1¼, 1½	½ x 1¾, 2
Number in Box...	3	5	8	5	3

No. 1—Ferry Assortment, U. S. Standard, consisting of 100 Set Screws as above ....Per Assortment, $.....

Packed—Each Assortment (100) in a Box.

Assortments of Steel Cap Screws

Hexagon Head, Cup Point, Case Hardened, U. S. Standard and S. A. E. Standard Thread.

Contents.

Size, inches.....	¼ x ½, ¾	5/16 x ¾, 1	⅜ x ¾	⅜ x 1	⅜ x 1¼, 1½	7/16 x ¾, 1, 1¼	½ x 1	½ x 1¼, 1½
Number in Box...	3	4	7	6	3	2	3	4

No. 2—Ferry Assortment, U. S. Standard, consisting of 50 Cap Screws as above.....Per Assortment, $.....

No. 3—Ferry Assortment, S. A. E. Standard, consisting of 50 Cap Screws as above..Per Assortment, ...

Packed—Each Assortment (50) in a Box.

COPPER RIVETS AND BURRS

No. 100—No. 10 Rivets with Burrs, Assorted ⅜ to ¾ inch.....Per Pound, $0.60

Packed—Half Pound in a Box.

HEXAGON NUTS

Semi-Finished.

U. S. Standard or A. L. A. M. Eight each ¼, 5/16 and ⅜ inch.

No. 24—24 Perfect Nuts.....Per Box, $0.56

Note.—Specify **thread** wanted.

CASTELLATED NUTS

Case Hardened.

A. L. A. M. Threads. Four each 5/16, ⅜ and 7/16 inch; two each ½ and ⅝ inch.

No. 15—15 Perfect Nuts.....Per Box, $0.60

TAPER PINS

High Grade Turned

40 pins; 6 sizes, Nos. 0x1 to 5x2¾ inch.

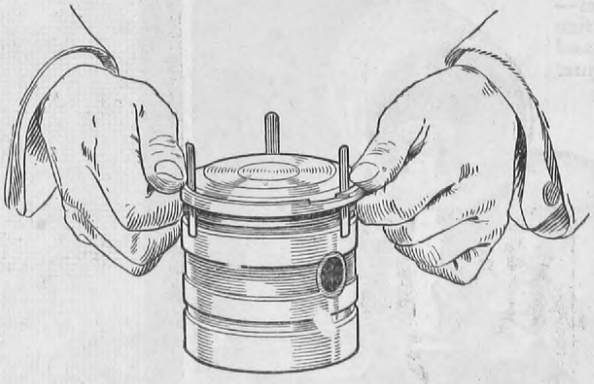
No. 40—40 Taper Pins.....Per Box, $0.60

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ONE-PIECE PISTON RINGS

Inland.

Inland One Piece Piston Rings produce a gas-tight elastic joint between the piston and cylinder walls. This gives greater efficiency and a large increase in the power generated by the motor, with a relative decrease in gasoline consumption and in the amount of lubricating oil used. When contracted in a cylinder it tends to uncoil like a spring in a perfect circle, exerting an even and gentle radial pressure at all points of contact. Its free ends being diagonally opposite, all openings are effectually sealed so that no gas can escape. Being made of one piece of the best grade of gray cast iron, they cannot score or mar the cylinders. They adjust themselves to worn cylinders and produce surprising results in replacement work. Being of one piece and very strong, the Inland is easily put on and it will not break as others do.



Standard Widths from 3/16 to 5/16 inclusive

2½ to 3⅞	inch diameter inclusive.....Each,	$1.00
4 to 4⅞	inch diameter inclusive.....Each,	1.20
5 to 7½	inch diameter inclusive.....Each,	1.50

Note.—Extra widths over 5/16 to and including ½ inch 25% extra.

Packed—One in Envelope with Steel Skids.

SNAP PISTON RINGS

Quality.

Quality rings in use mean more work, more horse-power, no smoking, less oil and fuel consumption and above all, an even compression.

Standard Individually Cast Rings, 45 degree angle slot, turned finish, fully guaranteed as to quality and accuracy. Sizes not listed take price of next larger size.

Diameter, in.	Width, in.	Each.
2	1/8-3/16	$0.20
2 1/8	1/8-3/16	.20
2 1/4	1/8-3/16-1/4	.20
2 3/8	1/8-3/16-1/4	.20
2 1/2	3/16-1/4	.20
2 5/8	3/16-1/4	.20
2 3/4	3/16-1/4	.20
2 7/8	3/16-1/4	.20
3	3/16-1/4-5/16	.20
3 1/8	3/16-1/4-5/16	.20
3 1/4	3/16-1/4-5/16	.20
3 3/8	3/16-1/4-5/16	.20
3 1/2	3/16-1/4	.20
3 1/2	5/16	.20
3 5/8	3/16-1/4	.20
3 5/8	5/16	.20
3 3/4	3/16-1/4	.20
3 3/4	5/16	.20
3 7/8	3/16-1/4	.20
3 7/8	5/16	.20
4	3/16-1/4	.22
4	5/16-3/8	.23
4 1/8	3/16-1/4	.23
4 1/8	5/16-3/8	.24
4 1/4	3/16-1/4	.24
4 1/4	5/16-3/8	.25
4 3/8	3/16-1/4	.25
4 3/8	5/16-3/8	.26
4 1/2	3/16-1/4	.26
4 1/2	5/16-3/8	.27
4 5/8	3/16-1/4	.27
4 5/8	5/16-3/8	.28
4 3/4	3/16-1/4	.28
4 3/4	5/16-3/8	.29
4 7/8	3/16-1/4	.29
4 7/8	5/16-3/8	.30
5	3/16-1/4	.30
5	5/16-3/8	.31

Packed—Rolled in Fibre Wax Paper.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LYNITE-PISTONS
ALUMINUM

An Established Success

Everything we've said about Lynite Aluminum Pistons has proved to be true.

The Marmon made its record-breaking run from San Francisco to New York with Lynite Aluminum Pistons. A Ford equipped with them made the trip from Seattle to St. Louis, 2847 miles, at an average running time of 25 miles per hour, getting 26 miles to a gallon of gasoline and using only 5 gallons of oil. 24,000 miles without fouling a spark plug is another record made by these pistons in a Ford car.

Ford owners want Lynite Aluminum Piston service more than anything else, and need it most. The noise and vibration, riding and driving discomfort and continual repairing caused by those heavy cast-iron Ford pistons in the motor are disadvantages they're conscious of all the time. Lynite Aluminum Pistons mean comfort, speed, silence, smoothness, long life, economy.

Every piston completely equipped with Genuine McQuay-Norris LEAK-PROOF Piston Rings—the Power Producers—Carbon Reducers.

Stock a set—show them—talk them—demonstrate them. It will mean a fine increase in your business this year and steadily growing profits for the future.

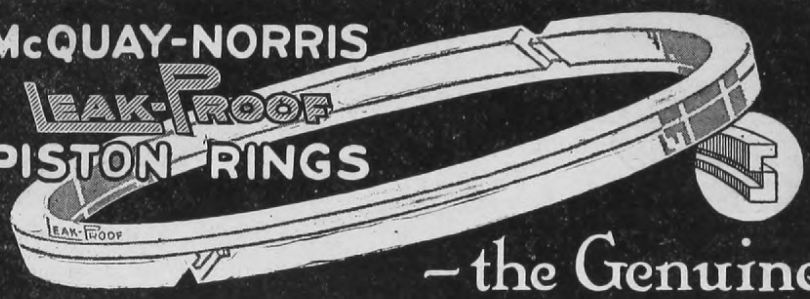
for FORDS

Consumer's Price
4 Pistons completely equipped with 12
McQUAY-NORRIS LEAK-PROOF PISTON RINGS **$30**

Equipped with McQUAY-NORRIS LEAK-PROOF PISTON RINGS

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

McQUAY-NORRIS LEAK-PROOF PISTON RINGS



—the Genuine

There is only one Genuine LEAK-PROOF Piston Ring. The LEAK-PROOF design can not be copied — LEAK-PROOF service can not be duplicated — LEAK-PROOF durability can not be equalled by any other make of piston ring. Made in over 2000 sizes, including all over-sizes, both over-widths and diameters. Exact dimensions to fit any automobile, gas engine, tractor, compressor, pump, etc., always in stock ready for immediate delivery.

PRICE LIST

Always give diameter of cylinder and width of ring.

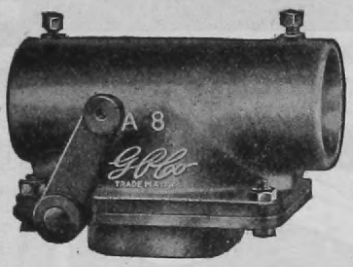
Diameter in Inches	Width and Price Each					Diameter in Inches	Width & Price Each	
	3/16	1/4	5/16	3/8	1/2		3/8	1/2 & over
2 3/8	$1.75	$1.75	-------	-------	-------	6 1/8	$2.25	$2.25
2 1/2	1.75	1.75	-------	-------	-------	6 1/4	2.25	2.25
2 5/8	1.75	1.75	-------	-------	-------	6 3/8	2.25	2.25
2 3/4	1.75	1.75	-------	-------	-------	6 1/2	2.25	2.25
2 7/8	1.75	1.75	-------	-------	-------	6 5/8	2.25	2.25
3	1.75	1.75	$1.75	-------	-------	6 3/4	2.50	2.50
3 1/8	1.75	1.75	1.75	-------	-------	6 7/8	2.50	2.50
3 1/4	1.75	1.75	1.75	-------	-------	7	2.50	2.50
3 3/8	1.75	1.75	1.75	-------	-------	7 1/8	2.50	2.50
3 1/2	1.75	1.75	1.75	$1.75	-------	7 1/4	2.50	2.50
3 5/8	2.00	2.00	2.00	2.00	-------	7 3/8	2.50	2.50
3 3/4	2.00	2.00	2.00	2.00	-------	7 1/2	2.50	2.50
3 7/8	2.00	2.00	2.00	2.00	-------	7 3/4	-------	2.75
4	2.00	2.00	2.00	2.00	$2.00	8	-------	3.00
4 1/8	2.00	2.00	2.00	2.00	2.00	8 1/4	-------	3.25
4 1/4	2.00	2.00	2.00	2.00	2.00	8 1/2	-------	3.50
4 3/8	2.00	2.00	2.00	2.00	2.00	8 3/4	-------	3.75
4 1/2	2.00	2.00	2.00	2.00	2.00	9	-------	4.00
4 5/8	2.00	2.00	2.00	2.00	2.00	9 1/4	-------	4.25
4 3/4	2.00	2.00	2.00	2.00	2.00	9 1/2	-------	4.50
4 7/8	2.00	2.00	2.00	2.00	2.00	9 3/4	-------	4.75
5	2.00	2.00	2.00	2.00	2.00	10	-------	5.00
5 1/8	2.00	2.00	2.00	2.00	2.00	10 1/4	-------	5.25
5 1/4	2.00	2.00	2.00	2.00	2.00	10 1/2	-------	5.50
5 3/8	2.00	2.00	2.00	2.00	2.00	10 3/4	-------	5.75
5 1/2	2.00	2.00	2.00	2.00	2.00	11	-------	6.00
5 5/8	2.00	2.00	2.00	2.00	2.00	11 1/4	-------	6.25
5 3/4	2.00	2.00	2.00	2.00	2.00	11 1/2	-------	6.50
5 7/8	2.00	2.00	2.00	2.00	2.00	11 3/4	-------	6.75
6	2.00	2.00	2.00	2.00	2.00	12	-------	7.00

The GENUINE are packed only in this special carton under this copyrighted label. Each ring is contained in this sealed parchment container. Refuse rings which are put up in any other way

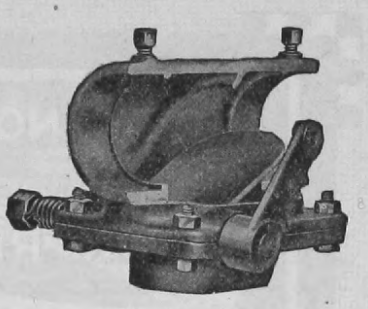
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MUFFLER CUT-OUTS

G-P



Exterior View.



Interior View.

The G-P Muffler Cut-Out is designed along practical lines, and while there is no superfluous metal, there is no sacrifice made that might impair its strength. Its simplicity is commendable—the illustrations herewith show both interior and exterior. The valve-tongue and its seat are so constructed that, when the Cut-Out is open, the line to the Muffler is completely shut off and the correct angle is obtained for deflecting the exhaust gases freely and without a possibility of back pressure. **The G-P Muffler Cut-Out** is made in two parts, thus enabling quick and thorough access to its interior. When the Cut-Out is closed, the pressure of the exhaust gases cannot open it. The course which the exhaust gases must take tends to prevent carbon accumulation on the valve or its seat. The area of the sections in every part of the Cut-Out is greater than any section of the exhaust pipe line; therefore, the relief of the motor is complete and the volume of sound intensified. **The G-P Muffler Cut-Out** will appeal to automobile owners. It is attached without flanges. The ends are bored to the exact size of the exhaust pipe, with shoulders at each end. A set screw prevents shifting and insures rigidity.

G-P—Cut-Out for Exhaust Pipes 1¼, 1⅜, 1½, 1⅝, 1¾ or 1⅞ inches.....Each, $4.50
G-P—Cut-Out for Exhaust Pipes 2, 2⅛, 2¼, 2⅜, 2½ or 2⅝ inches .....Each, 5.00
G-P—Cut-Out for Exhaust Pipes 2¾, 2⅞, 3, 3⅛ or 3¼ inches .....Each, 5.50

Packed—One Dozen in a Box.

GEMCO

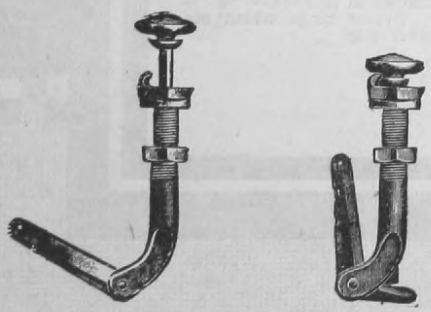
For Ford Cars.

Gemco Mufflers are made of Pressed Steel, Light in Weight, Electrically Welded. Furnished complete, anyone can install it.

Gemco Mufflers—Weight 6½ lbs.....Each, $2.30

Packed—One in a Box.

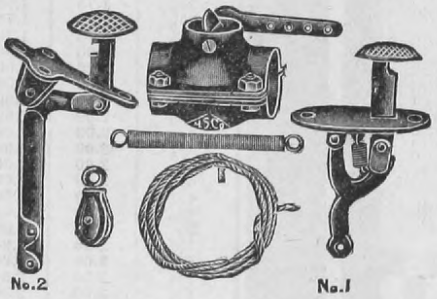
PEDALS



For Operating Horns, Cut-Outs, etc.

No. 195—Nickel Plated.....Each, $0.70

CUT-OUT OUTFITS



For Ford Cars.

These Outfits are complete ready to attach and contain either an M Cut-Out for 1⅜ inch Exhaust or Z Cut-Out for 2 inch Exhaust, as well as spring, pully block, cable and either the No. 180 or 185 Pedal.

No. 1—M Cut-Out, No. 185 Pedal.....Each, $0.65
No. 2—M Cut-Out, No. 180 Pedal.....Each, .65
No. 3—Z Cut-Out, No. 185 Pedal.....Each, .80
No. 4—Z Cut-Out, No. 180 Pedal.....Each, .80

CUT-OUTS

M Cut-Out only.....Each, $0.45
Z Cut-Out only.....Each, .60

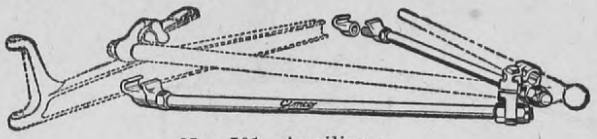
PEDALS

No. 185—Shown above as No. 1.....Each, $0.20
No. 180—Shown above as No. 2.....Each, .20

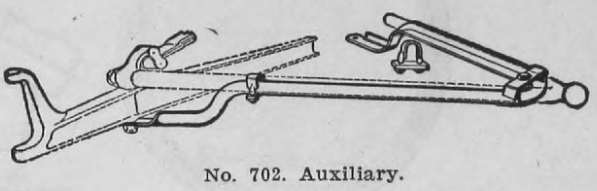
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FRONT RADIUS RODS

FOR FORD CARS



No. 701. Auxiliary.



No. 702. Auxiliary.

Strong Steel Rods for reinforcing regular rods; keeping axle true, making steering easier, lessening vibration and eliminating possibility of breaking.

No. 701—Weight, 12 lbs.....Each, $2.75 | **No. 702**—Weight, 8 lbs.....Each, $1.40

No. 703. Auxiliary.

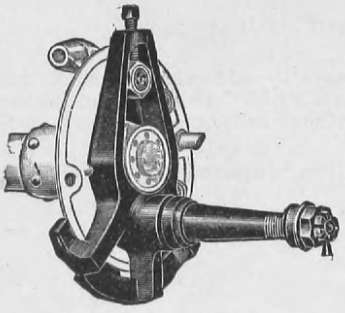
Practically the same as No. 702, only a little lighter in weight.

No. 705. Regular.

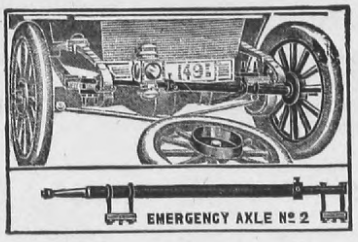
The Regular Radius Rod for Ford Cars.

No. 703—Complete .....Each, $1.00 | **No. 705**—Complete.....Each, $3.00

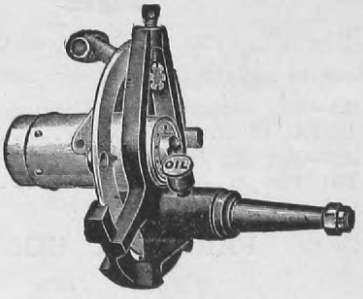
EMERGENCY AXLES



No. 1. For Ford Cars.



No. 2 For Any Make of Car.



No. 3 For Ford Cars.

Made especially for garages, to facilitate bringing in disabled cars.

No. 1—Allows a Ford with a broken front axle shaft to be placed on wheels in less than 2 minutes and to be hauled at any speed. Weight, 7 lbs.....Each, $ 5.00

No. 2—Allows any make of car to be placed on wheels in 10 minutes and hauled at any speed in safety. Weight, 28 lbs. Without Cones.....Each, 10.00

No. 3—For Fords. Steel Spindle is tapered to fit rear wheel hub. Spindle is stationary, revolving in a lubricated bearing 3 inches long. A compression grease cup is attached to the bearing. Weight, 8 lbs. .....Each, 6.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRAKE SHOES

For Ford Cars.

Perfection in Use.

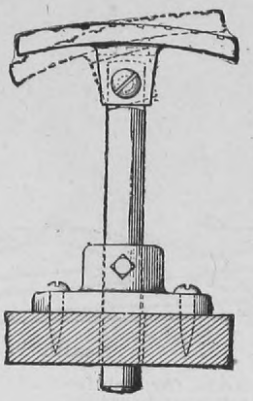
Two-Piece, Interchangeable with the regular Ford Shoes.

No. 1—Gray Iron ..... Per Set, $0.70
No. 2—With Brake Lining ..... Per Set, 1.30

One-Piece (Ford No. 2566).

No. 3—Gray Iron ..... Per Set, .80
No. 4—With Brake Lining ..... Per Set, 1.40

ACCELEREST

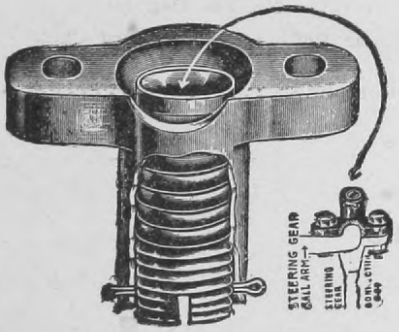


Perfection.

A Simple and Practical Foot Rest designed for use with the accelerator. It provides a pivotal foot rest and brace for the foot in a scientific manner. The most delicate adjustments of the accelerator pedal by the manipulation of the foot are thus made possible.

Accelerests—Japanned ..... Each, $0.60

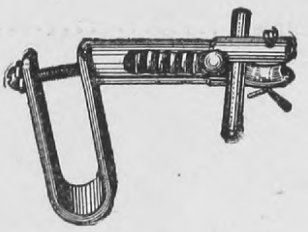
ANTI-RATTLERS



No 33. For Ford Cars.

Made to replace the solid cap and stop rattle.

No. 33—For Steering Gear Connecting Rod. Malleable, Japanned ..... Per Pair, $0.50
No. 22—For Radius Rod, Screw Adjustment, Japanned ..... Per Pair, .30

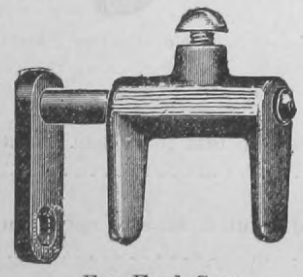


For Ford Brake Rods.

Will positively silence the objectionable shake and rattle of the Ford Brake Rod, without impeding full movement of the rod. Attached without drilling any holes.

No. 40—Malleable Iron, Japanned ..... Per Pair. $0.40

FAN BELT HOLDERS

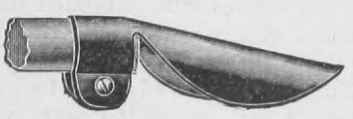


For Ford Cars.

Will absolutely prevent the Fan Belt from slipping off the pulley.

No. 18—Malleable Iron ..... Each, $0.18

EXHAUST DEFLECTORS



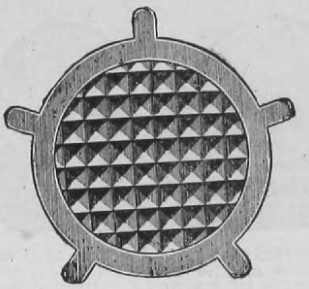
No. 16.

Clamps to end of exhaust pipe and deflects the gases. Can be turned in any direction.

No. 16—Pressed Steel, Japanned ..... Each, $0.16

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

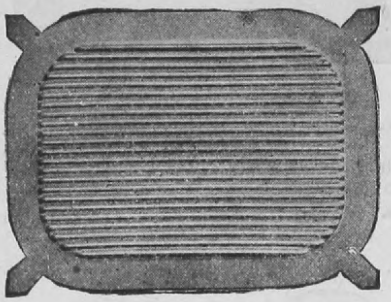
ALUMINUM HEEL PLATES



No. 1.

Place directly back of the pedals and save the appearance of the floor.

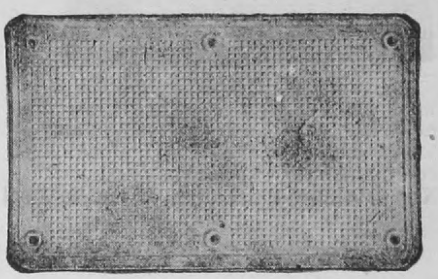
No. 1—Per Pair, ...$0.40



No. 2.

Aluminum Heel Plates protect the rubber floor covering and prevent wearing unsightly holes in it. Attached by inserting the projections and then bending them back.

No. 2—Aluminum Heel Plates.....Per Pair $0.50



No. 3.

These Plates are made of extra heavy tough Aluminum, having ¼ inch pyramids with ½ inch plain borders. Size 6x10½ inches with drilled screw holes.

No. 3—Aluminum Heel Plates.....Per Pair $0.75

RUBBER PEDAL PADS

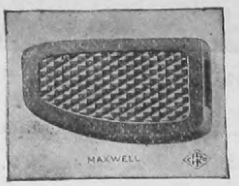
Rubber Foot Pedal Pads not only prevent the feet from slipping off the pedals and impart a sense of security to the driver, but, they mean real foot comfort on long drives. They eliminate jar and vibration from the engine.

FORD

Ford Pads—3 in a set .....Per Set, $1.00

OVERLAND

MAXWELL



Overland Pads—2 in a set.....Per Set, $1.00
Maxwell Pads—2 in a set.....Per Set, 1.00

DODGE

CHEVROLET

BUICK

STUDEBAKER

Dodge Pads—2 in a set.....Per Set, $1.00
Chevrolet Pads—2 in a set.....Per Set, 1.00
Buick Pads—2 in a set.....Per Set, $1.00
Studebaker Pads—2 in a set.....Per Set, 1.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WILLSON GOGGLES

Style Z9659. Zyl-Edge Eye Glass. A handsome, conservative eye glass for general wear. 1⅝-in. round amber lenses with thin shell rims. Here's the comfortable eye glass.

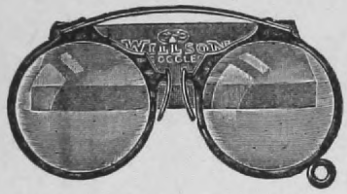
No. Z9659—Per Dozen $6.00

Universal Goggle. A wonderful seller because of the material and design in a goggle of its price. Strong wire-screen side guards, flexible cable temples, and 1⅞-in. round amber and fieuzal lenses.

Universal—Per Dozen.....$9.00

Style Z1W. The Zylbex Eye Protector. Shell frame with ventilated leather side guards and rust-proof flexible cable temples of white metal. 1¾-in. round amber lenses.

No. Z1W—Per Dozen $12.00

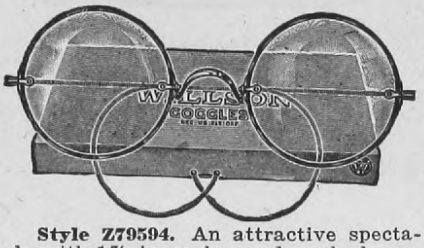


Style Z5. Zylbex Eye Glass. An unusually distinctive design in shell rims with long spring and black metal guards. 1⅝-in. round amber lenses. A much-preferred style by women.

No. Z5—Per Dozen $12.00

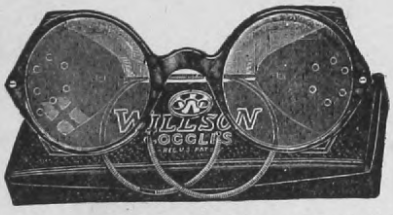
Style K1. All-shell goggle with ventilated side guards and round 1¾-in. amber lenses. Strong, light and compact. Each goggle in steel case.

No. K1—Per Dozen $12.00



Style Z79594. An attractive spectacle with 1⅞-in. amber and smoke lenses edged with shell. Flexible cable temples.

No. Z79594—Per Dozen $9.00



Style Z21W. Zylbex Protection Glass. Shell frame with rust-proof, flexible cable temples of white metal. 1¾-in. round lenses in amber and fieuzal.

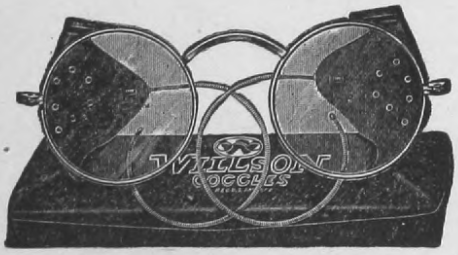
No. Z21W—Per Dozen $15.00

Style K7. All-shell spectacle, with 1¾-in. round lenses in amber and fieuzal. A distinctive and conservative style for resort and street wear.

No. K7—Per Dozen $9.00

Style 72594. Eye Protector Spectacle of rust-proof white metal; flexible cable temples and round 1⅞-in. lenses in amber, fieuzal, smoke and clear.

No. 72594—Per Dozen $3.00



Style A1. The famous Albex Eye Protector, biggest seller of any dollar goggle, and probably the most popular style ever designed. Ventilated leather side guards, flexible cable temples, adjustable brace bridge and 1⅞-in. round lenses in amber and clear.

No. A1—Per Dozen $12.00

Style ZF1W. The Willson Self-Adjusting Goggle is the last word in refinement, comfort, convenience and complete protection. A pure silk bridge adjusts goggle automatically. Shell rims, ventilated leather side guards and rust-proof flexible cable temples of white metal. 1¾-in. round lenses in amber and fieuzal.

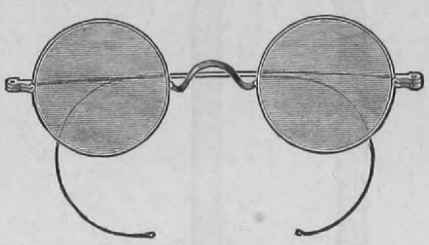
No. ZF1W—Per Dozen.....$18.00

No. 1. Display Case Outfit. Case contains 40 pairs of the 11 styles and colors as illustrated on this page.

No. 1—Outfits ..... Each, $30.50

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

GOGGLES

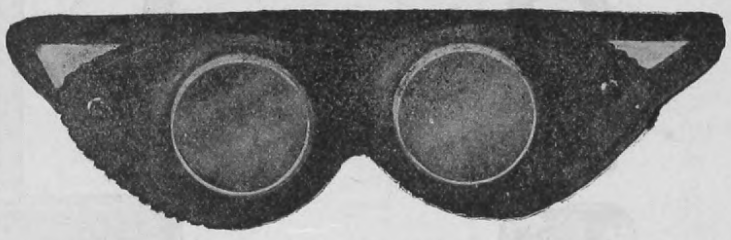


Sensible Protection Glasses have German Silver Frames, with special saddle nose pieces bent to bring glasses close together; 2 1/16 inch Round Glasses, in Smoke, Blue and Amber Mi-Coquille.

No. 2835—Three colors.....Per Dozen, $3.00

Ajax Protection Glasses have Zylonite, Shellite Frames with Shaped Bridge, Cable Temples, Fire Gilt Finish; 1¾ in. Round Glass of Amber Color. Each pair in a box with hinged lid.

No. 541—Amber Glass 1¾ in.....Per Dozen, $6.00



Aluminum Cups, Curved Glass, Flat Elastic, Assorted Fancy Leather Masks, 8¼x3 inches; velvet bound.

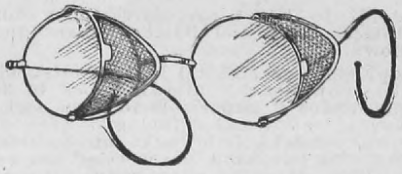
No. 88—Clear glass, 1⅞ inches in diameter..... Per Dozen, $.....

Packed—One Dozen in a Box.

Aluminum Cups, Flat Glass, Flat Elastic, Assorted Leather Masks. 7½x2¼ inches.

No. 83—Clear glass, 1¾ in.....Per Dozen, $.....

Packed—One Dozen in a Box.



German Silver Frame, Self-Adjusting, Cable Wire Temples, Flat Glasses.

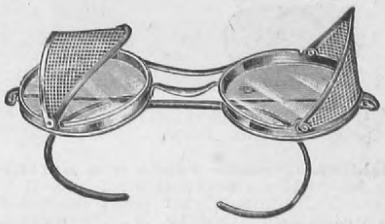
No. 1499A—Amber glass, 2 in...Per Dozen, ...

No. 1499C—Clear glass, 2 in....Per Dozen, ...

Packed—In Telescope Cardboard Cases.

KRAFT-GUARD SAFETY GOGGLES

KRAFT-GUARD



German Silver Frame, Wide Comfortable Nose Bridge, Full Cable Temples and Folding Wire Side Screens. The lenses are of best quality specially prepared glass, as nearly as possible unbreakable.

Kraft Guard—Glasses may be sterilized with live steam without injury..... .....Per Dozen, $15.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE AUTOMOBILE PADLOCKS

No. 701.

No. D701.

For Metal Tire Holders, Tool and Battery Boxes.

No. 701—1⅛ inch, Bronze.....Per Dozen, $20.85
No. D701—With Dust Guard.....Per Dozen, 23.80
Packed—Half Dozen in a Box.

No. 1701.

No. D1701.

No. 1701—1⅛ inch Bronze.....Per Dozen, $21.85
No. D1701—With Dust Guard.....**Per Dozen,** 24.80
Packed—Half Dozen in a Box.

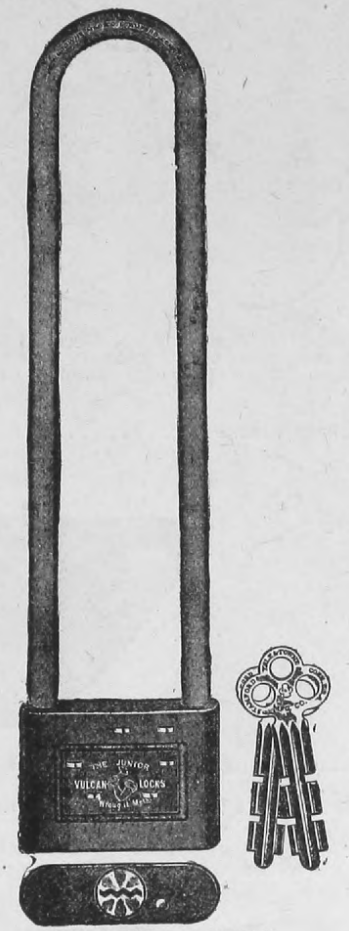
Note—Nos. 701 to D1701 are particularly adapted for Metal Tire Holders, Tool and Battery Boxes and are described as follows:

Cast Bronze Metal Case, Nickel Plated Self-Locking Steel Spring Shackle. Low Shackle allowing lock to fit close to hasp and staple makes it impossible to force lock and prevents the annoying rattle and defacing of the box. Locks automatically when shackle is brought into locking position. Can be operated with one hand by inserting key and pulling down on lock. Key cannot be withdrawn or drop out until shackle is in a locked position. Four Pin-Tumblers, Two Nickel-Bronze Paracentric Keys. **Can be** Master-Keyed.

No. D830.

For Tire Holders, Gasoline Tanks and Garage Doors.
Cast Bronze Metal Case, Self-Locking Nickel Plated Steel Shackle, Five Pin Tumblers, Two Nickel Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. D830—1½ inch With Dust Guard.....
.....Per Dozen, $31.80
Packed—One-Twelfth Dozen in a Box.



Nos. 2115J and 3115J.

Motorcycle Padlock, Seamless Steel Case, specially treated to prevent rusting, Brass Interior Parts, Nickel Plated Self-Locking Steel Spring Shackle. Easy to apply, the shackle encircles both tubes of the front fork, together with two or more spokes, thus positively preventing the wheel from turning. Fits all makes of machines, is convenient in size and can be carried in the tool bag or pocket. Two Nickel Plated Corrugated Steel Keys.
No. 2115J—2 in. Case, 6⅞ in. Shackle.....
.....Per Dozen, $7.95
No. 3115J—2 in. Case, 5 in. Shackle.....
.....Per Dozen, 7.05
Packed—One-Twelfth Dozen in a Box.

No. 877.

Cast Bronze Metal Case and Self-Locking Spring Shackle, Fire Wheel Finish. Four Lever Tumblers, Two Nickel-Bronze Fluted Keys, 144 Changes.
No. 877—2½ inches, Bronze.....Per Dozen, $62.50
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE AUTOMOBILE PADLOCKS

Nos. 563VX and 565VX.

Seamless Brass Case, Buffed; Nickel Plated Self-Locking Steel Spring Shackle. Three Lever Tumblers, Two Nickel Plated Flat Steel Keys, 48 Changes.

No. 563VX—1½ inches, Brass.....Per Dozen, $16.65
No. 565VX—2 inches, Brass.....Per Dozen, 20.00

Packed—Half Dozen in a Box.

No. 830.

Heavy Cast Bronze Metal Case, Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. 830—1½ inches, Bronze.....Per Dozen, $28.80

Packed—Each in a Separate Carton, Half Dozen in a Box.

Nos. 1563 and 2563.

Seamless Steel Case, Bower-Barffed; Nickel Plated Self-Locking Spring Shackle, Three Lever Tumblers, Two Nickel Plated Flat Steel Keys, 48 Changes.

No. 1563—1½ in. Case, 1¾ in. Shackle Clearance ..... Per Dozen, $14.00

No. 2563—1½ in. Case, 2½ in. Shackle Clearance ..... Per Dozen, 15.05

Packed—Half Dozen in a Box.

No. 840.

Heavy Cast Bronze Metal Case and Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. 840—1¾ inches, Bronze .....Per Dozen, $35.75

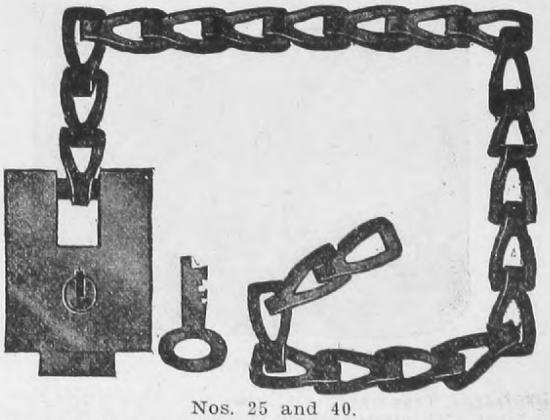
Packed—Each in a Separate Carton, Half Dozen in a Box.

No. 36.

Tire Locks. This Tire Lock is constructed of the strongest crucible steel cable obtainable, making it preferable in every way to any chain lock. The cable is covered with heavy genuine leather, making it neat and durable and is amply long enough to lock any two spare tires. Corbin lock furnished.

No. 36—36 inch Cable with Lock.....Per Dozen, $21.00

Packed—Quarter Dozen in a Package.



Nos. 25 and 40.

Tire and **Robe** Locks. Nickel Plated Cast Bronze Lock with Japanned Case, Hardened Steel Safety Chain. Extensively used for Safe Guarding Tires, Robes and Coats.

No. 25—25 inch Chain.....Per Dozen, $20.00
No. 40—40 inch Chain.....Per Dozen, 24.00

Packed—Half Dozen in a Box.

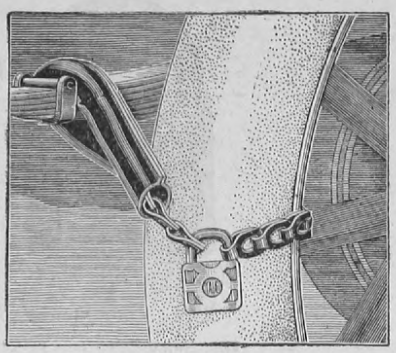
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

POWERSTEEL AUTOWLOCKS TIRE AND AUTO LOCK CHAINS

POWERSTEEL AUTOWLOCKS

Consist of four feet of water-proofed Yellow Strand Wire Rope with a spliced-in eye at each end and a Padlock. The Rope is wound with a strong cord which will last as long as the rope. Powersteel Autowlocks can also be used as an emergency chain to secure traction.

Powersteel Autowlocks ..... Each, $2.25



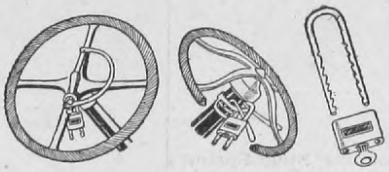
AMERICAN TIRE AND AUTO LOCK CHAINS

Made of Flat Link Steel Chain. The Links are 1½ inches long and ¾ inch wide. Easily attached, Strong and Noiseless. Occupy small space when not in use.

No. 22—36 inches long, galvanized ..... Per Dozen, $4.60
No. 42—36 inches long, covered with black Pantasote ..... Per Dozen, 5.80
No. 52—36 inches long, covered with best grade oil tanned leather ..... Per Dozen, 9.50
No. 521—42 inches long, covered with best grade oil tanned leather ..... Per Dozen, 11.10
No. 522—44 inches long, covered with best grade oil tanned leather ..... Per Dozen, 11.60
No. 523—48 inches long, covered with best grade oil tanned leather ..... Per Dozen, 12.70

Note.—Above prices **do not** include Locks. For Padlocks see preceding pages 810 and 811.
Packed—One Dozen in a Carton.

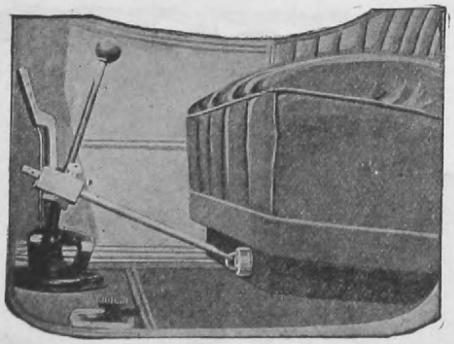
STEERING WHEEL LOCKS



Evans Auto Locks for locking Spark and Gas Levers. Polished Brass Case. Furnished with adjustable steel shackle and two corrugated steel keys.

Evans Auto Locks ..... Each, $1.00

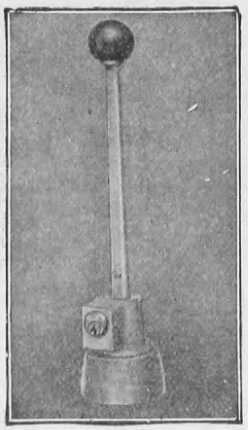
TRANSMISSION LOCKS



Protector.

Protector Transmission Locks are constructed of hardened steel with non-pickable barrel locks. A Half Inch steel rod (adjustable for different cars) runs through the lock and is supplied at the opposite end with a connector for attaching to rear panel board below seat. The device locks automatically; to unlock, insert key, give turn when device is swung around to seat panel and clamped until next needed. Applied to any make of car by drilling for bolts and adjusting rod to proper length.

Protector Transmission Locks ..... Each, $6.50



Neutralock.

Absolute Protection from Theft, unauthorized use and accidental starting. Upon pressure of hand or foot it automatically locks the gear shift lever in neutral.

H Type Transmissions ..... Each, $6.50
Ball Type Transmissions ..... Each, 7.50

Note.—Specify Make and Model of Car.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

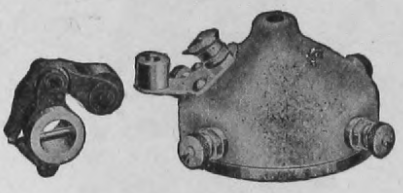
COIL UNITS

For Ford Cars.

Interchangeable with Ford No. 4732. Furnished complete with upper and lower vibrator springs, ready to attach.

K-W Coil units ..... Each, $2.50

TIMERS



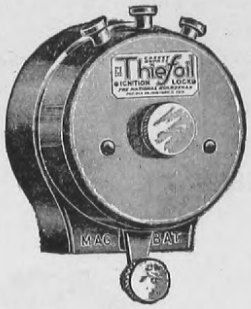
For Ford Cars.

High Grade Steel, Lathe Turned and Ground, carrier is Bronze Casting with Steel Roller.

No. FT18—With terminals and oil cups... Each, $1.75
No. FT18W—Less terminals and oil cups.. Each, 1.60

IGNITION LOCKS

Thiefoil



Combination.

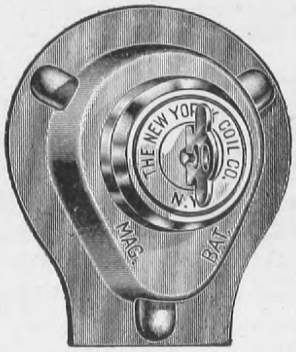
Yale Cylinder.

Thiefoil Locks for Ford cars can be attached permanently in a very few minutes. A screw driver is the only tool required. No changes are necessary in the wiring. There is nothing to get out of order. Proper manipulation of the buttons on top of Combination Lock or the use of the key on the Yale Lock are absolutely necessary to release the lock.

Thiefoil—Combination ..... Each, $3.50
Thiefoil—Yale Cylinder..... Each, 3.50

Note.—The owner can change the combination on the Thiefoil at any time. The Yale locks are all different, no two locks have keys alike.

SECURITY SWITCH LOCKS



Security Switch Locks can be installed on a Ford Switch in three minutes without changing wires or bolts. All locks are different; each has two keys.

Security Switch Locks..... Each, $3.00

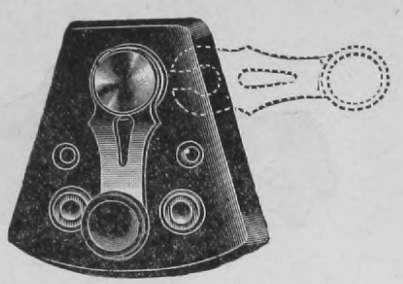
K-W AUTOLOCK SWITCHES

The K-W Autolock Switch protects a car from thieves, the unauthorized use of same when left in garages and is even proof against an owner's self-negligence, because he cannot forget to lock his car. It takes the place of an ordinary switch and can be easily attached to any make of coil in five minutes by using a screw driver and a pair of pliers. It fits right over regular Ford switch on metal box, entirely covering and protecting the hard rubber base. Removing the screw will not remove the lock unless the key is inserted and turned to the magneto side. Each K-W Autolock Switch is provided with a Yale lock and three keys. No two locks have keys alike.

K-W Autolock Switches ..... Each, $3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IGNITION SWITCHES



Waterproof Type, Detachable Lever, Designed especially for exposed work. The removable lever prevents tampering with switch and guards against accidental running down of batteries.

No. 16350—2⅜ x 2½ in. ..... Each, $1.00

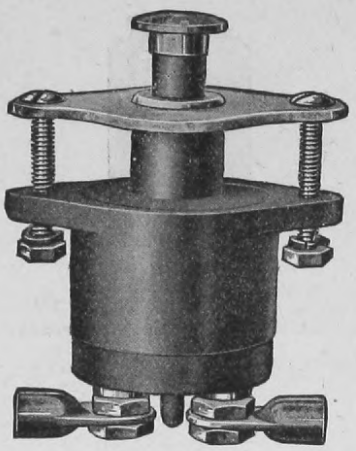
Detachable Lever Switches

For Battery Circuits.

Can be used in ignition or any battery circuit where it is desirable to detach the lever from the base. Size, 1⅞x1½ inches.

No. 2112—Switch, one point, ... Each, $0.45
No. 2113—Switch, two point ..... Each, .50
No. 2114—Switch, three point ..... Each, .55
No. 2115—Switch only ..... Each, .12

MOTOR STARTING SWITCHES

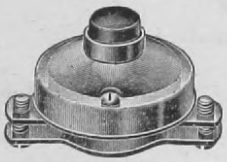


No. 1401. Foot Control.

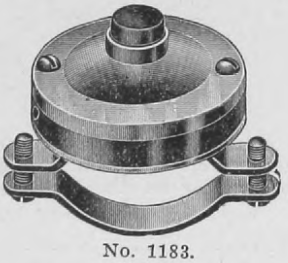
For mounting on the floor. Used for the control of Electric Motor Starters. Cast Iron Frame, Copper Contacts, Self-Cleaning, Sturdy and simple in operation.

No. 1401—Switches ..... Each, $3.00

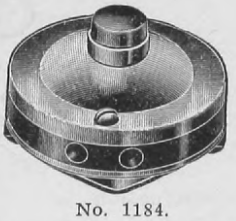
AUTOMOBILE PUSH BUTTONS



No. 1181.



No. 1183.



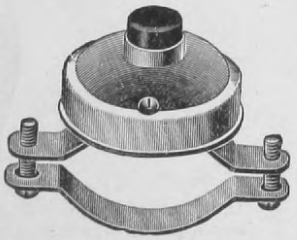
No. 1184.

No. 1181—Waterproof Type for use on steering wheels. Metal Base and Cap with Composition Button. Nickel Plated. Diameter 1 11/16 inches ..... Each, $0.80

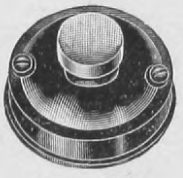
No. 1183—Composition Base, mounted on Brass Clamps for use on Steering Wheel. Brass Finish. Diameter, 2⅛ inches ..... Each, 1.30

No. 1184—With Clamps to attach to Spider, otherwise the same as No. 1183 ..... Each, 1.30

No. 1185.



No. 1186.



No. 1187.

No. 1188.

No. 1185—Polished Rubber Base for mounting on flat surface. Connects at side or on bottom. Brass Finish. Diameter 2⅛ inches ..... Each, $1.30

No. 1186—Without Waterproof Cap, otherwise the same as No. 1181 ..... Each, .70

No. 1187—For Flat Surface Work, otherwise the same as No. 1181. Japanned ..... Each, .70

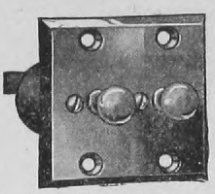
No. 1188—Black Moulded Composition. For concealed or open wiring. Heavy springs, contacts, screws and terminals. Diameter 1 9/16 inches ..... Each, .50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

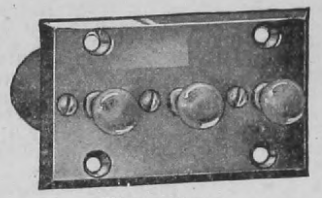
PUSH BUTTON SWITCHES

LIGHTING

Single Gang.



Two Gang.

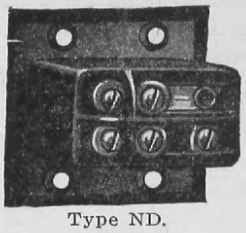


Three Gang.

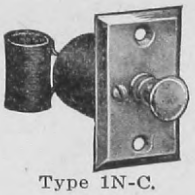
Neat, Simple and Easily Installed. Resist heat and rough usage. Buttons are large enough to be grasped by a gauntletted hand. Finished regularly with Black Plate and Nickel Plated Button.

Points	1	2	3	4
Mounting Plate, in.	1½x1	2x2 5/16	1 11/16 x 2 13/16	2x4 1/16
Type N Switches—Each	$0.50	1.00	1.50	2.00

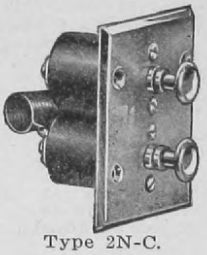
DIMMING



Type ND.



Type 1N-C.



Type 2N-C.

Universal Dimming Switches are used without alteration for both Lighting and Dimming purposes.

Type ND—With wiring diagrams..... Each, $1.25

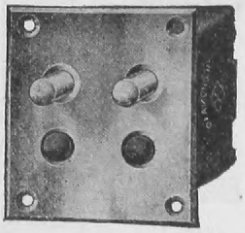
Dimming Switches with Resistance used in connection with Lighting Switch already on car or alone.

Type 1N-C—Used with Lighting Switch. Order for 6 or 12 volts as wanted.....Each, $0.75

Type 2N-C—Two Gang for Lighting and Dimming. Order Voltage as wanted.....Each, 1.25

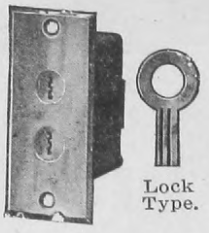
BATTERY TYPE

No. 31.



No. 32.

No. 631.



Lock Attachment.

Designed for low voltage work with automobile batteries. Quick make and break, mica insulation, permanent face plate, rear wiring. Binding screws with inverted cup washers hold the wire securely. Brush Brass Plate and Unbreakable metal push buttons.

Nos.	31	32	33	34	331	631	13
Type Single Pole	Single	2 Gang	3 Gang	4 Gang	3 Way	Automatic Door	2 Circuit
Each	$0.80	1.60	2.40	3.20	.96	.80	1.76

Lock Attachments—For Single Pole and 3-Way Battery Switches .....Per Gang, $0.20

Keys—For Lock Attachments..... Each, .10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

IGNITION SYSTEMS AND VIBRATORS

ATWATER KENT FORD SYSTEM.

The Ford owner who wishes to obtain the best possible power and efficiency from his motor can now install the same high grade ignition equipment used by such well-known car manufacturers as Chalmers, Peerless, Hupmobile, Regal, King, Imperial, Velie and many others.

The Atwater Kent Ford System is made in two forms: Type "K-2" with automatic spark control and Type "H" for use in connection with the regular spark lever.

The automatic spark control greatly improves the performance of the car and in addition makes it safer, easier and pleasanter to drive.

A few of the many advantages of Atwater Kent ignition on a Ford are as follows::

1—Perfect synchronous ignition at all speeds.

2—Smooth running without missing or uneven firing, no matter how slow or how fast the motor is running.

3—Easier starting in cold weather.

4—Will idle at lowest possible speed and throttle down to three miles per hour on high gear.

5—All vibrator and magneto troubles eliminated. There are no vibrators and the magneto is not used.

6—Leaves magneto free for electric lighting.

7—Increased gasoline economy due to the higher efficiency of the motor when the spark is always properly timed.

8—Improved acceleration.

9—Safe starting, the spark being automatically retarded so as to prevent back-firing.

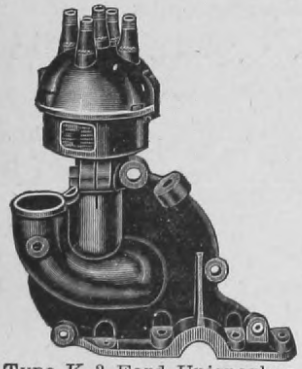
The Atwater Kent Ford System is quickly and easily installed without alterations or machine work. It will give better results on the Ford cars than any magneto and at a much lower price.

The Atwater Kent Ford System consists of:

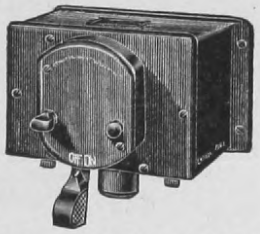
1—Unisparker complete with necessary equipment for mounting.

2—Coil and switch.

The Atwater Kent coil can be furnished with either a substantial kick switch, which may be operated with the foot, or with a plate switch somewhat simpler and cheaper in construction, if desired.



Type K-2 Ford Unisparker Complete.



Kick Switch Coil on Ford Dash.

K-2 Atwater Kent System with automatic spark advance, including kick switch . . Each, $30.00

K-2 with plate switch coil . . . . . Each, $28.00

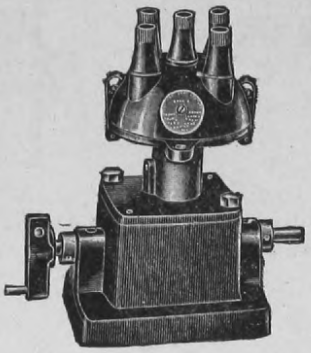
Type H Unisparker with Bracket.

Plate Switch Coil.

Type H Atwater Kent System, without automatic spark advance, for connection to switch lever, including kick switch coil . . . . Each, $24.00

Type H with plate switch coil . . . . . Each, 22.00

UNISPARKER MAGNETO MOUNTINGS



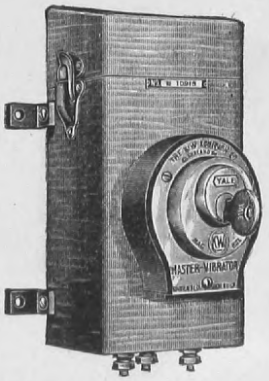
Type K-2.

Type H.

When it is desired to install either the Type K-2 or H Atwater Kent System in place of a magneto, a special base with enclosed gears is provided at an extra charge. The base and the distance from the center of the drive-shaft to the base are of standard magneto dimensions. It will be noted that the drive-shaft on this mounting projects from both ends of the gear case, thus permitting the same instrument to be used for either clockwise or counter clockwise rotation of the magneto drive-shaft.

K-W MASTER VIBRATORS

With Kick Switch.



With Autolock Switch.

Eliminating the four separate vibrators on the coil, it gives perfect adjustment and timing of the spark, which creates more power in the motor. It will give less carbon in the motor, easier starting and a smoother running engine and on less gasoline. Install the K-W Master Vibrator on your Ford car and let us prove this.

With Kick Switch $15.00
With Autolock Switch 16.00

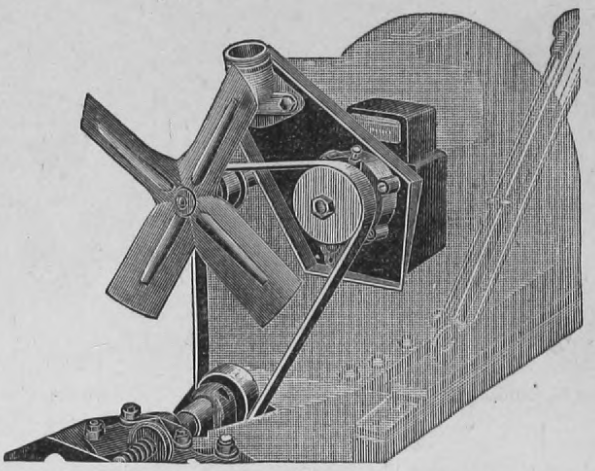
Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ELECTRIC LIGHTING OUTFITS

GENOLITE

Type H (6 Volt System) **For Fords.**

Lights Head and Tail Lamps from Battery with Dimming Switch meeting the demand for a low-priced electric lighting system to replace the method of taking the current from magneto. This is done with the motor running or idle. The System is composed of units designed according to accepted automobile practice and contains the latest features of lighting systems as employed on high priced cars.



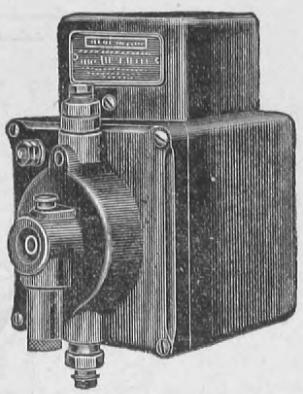
The Generator is of the square type, mounted on a stamped steel bracket, no machine work required. It begins charging a car at a speed of nine miles per hour, and at 13-14 miles an hour gives 7 amperes, which charging rate is held constant by means of the Ward-Leonard regulator.

The Battery is guaranteed and of ample capacity. It is 3 cell 40 ampere hour capacity, 6 volt. It is capable of lighting the headlamps and tail lamp for approximately 25 hours on one full charge of the battery. It is located on the running board and held in position by straps with the entire assembly in a metal battery box.

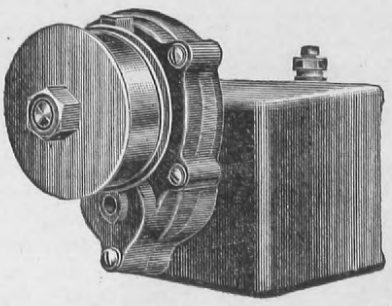
The Combination Cut-out and Controller is mounted integral with the generator. This instrument is the Ward-Leonard constant current type. It provides constant output from the generator regardless of speed and has the important effect of maintaining the battery in a fully charged condition.

The Control Switch is accessibly located on the steering post. It is of the two-gang type. The lights can either be thrown on full touring candle power or dimmed for city use. The bulb of the headlights is equipped with two filaments, one giving full candle power, and the other a dim light for meeting anti-glare regulations. The Drive is by belt which obviates stretching, belt adjustments and slippage.

Genolite Type H (6 volt) **System**—Complete with every detail, ready for installation with directions for same ..... Each, $38.85



Generators—Only with Cut-out and Controller as in Type H Systems ..... Each, $24.85

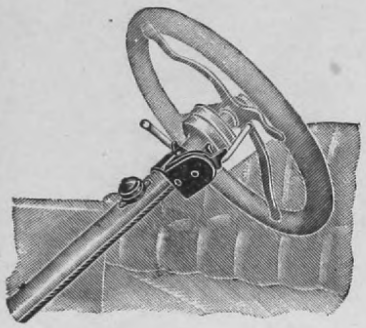


Generators—With Drive Cut-Out and Controller as in Type H Systems ..... Each, $28.85

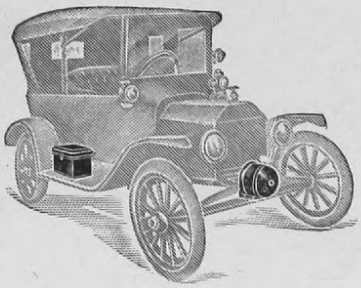
Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

LIGHTING AND STARTING OUTFITS

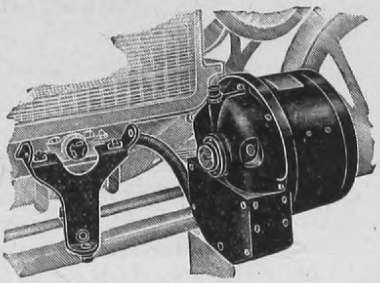
EVEREADY



Showing Control on Wheel.



Starter and Battery Box in place.



Attached to Ford Car.

This system has been scientifically designed to operate with the FORD motor without impairing its flexibility, power or balance. It is the last word in simplicity, strength and economy; has few parts, is light in weight, and being single wired is easily installed in a few hours without even removing radiator.

The EVEREADY FORD Starting and Lighting System consists of a combined starting motor-generator unit, a 12-Volt EVEREADY Non-Sulphating Storage Battery provided with enameled steel case and suitable "hold-downs" for attaching to running board, and the necessary switches and wiring—everything except the lamps.

The motor-generator is mounted in front, having its full weight supported by the front cross member of the FORD chassies. Direct coupled to motor shaft, it has no gears, chains or sprockets for driving generator, and thus does away with the usual loss of power, noise, adjustments and repairs. Generator drives at engine speed, has effect of secondary fly-wheel and does not "drag" on motor nor consume power. No additional weight is added to front engine support, engine balance is not disturbed, and engine cooling is not interfered with.

The EVEREADY Non-Sulphating Storage Battery is mounted on right hand running board where it is instantly accessible, and where its weight tends to reduce sag of car-body on driver's side.

Master starting switch is located on steering column and is operated by full retarding spark lever. Conveniently accessible, combines starting and spark adjustment in one movement, eliminates back-firing and ensures immediate starting at all times.

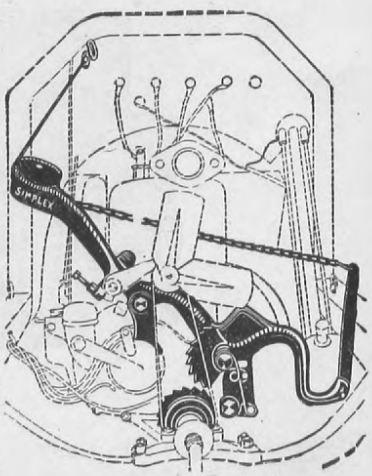
Lighting switch is located on heel-board underneath seat at extreme left. Within easy reach of driver's left hand. Starting tables and lighting wires, as well as carburetor throttler complete the system.

Eveready—Lighting and Starting Outfit, complete as described ..... Each, $85.00

MECHANICAL STARTERS

Simplex

For Ford Cars.



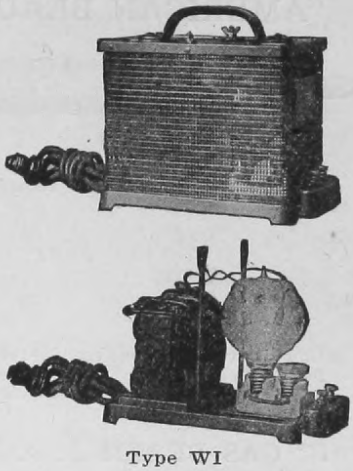
Simple in construction. No parts to get out of order. Attached without boring holes in the frame or engine. Located under the hood and out of sight. Weighs 9 pounds. It is impossible for the Simplex Starter to back fire and injure the operator.

Simplex—Starters ..... Each, $10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MERCURY RECTIFIERS

Type E. 10 Amperes.



Type WI

Westinghouse Rectifiers consist of a rectifier Bulb for changing an Alternating Current supply into the Direct Current required for charging batteries, with regulating apparatus for adjusting the charge. When set according to instructions the charge is automatically regulated.

Type E Outfit can be used on either 110 or 220 volt, 60 to 133 cycle circuits by changing link connections on the front of the panel. The Outfits are also provided with an alternating current line switch and a direct current fuse. Especially adapted to the individual user or the small garage. It will charge 3 to 10 lead cells and the current can be adjusted by means of three small dial switches.

Type WI Outfits are simple and inexpensive outfits for charging 6 cells or less without any adjustment whatever. Furnished with cord and attachment plug.

RECTIFIER OUTFITS FOR 60 CYCLE CIRCUITS

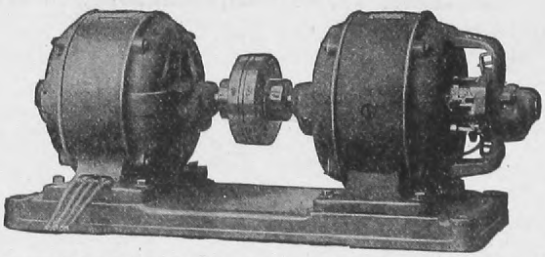
Nos.	Type	A. C. Volts	Lead Cells	D. C. Volts	D. C. Amperes	Approx. Ship. Wt. lbs.	Each
222305	E	110 or 220	1 to 18	2 to 45	5	160	$ 89.00
222306	E	110 or 220	1 to 36	2 to 85	5	160	105.00
154611A	E	110 or 220	3 to 10	6 to 28	10	145	94.00
222307	E	110 or 220	1 to 18	2 to 45	10	160	111.00
222308	E	110 or 220	1 to 36	2 to 85	10	175	138.00
242126	WI	110	1 to 6	1 to 15	5	27	25.00

Note.—Price includes outfit complete, with one bulb, but **without** meters.

ACCESSORIES

No. 125186A—Bulb for Type E Outfit, Style No. 154611A ..... Each, $11.00
No. 222324 —Bulb for Type E Outfit, Style No. 222305-6-7-8 ..... Each, 11.00
No. 242127 —Bulb for Type WI Outfit ..... Each, 7.50
No. 152526 —Time Switch for all types ..... Each, 10.00

MOTOR GENERATORS



Westinghouse Motor Generators furnish economically a direct current sufficient for charging standard batteries used with automobiles. The Motor Generator is made up of an alternating current motor and a low-voltage direct current generator exceedingly simple in operation.

To afford reverse current protection or provide against the battery operating the generator as a motor, if the supply voltage should fail, a Type KR relay consisting of a direct current circuit breaker with an alternating current low voltage release coil on a slate panel for separate mounting can be furnished at an extra price when desired.

Ratings

No. 1—100 Watts, 12 Volts, 8 Amperes, will charge 1 or 2, 6-volt Batteries. Revolutions per minute, 1725
No. 2—170 Watts, 12 Volts, 14 Amperes, will charge 1 or 2, 6-volt Batteries. Revolutions per minute, 1725
No. 3—250 Watts, 32 Volts, 8 Amperes, will charge 1 to 5, 6-volt Batteries. Revolutions per minute, 1725
No. 4—440 Watts, 32 Volts, 14 Amperes, will charge 1 to 5, 6-volt Batteries. Revolutions per minute, 1725
No. 5—400 Watts 50 Volts, 8 Amperes, will charge 1 to 8, 6-volt Batteries. Revolutions per minute, 1725
No. 6—700 Watts, 50 Volts, 14 Amperes, will charge 1 to 8, 6-volt Batteries. Revolutions per minute, 1725

Prices on Motor Generators furnished on application.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

"AMERICAN BEAUTY" ELECTRIC SOLDERING IRON

This soldering iron is of very simple construction and is made on the unit system so that every part is easily removable, replaceable and interchangeable. It can easily and quickly be taken apart by anyone. Every possible requirement is covered by the following three sizes:

Nos.	Watts.	Diam. of Tip	outside Diam. over all.	Length over all.	Weight.	Each.
3138	100	3/8 in.	13/16 in.	12 1/16 in.	18 oz.	$ 7.00
3158	200	5/8 in.	1 3/16 in.	12 3/32 in.	26 oz.	9.00
3178	300	7/8 in.	1 1/2 in.	13 21/32 in.	42 oz.	11.00

Made in the following voltage ranges: 95-104; 105-114; 115-125; 190-209; 210-229; 230-250. Can also be supplied for 32 volts at list price plus 50c.

Note.—Unless otherwise specified iron for 105-114 volts will be shipped.

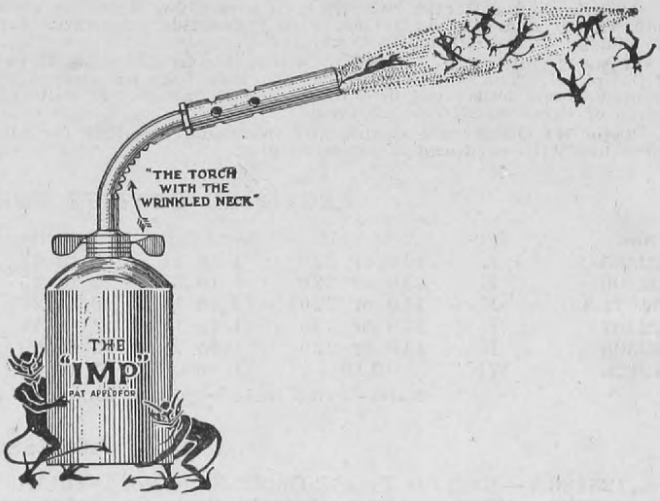
ELECTRIC GAS BRAZING TORCHES

For Annealing, Hardening and Brazing. Always Ready for Instant use; **110 Volt Direct** or 60 cycle **Alternating** Current. Outfit consists of Motor Blower, 5 ft. Air Hose, 5 ft. Gas Hose, Brazing Blow Pipe, 5 ft. cord, switch and attachment plug.

Tyler—Torches complete, ...Each, $25.00

Note.—Specify current to be used.

GASOLINE BLOW-TORCHES



Starts with a match, has no pump or valve, is entirely automatic and burns 2 hours on one filling. For hand or bench work. Produces a perfect Bunsen flame of over 2000 degrees Fahrenheit. The corrugated neck adds much to its efficiency.

Imp—All Brass, Nickel Plated.....Each, $1.50

GASOLINE TORCHES

No. 31. Style of No. 37.

Without Soldering Copper Attachment.

No. 31—Capacity One **Quart**.....Each, $7.60
No. 37—Capacity One **Pint**.....Each, 6.80

Polished Seamless Brass Tank, with concaved bottom. Fitted with improved Burner which protects the gas or vapor from the wind and cold and an Automatic Air Pump, with check valve, which insures the desired air pressure at all times.

No. 32. Style of No. 38.

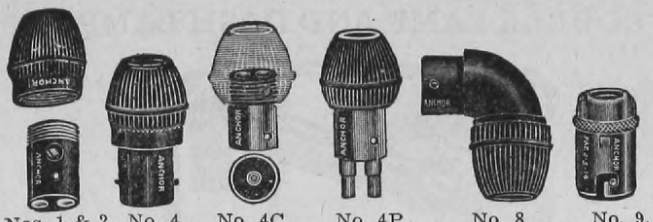
With Soldering Copper Attachment.

No. 32—Capacity One **Quart**.....Each, $8.00
No. 38—Capacity One **Pint**.....Each, 7.20

Note.—For full line of Torches, Fire Pots, Soldering Furnaces, etc., see pages 537 to 539.

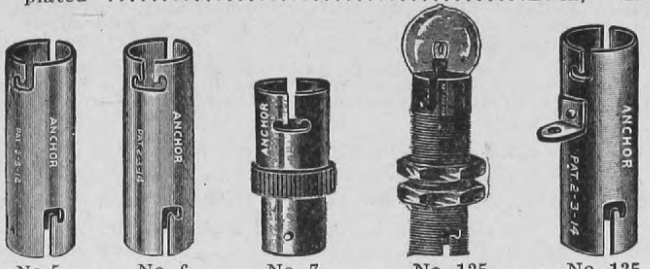
Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

CONNECTORS AND SWITCHES



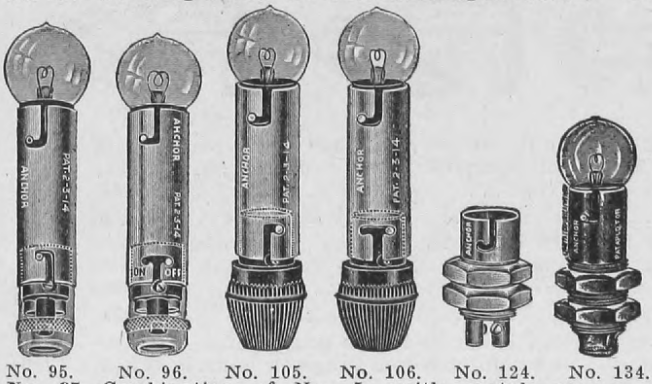
Nos. 1 & 2. No. 4. No. 4C. No. 4P. No. 8. No. 9.

No. 1—Composition rubber cap.....Each, $0.04
No. 2—Hard rubber plug, threaded.....Each, .18
No. 4—Rubber plug and cap together.....Each, .22
No. 4C—The same as No. 4, but made to convert two wires to single contact, complete with cap....Each, .35
No. 4P—Plunger plug for tail lamps.....Each, .40
No. 8—Elbow plug and cap together.....Each, .45
No. 9—Plug screw terminals with metal cap, nickel plated .....Each, .22



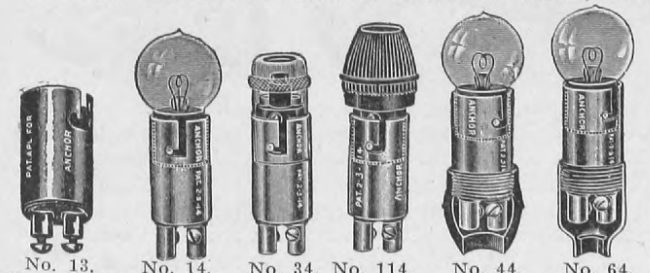
No 5. No. 6. No. 7. No. 125. No. 135.

No. 5—Double end socket, plain.....Each, $0.26
No. 6—Double end socket, switch type.....Each, .28
No. 7—Extension plug socket, switch type....Each, .50
No. 125—Converting socket, with nuts for side lights .....Each, .45
No. 135—Focusing socket for Ford head lights..Each, .45



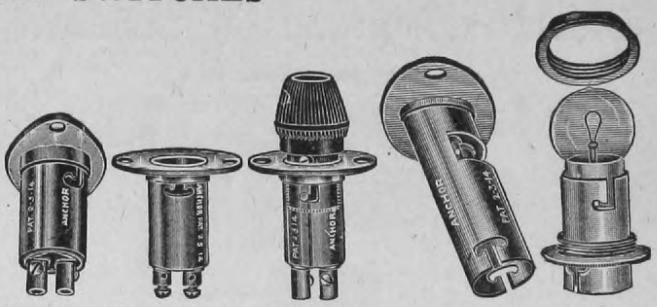
No. 95. No. 96. No. 105. No. 106. No. 124. No. 134.

No. 95—Combination of No. 5, with metal cap plug .....Each, $0.48
No. 96—Combination of No. 6, with metal cap plug .....Each, .50
No. 105—Combination of No. 5, with rubber cap plug.....Each, .48
No. 106—Combination of No. 6, with rubber cap plug .....Each, .50
No. 124—Metal dash socket, end leads.....Each, .40
No. 134—Lamp converter, screw terminals, metal cap and nuts .....Each, .56



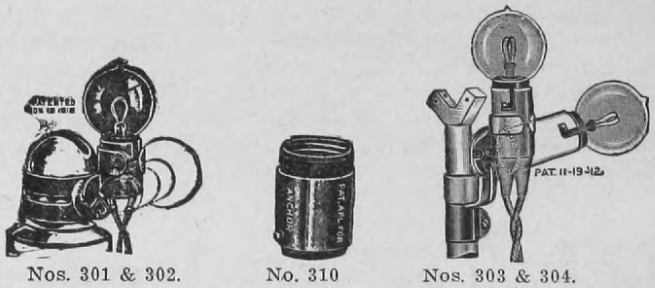
No. 13. No. 14. No. 34. No. 114. No. 44. No. 64.

No. 13—Lamp and socket screw terminals side lead .....Each, $0.22
No. 14—Lamp and socket screw terminals end lead .....Each, .22
No. 34—Combination of No. 14, with plug No. 9..Each, .45
No. 114—Combination of No. 14, with plug No. 4..Each, .45
No. 44—Lamp socket, with rubber cap over screw terminals .....Each, .28
No. 64—Same as No. 44, with metal cap over screw terminals .....Each, .37



No. 18 Nos. 67 & 68. No. 118. No. 77. No. 78.

No. 18—Dash connector, end leads and screw terminal .....Each, $0.26
No. 67—Dash socket, on and off switch type side leads, shown in illustration .....Each, .26
No. 68—Same as No. 67 with end leads.....Each, .26
No. 118—Combination of No. 18 with plug No. 4..Each, .48
No. 77—Inside lead 10-degree angle dash lamp socket .....Each, .50
No. 78—Tail lamp sleeve socket used with 4-P plug .....Each, .15



Nos. 301 & 302. No. 310 Nos. 303 & 304.

No. 310—Candelabra to Edi-Swan adapter.....Each, $0.15
No. 312—Miniature to candelabra adapter.....Each, .04

GIL-BO ELECTRIC LAMP ADAPTERS

For Oil Burner

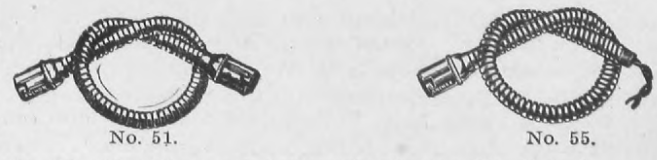
No. 301—With fibre candelabra socket.....Each, $0.30
No. 302—With No. 11 bayonet lamp socket.....Each, .50

For Gas Burner

No. 303—With fibre candelabra socket.....Each, $0.30
No. 304—With No. 11 Bayonet lamp socket.....Each, .50

No. 417. No. 417-2 gang. No. 400.

No. 417—Dash switch, for lighting outfits.....Each, $0.50
No. 417-2—Gang dash plug lighting switch.....Each, 1.00
No. 417-3—Gang dash plug lighting switch.....Each, 1.50
No. 417-4—Gang dash plug lighting switch.....Each, 2.00
No. 400—Floor push horn switch button.....Each, .50



No. 51. No. 55.

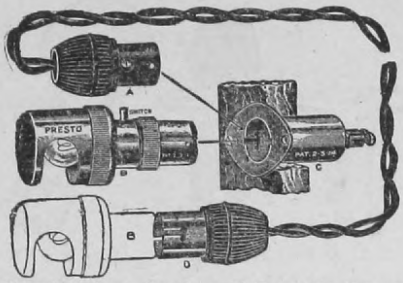
No. 51—Flexible brass tube extensions, with ⅝-inch Anchor Edi-Swan Plugs.

No. 55—Same as No. 51, with plug on one end only, other end open with 6 inches of wire extending outside the armor.

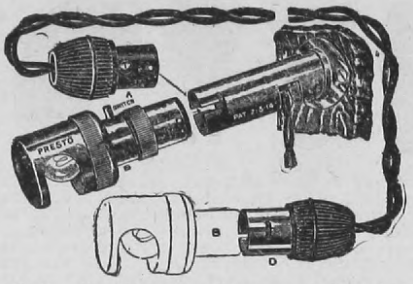
	No. 51.	No. 55.
10 inches over all.....	Each, $0.86.....	Each, $0.63
13 inches over all.....	Each, .93.....	Each, .67
16 inches over all.....	Each, 1.00.....	Each, .70

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PRESTO COMBINATION DASH AND TROUBLE LAMP AND DASH LAMPS



No. 230S. Combination Dash and Trouble Lamp.



No. 235S. Combination Dash and Trouble Lamp.

These combinations are suitable for all cars. Finished in polished nickel plate. In ordinary use it is a first-class dash lamp and may be used to illuminate the speedometer, vibrator, clock, pedals, etc. The light is turned on and off by means of a lever switch. A slight turn to the right turns it on and a turn to the left turns it off.

When desired it can be easily converted into a trouble lamp. Simply remove the lamp, bulb and reflector from the dash socket and use the 10 feet of wire fitted with bayonet plug and bayonet plug socket; connect the plug to the socket on the dash and the other end to the reflector and lamp as shown in the illustration above, all of which is furnished complete.

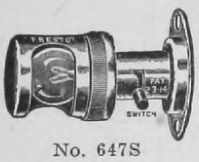
No. 230S—Combination dash and trouble lamp with lever switch in head complete with 10 feet of cord as shown above and 6-volt 2-candle power tungsten bulb ..... Each, $3.00

No. 230 —Same as No. 230S but without switch lever in lamp head but has switch-type dash socket.. Each, 2.70

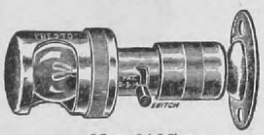
No. 235S—For Ford cars this combination with lever switch in head complete can be operated from two dry cells or storage battery, 6-volt 2-candle power bulb, furnished regularly ..... Each, 3.00

No. 235 —Same as No. 235S but without switch lever in lamp head but has switch type dash socket.. Each, 2.70

No. 230S and 235S furnished in **Double Contact** only.
No. 230 and 235 furnished in either **Double** or **Single Contact.**



No. 647S



No. 618S.

No. 637S.

No. 645.

No. 640.

No. 647S—Bull dog dash lamp, strong, heavy short and chunky; built for service, full nickel-plated with self-contained lever switch, bayonet type lamp socket and 6-volt 2-candle power tungsten bulb, length from dash to bulb center 2 inches ..... Each, $1.55

No. 647—Same as above without lever switch..... Each, 1.20

No. 618S—Bull dog dash lamp is a longer degree of the bull pup, full nickel-plated with self-contained switch, bayonet type lamp socket, 6-volt 2 candle power tungsten bulb. Length from dash to bulb center 2½ inches ..... Each, 1.70

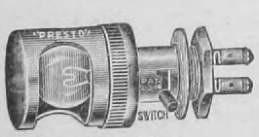
No. 618—Same as above without lever switch..... Each, 1.35

No. 637S—Dash lamp for Fords, length from dash to bulb center 2½ inches, 10-degree angle flange has self-contained lever switch, bayonet type lamp socket, complete 6-volt 2-candle power tungsten bulb.... Each, 1.70

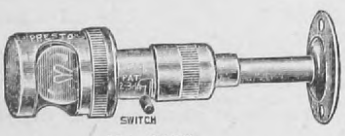
No. 637—Same as above without lever switch..... Each, 1.35

No. 645—Dash or instrument board lamp fitted with oval flange for wood dash. A close compact lamp for countersunk clocks, speedometers, etc., complete with 6-volt 2-candle power tungsten bulb..... Each, 1.20

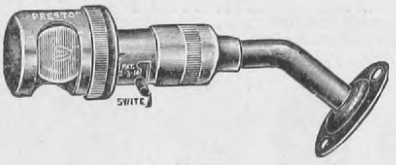
No. 640—Metal dash lamp same as No. 645 but with nut to hold the dash lamp in place..... Each, 1.20



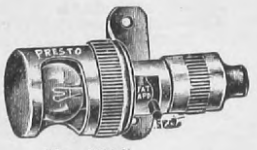
No. 655S.



No. 610S.



No. 612S.



No. 650S.

No. 655S—Metal dash lamp with self-contained lever switch complete with bayonet type lamp socket, 6-volt 2-candle power tungsten bulb and nut for metal dash ..... Each, 1.70

No. 655—Same as above without lever switch..... Each, 1.35

No. 610S—Full nickel-plated with self-contained lever switch, bayonet type lamp socket, complete with 6-volt 2-candle power bulb. Length from dash to bulb center 3¾ inches ..... Each, 1.70

No. 610—Same as above but without lever switch..... Each, 1.35

No. 612S—45-degree angle neck full nickel-plated, with self contained lever switch bayonet type lamp socket, complete with 6-volt 2-candle power tungsten bulb. Length from dash to bulb center 3½ inches.. Each, 1.70

No. 612—Same as above but without lever switch..... Each, 1.35

No. 650S—Cowl dash step light or tonneau lamp complete with self-contained lever switch and 6-volt 2-candle power tungsten bulb, length over all 3 inches..... Each, 1.70

No. 650—Same as above without lever switch..... Each, 1.35

Dash Lamps with lever switches made only in **Double Contact**.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

AUTO FUSES

We list below Union Automobile Fuses, both Glass and Fibre Tube, used in connection with the electric lighting system on both Gasoline and Electric cars.

Types 1A, 2A, 3A and 4A can be used for any voltage up to 50 Volts. Types 5A and 6A can be furnished as high as 250 Volts.

GASOLINE CARS

MAKE OF CAR	Uses Fuse No.	Amp.	Volts	Each
Allen	5AG	15	1-50	$0.10
Amesberry	6A	20	250	.25
Anderson 1917	5A	5-15	1-50	.18
Apperson	3A	10	1-50	.05
Arbenz	4A	10	1-50	.18
Auburn 1915	5A	15	1-50	.18
Auburn 1917	Special Link Fuse			.18
Austin	5A	5-15	1-50	.18
Biddle 1917	5AG	10	1-50	.10
Bour Davis 1917	2A	20	1-50	.05
Brisco 1915	3A	15-20	1-50	.05
Brisco 1916-17	1A	20	1-50	.05
Buick	Special Link Fuse			.18
Cadillac 1914	6A	25	250	.25
Cartercar	Fuse Plug	15	125	.10
Cartercar, Model 9	4A	15	1-50	.18
Cartercar, 1915	5A	10	1-50	.18
Case	5A	5-15	1-50	.18
Case 1917	1A	20	1-50	.05
Chadwick	4A	5	1-50	.18
Chadwick	5A	15	1-50	.18
Chalmers 1914	6A	15	250	.25
Chalmers 1915	6A	20	250	.25
Chalmers, Model 32	1A	20	1-50	.05
Chalmers " 35 1917	2A	15	1-50	.05
Chalmers " 35 1917	5AG	30	1-50	.10
Chandler	5A	5-15	1-50	.18
Chandler 1916	1A	20	1-50	.05
Chandler 1917	3A	20	1-50	.05
Chevrolet 1915-16	6A	20	250	.25
Chevrolet, Model 490	1A	20	1-50	.05
Chevrolet 1917	1A	20	1-50	.05
Cole 1913-1914	4A	15	1-50	.18
Crawford 1915	5A	5-15	1-50	.18
Crawford 1916-17	1A	20	1-50	.05
Cunningham, J. 1914	4A	15	1-50	.18
Cunningham, J. 1915	1A	20	1-50	.05
Cunningham, J. 1916-17	5A	20	1-50	.18
Crow	1A	20	1-50	.05
Daniels 8-1917	5A	5-15	1-50	.18
Davis	5A	5-15	1-50	.18
Davis	1A	20	1-50	.05
Detroiter	5A	15	1-50	.18
Detroiter 1917	1A	20	1-50	.05
Dispatch	4A	10	1-50	.18
Dispatch 1917	2A	15	1-50	.05
Dixie	2A	10	1-50	.05
Dixie 1917	3A	10	1-50	.05
Dodge	4A	10	1-50	.18
Dorris	5AG	15	1-50	.10
Dort	3A	5-15-25	1-50	.05
Dort 1916-17	1A	20	1-50	.05
Drexel 1917	3A	20	1-50	.05
Elcar	2A	15	1-50	.05
Empire 1914	3A	5-15	1-50	.05
Empire 1915	6A	20	250	.25
Empire 1916-17	1A	20	1-50	.05
Empire 1916-17	6A	20	250	.25
Enger	1A	20	1-50	.05
Farmack	3A	15	1-50	.05
Fiat	5A	5-15	1-50	.18
Fiat 1916-17	6A	30	250	.25
Franklin	3A	15	1-50	.05
Franklin 1917	2A	10	1-50	.05
Glide 1916-17	5A	5-15	1-50	.18
Grant Six	5A	Spec'l	1-50	.18
Grant 1917	3A	20	1-50	.05
Haynes	1A	15	1-50	.05
Haynes 1917	1A	5	1-50	.05
Hollier Eight	Special Link Fuse			.18
Hudson 1914-15	4A	15	1-50	.18
Hal 1917	5AG	15	1-50	.10
Hupmobile 1914	5A	5-10-15	1-50	.18
Hupmobile 1915-16	4A	15	1-50	.18
Hupmobile 1917	4AG	10	1-50	.10
Imperial, Model 56	4A	5	1-50	.18
Imperial, Model 64	1A	20	1-50	.05
Imperial, Models 66F and 66, 1916	5AG	15	1-50	.10
Jackson 1916-17	1A	20	1-50	.05
Jeffery 1913-14	5A	15	1-50	.18
Jeffery 1915	4A	10	1-50	.18
Jeffery 1916-17	3A	20	1-50	.05
Jordan 1917	3A	20	1-50	.05
King	5AG	30	1-50	.10
King	3A	10	1-50	.05
Kissel Kar 1915	5A	15	1-50	.18
Kissel Kar 1916-17	3A	20	1-50	.05
Knox	4A	10-15	1-50	.18
Lexington-4	6A	15	250	.25
Lexington-4	5A	5-15	1-50	.18
Lexington-6	5A	5-15	1-50	.18
Lexington-6 1917	5A	15	1-50	.18
Lexington Super 6 1917	3A	15	1-50	.05
Locomobile 1916	6A	30	250	.25
Locomobile 1915-16	5A	15	1-50	.18
Locomobile 1916-17	5AG	10	1-50	.10
Lyons-Knight 1913-14	4A	10	1-50	.18
Lozier	6A	10	250	.25
Lozier 4 cyl 1917	6A	20	250	.25
L. C. E.	4A	15	1-50	.18
Madison	3A	5-15	1-50	.05
Marion	5A	5-15	1-50	.18
Marmon	4A	15	1-50	.18
Master	5A	15	1-50	.18
Maxwell 1914	4A	15	1-50	.18
Maxwell 1915-16-17	3A	20	1-50	.05
McFarlan-76	5A	5-15	1-50	.18
McFarlan 1917	5AG	10-30	1-50	.10
Mercer	5A	5	1-50	.18
Mercer 1916-17	5AG	30	1-50	.10
Mercer 1916-17	3A	5-10	1-50	.05
Metz	1A	20	1-50	.05
Mitchell 1913-14	4A	15	1-50	.18
Mitchell 1915	3A	15	1-50	.05
Mitchell 1916	Special Link Fuse			.18
Mitchell 1917	3A	20	1-50	.05
Moline 1914	4A	10	1-50	.18
Moline 1915	5A	15	1-50	.18
Moline 1916-17	6A	20	250	.25
Monroe	6A	20	250	.25
Monroe 1916-17	1A	20	1-50	.05
Norwalk-6	5A	15	1-50	.18
National 1914	4A	15	1-50	.18
National 1916	1A	20	1-50	.05
Oakland 1916-17	4A	15	1-50	.18

(STANDARD PACKAGE 100)

WHEN ordering, do not fail to specify Fuse Number, Ampere and Make of Car; this will insure our sending the correct Fuse.

Type 1A
Glass Tube $\frac{5}{8}$" x $\frac{3}{4}$"
Price 5c each

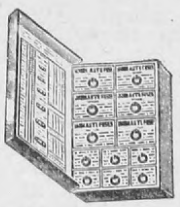
Type 2A
Glass Tube $1\frac{1}{4}$" x $\frac{1}{4}$"
Price 5c each

Type 3A
Glass Tube $1\frac{1}{4}$" x $\frac{3}{4}$"
Price 5c each

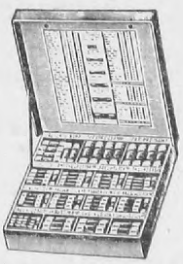
Type 4A
Type 4A Fibre Tube $1\frac{1}{4}$" x $\frac{1}{4}$"
Price 18c each
Type 4AG Glass Tube $1\frac{1}{4}$"x$\frac{1}{4}$"
Price 10c each

Type 5A
Type 5A Fibre Tube $1\frac{1}{2}$" x $\frac{3}{8}$"
Price 18c each
Type 5AG Glass Tube $1\frac{1}{2}$"x$\frac{3}{8}$"
Price 10c each

Type 6A
Type 6A Fibre Tube 2" x $\frac{1}{2}$"
Price 25c each
Type 6AG Glass Tube 2"x$\frac{1}{2}$"
Price 20c each



Assortment No. 1
Contains 100 Assorted Glass & Fibre Fuses
List Price $13.00 each



Assortment No. 2
Contains 200 Glass Fuses
List Price $15.00 each

Packed—10 Fuses in an Envelope. 10 Envelopes in a Box or Standard Package.

Packed—10 Fuses in an Envelope. 10 Envelopes in a Box or Standard Package.

GASOLINE CARS

MAKE OF CAR	Uses Fuse No.	Amp.	Volts	Each
Overland, Models 79-83	1A	20	1-50	$0.05
Overland Coupe 1914	6A	20	250	.25
Overland 1916-17	1A	20	1-50	.05
Owen Magnetic 1917	5A	10	1-50	.18
Pathfinder	5A	5-15	1-50	.18
Packard	2A	10	1-50	.05
Packard Trucks	2A	20	1-50	.05
Paige	1A	20	1-50	.05
Peerless 1914	3A	20	1-50	.05
Peerless 1915	1A	20	1-50	.05
Peerless 1916	6A	20	250	.25
Peerless 1917	1A	10	1-50	.05
Peerless 1917	6A	20	250	.25
Pierce-Arrow	5AG	5-10-30	1-50	.10
Pope-Hartford	4A	10	1-50	.18
Pratt	1A	20	1-50	.05
Premier 1915	3A	10	1-50	.05
Premier 1916	4A	10	1-50	.18
Pullman	Special Link Fuse			.18
Pullman 1917	1A	20	1-50	.05
Regal 1914-1915	5A	5	1-50	.18
Reo 1914-15	4A	10-15	1-50	.18
Reo 1916-17	3A	5-10	1-50	.05
Roamer	3A	10	1-50	.05
Ross 8 1917	Fuse Plug	20	125	.10
Saxon Six	1A	20	1-50	.05
Saxon Six	5A	15-30	1-50	.18
Saxon Six 1917	5A	15	1-50	.18
Simplex 1915-16	6A	30	250	.25
Simplex 1915-16	5A	10	1-50	.18
Simplex 1917	6A	20	250	.25
Simplex 1917	5A	10	1-50	.18
Standard 1916	5AG	10	1-50	.10
Standard 1917	6A	5-15	250	.25
Stearns 4-1916-17	1A	20	1-50	.05
Stearns 8-1916-17	3A	20	1-50	.05
Stageman Trucks	5A	15	1-50	.18
Sun 1917	2A	20	1-50	.05
Stephens 1917	1A	20	1-50	.05
Studebaker 1914	4A	15	1-50	.18
Studebaker 1915	2A	15	1-50	.05
Studebaker 1916-17	3A	10	1-50	.05
Spaulding	5A	1-2-3	1-50	.18
Speedwell	4A	15	1-50	.18
Staver	4A	15	1-50	.18
Stutz	3A	15	1-50	.05
Velie, Model 15	1A	20	1-50	.05
Velie 1916	Special Link Fuse			.18
Westcott 1916	4A	15	1-50	.18
Winton	3A	10	1-50	.05
Winton, Model 21A	5A	5-20	1-50	.18
Winton 1916-17	3A	15	1-50	.05
White 1915	5A	15	1-50	.18
White 1916	4A	15	1-50	.18
Willys-Knight	6A	20	250	.25
Willys-Knight	5A	15	1-50	.18
Willys-Knight	4A	15	1-50	.18
Willys-Knight	2A	15	1-50	.05
Zimmerman	3A	15	1-50	.05

ELECTRIC CARS

American	5A	10	80	$0.18
Anderson 1914-15-16	6A	10	250	.25
Anderson 1917	5A	5-15	250	.18
Argo A-B-C	5A	10	40	.18
Borland	5A	10	80	.18
Broc	5A	10	80	.18
Baker	5A	10	110	.18
Bailey	6A	10	250	.25
Century	6A	10	250	.25
Chicago	5A	15	250	.18
Detroit 1914	6A	10	250	.25
Detroit 1915	5A	15	250	.18
Dayton	6A	10	250	.25
G. V. C.	6A	5	90	.25
Grinnell	6A	15	250	.25
Hupp Yeates	6A	6	250	.25
Ohio 1916-17	6A	15	250	.25
Standard	6A	15	250	.25
Ward	3A	5	80	.05
Woods	5A	5	250	.18
Woods 1917	3A	10	50	.05

ELECTRIC STARTING AND LIGHTING SYSTEM FUSES

Appleco	Type A	50	1-100	$0.35
Appleco	Special Link			.18
Apperson	3A	10	1-50	.05
Bijou	3A	10	1-50	.05
Briggs & Stratton	3A	20	1-50	.05
Dean	3A	15	1-50	.05
Electric Auto Lite	1A	20	1-50	.05
Exterline	4A	15	1-50	.18
Gray & Davis	1A	20	1-50	.05
Gray & Davis Ford 1915	5A Glass	30	1-50	.10
Gray & Davis Ford 1916	5A Glass	20	1-50	.10
North East	4A	10	1-50	.18
Remy	3A	5 & 15	1-50	.05
Splitdorf	Special Link			.18
Westinghouse	4A	15	1-50	.18
Westinghouse Special	5A	20	1-250	.18
Westinghouse (Ford)	3A	15	1-50	.05

MOTOR CYCLES

Harley Davidson	2A	6	1-50	$0.05
Excelsior 1914-15	2A	15	1-50	.05
Excelsior 1916-17	Special Link			.18
Indian	4AG	15	1-50	.10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

AUTOMOBILE CABLES

IGNITION

Packard High Tension.

Packard High Tension Magneto.

Packard Plain High Tension.

Packard Low Tension, 1 Strand.

Packard Low Tension, 3 Strand.

LIGHTING

Packard No. 14, 1 Strand.

Packard No. 10, 2 Strand.

Packard No. 14, 3 Strand.

Packard Ignition and Lighting Cable is the Highest Grade possible. It outlasts all others because it is thoroughly and especially protected against heat, oil, water and vibration.
The color is **Seal Brown** with two **Black** Stripings running spirally in opposite directions.

IGNITION.

Trade No.	Description.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
26	High Tension, ½ inch...	$336.00	.61	345.15
21	Magneto, ⅜ inch.....	183.00	.61	192.15
22	Plain Magneto, 7mm....	125.00	.51	132.65
23	Low Tension 1 strand...	90.00	.67	100.05
24	Low Tension, 2 strand...	255.00	1.33	274.95
25	Low Tension, 3 strand...	323.00	2.00	353.00
26	Low Tension, 2 strand, flat	208.00	1.33	227.00

LIGHTING.

Trade No.	B. &S. Ga.	Description.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
30	14	1 strand	$ 90.00	.67	100.05
31	14	2 strand	255.00	1.33	274.95
32	14	3 strand	323.00	2.00	353.00
33	12	1 strand	95.00	.95	109.25
34	12	2 strand	259.00	1.91	287.65
35	12	3 strand	347.00	2.87	390.05
36	10	1 strand	116.00	1.47	138.05
37	10	2 strand	305.00	2.94	349.10
38	10	3 strand	411.00	4.41	447.11

Packard, Jr. Ignition and Lighting Cable is a popular price High Grade Cable which, while not equal to Packard in quality, is nevertheless superior to any ordinary cable.
The color is **Seal Brown** with two **Black** Stripings running spirally in opposite directions.

IGNITION.

Trade No.	Description.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
40	½ in. Secondary.....	$190.00	.58	195.70
41	⅜ in. Secondary.....	109.00	.38	114.70
42	7 mm. Plain Sec.....	60.00	.38	65.70
43	9 mm. Plain Sec.	92.00	.38	97.70
44	7 mm. Braided Sec.....	70.00	.38	75.70
45	5 mm. Plain Primary....	36.00	.38	41.70
46	Primary, 1 strand.....	42.00	.38	47.70
47	Primary, 2 strand.....	88.00	.74	99.10
48	Primary, 3 strand.....	138.00	1.09	154.35

LIGHTING.

Trade No.	B & S Ga.	Description.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
50	16	1 strand	$ 28.00	.31	32.65
51	16	2 strand	78.00	.61	87.15
52	14	1 strand	36.00	.48	43.20
53	14	2 strand	94.00	.94	108.10
54	12	1 strand	50.00	.76	61.40
55	12	2 strand	129.00	1.49	151.35
56	10	1 strand	68.00	1.21	86.15
57	10	2 strand	166.00	2.37	201.55

PACKARD JUNIOR STARTING NO. 4

STARTING

PACKARD JUNIOR STARTING NO. 1

Trade No.	B. & S. Gauge.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
60	8	$ 93.00	1.92	121.80
61	6	143.00	3.10	189.50
62	5	169.00	3.90	227.50
63	4	190.00	4.72	260.80
64	3	230.00	5.98	319.70

Trade No.	B. & S. Gauge.	Per 1000 Ft. 15c Base.	Differential for 1c Base Change.	Per 1000 Ft. 30c Base.
65	2	$297.00	7.65	411.75
66	1	341.00	9.42	482.30
67	0	414.00	11.88	592.20
68	00	503.00	15.00	728.00

Note.—All Packard, Jr. Ignition Cables except Nos. 42, 43 and 45 are double braided. All Packard, Jr. Lighting and Starting Cables are single braided. To avoid errors and delays use Trade Numbers when ordering.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

AUTOMOBILE CABLES

PACKARD ARMORED

Packard Armored Cable is made for hard service under strenuous conditions. The Armor consists of an all metal ribbon wound on after the braid has been oil-proofed.

Styles.—Style A: Core, Cotton Wrap, Braid, Packard Enamel, Rust Proof Steel Armor.
Style C: Core, Cotton Wrap, Insulating Cloth, Braid, Packard Enamel, Rust Proof Steel Armor.

All of the following numbers of Armored Cables have Rust Proof Steel Armor.

LIGHTING

Trade No.	B. & S. Ga.	Strand.	Style.	Per 1000 ft. 15c Base.	Differential for 1c Base Ch.	Per 1000ft. 30c Base.
70	16	1	A	$ 45.00	.31	49.65
71	16	1	C	55.00	.31	59.65
72	16	2	A	117.00	.61	126.15
73	16	2	C	137.00	.61	146.15
74	14	1	A	51.00	.48	58.20
75	14	1	C	61.00	.48	68.20
76	14	2	A	132.00	.94	146.10
77	14	2	C	154.00	.94	168.10
78	12	1	A	64.00	.76	75.40
79	12	1	C	75.00	.76	86.40
80	12	2	A	158.00	1.49	180.35
81	12	2	C	180.00	1.49	202.35
82	10	1	A	83.00	1.21	101.15
83	10	1	C	95.00	1.21	113.15
84	10	2	A	205.00	2.34	240.10
85	10	2	C	230.00	2.34	265.10

STARTING

Trade No.	B. & S. Ga.	Style.	Per 1000 ft. 15c Base.	Differential for 1c Base Ch.	Per 1000 ft. 30c Base.
90	8	A	$111.00	1.92	139.80
91	8	C	156.00	1.92	184.80
92	6	A	164.00	3.10	210.50
93	6	C	177.00	3.10	223.50
94	5	A	190.00	3.90	248.50
95	5	C	204.00	3.90	262.50
96	4	A	226.00	4.93	299.95
97	4	C	233.00	4.93	306.95
98	3	A	281.00	6.23	374.45
99	3	C	296.00	6.23	389.45
100	2	A	323.00	7.82	440.30
101	2	C	338.00	7.82	455.30
102	1	A	373.00	9.85	520.75
103	1	C	389.00	9.85	536.75
104	0	A	449.00	12.42	635.30
105	0	C	468.00	12.42	654.30
106	00	A	538.00	15.68	773.20
107	00	C	556.00	15.68	791.20

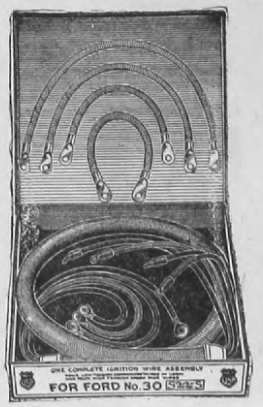
Nos. 1-4 to 1-5W.

IGNITION OUTFITS

Nos. 1-4 to 1-5W

Made up with No. 16 Ga. Insulated Wire and Circular Loom. One end of wire looped and soldered, on other end copper terminals. Braids on wire are different colors and end of Loom is covered with rubber caps.

No. 1-4 —Without Secondary Wires (4-Wire Type) ..... Each, $1.00
No. 1-5 —Without Secondary Wires (5-Wire Type) ..... Each, 1.20
No. 1-4W—With Secondary Wires (4-Wire Type) ..... Each, 1.65
No. 1-5W—With Secondary Wires (5-Wire Type) ..... Each, 1.85



No. 30.

Nos. 30 to 36 Outfits for Ford Cars

First Quality Wire and Cable Conduit furnished complete with Rubber Tipped Loom or metallic covering with terminals; all Cables correct length.

No. 30 —Loom Covered Assembly (4 Wire) complete ..... Each, $1.04
No. 32 —Loom Covered Assembly (5 Wire) complete ..... Each, 1.18
No. 30A—Loom Covered Assembly (4 Wire) less Spark Plug Wires ..... Each, .64
No. 32A—Loom Covered Assembly (5 Wires) less Spark Plug Wires ..... Each, .74
No. 35 —4 Spark Plug Wires ..... Each, .40
No. 36 —5 Spark Plug Wires ..... Each, .50

Packed—Nos. 30 to 32A, One Set in a Box; Nos. 35 and 36, One Set in an Envelope.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHAMPION SPARK PLUGS

Champion "X"

Adopted by the Ford Motor Co. as standard equipment on Ford cars since 1911.

No. A15, ½ Inch
Each $0.75

The following is quoted from the instruction book in each Ford car:

"There is nothing to be gained by experimenting with different makes of plugs. The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor."

Champion "Maxwell" for Maxwell Cars

No. A44, ⅞—18
Each $1.00

The Maxwell factory equipment plug.

Has the well-known patented Copper Asbestos gasket construction which does not allow any metal to touch the shoulders of the porcelain.

Champion "Heavy Duty" for Dodge Cars

No. J43, ⅞—18
No. J63, Metric
Each $1.00

Recommended for use in:
Apperson
Briscoe
Crow-Elkhart
Elcar
Franklin
Hupmobile
Jackson
King
McFarlan
Monroe

Champion "O" for Overland Cars

No. J13 "O,"
½ Inch
Each $1.00

The Overland factory equipment plug. Especially recommended to meet the requirements of the Overland motor. Also recommended for tractors, farm, stationary, marine engines and all automobiles where a standard ½ inch plug is used.

Champion "Buick" for Buick and Chevrolet Cars

No. A53, Long,
⅞—18
Each $1.00

Has long shell, conical porcelain. The long shell allows the spark to ignite within the cylinder instead of in a pocket, as occurs when the ordinary type of plug is used.

Champion "Heavy Duty" for Packard Cars

No. JA43,
⅞—18
Each $1.00

Recommended for use in:
Packard
Pierce Arrow
Peerless
Mercer
Cadillac
Chalmers
Chandler
Marmon
Cole
Dorris
Haynes
Oldsmobile
Hudson
Kissel-Kar
Velie

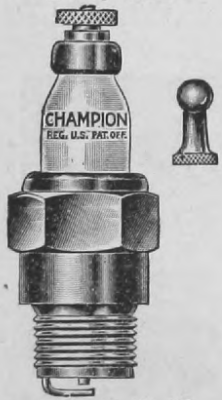
Champion "Studebaker" for Studebaker Cars

No. AA13, ½ in.
No. A43, ⅞—18
Each $1.00

Recommended for use in:
Allen
Auburn
Dort
Elgin
Grant
Jordan
Liberty
Mitchell
Paige-Detroit
Saxon
Spaulding
Stewart

And tractors, farm, stationary and marine engines where a standard ⅞—18 plug is used.

Champion One Piece "Heavy Stone"



No. G43, ⅞—18
Each $1.00

Recommended for use in:
Murray
Owen
Stutz
Moline-Knight
Stearns-Knight
Willys-Six
Willys-Knight

And all Knight motors.

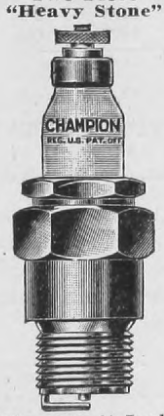
Champion "Long" for "Reo" Cars

No. A23,
Long ½ Inch
No. A34, Extra
Long ½ Inch
Each $1.00

Recommended for the Reo car, and other automobiles and engines requiring a long type of plug.

Extra long extension for the Metz car

Champion Two Piece "Heavy Stone"



No. B13, ½ Inch
No. B43, ⅞—18
No. B63, Metric
Each $1.00

Recommended for use in:
Austin
Case
Stutz
Locomobile
White
Fiat
Marmon

And heavy service trucks and tractors.

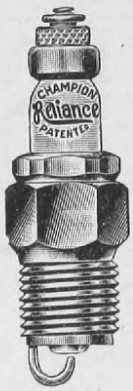
Champion "Aeroplane"

No. J 1S63, Metric
Each $1.00

Specially constructed for all types of aeroplanes and motorcycles.

Not affected by heat or oil conditions.

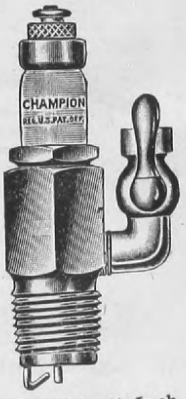
Champion "Sparks-in-Water" Marine



No. DC43, ⅞—18
No. DC13, ½ Inch
Each $1.25

Ideal plug for motorboat use. Moisture, fog and rain on the outside of this plug does not interfere with its operation.

Champion "Priming"

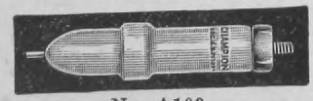


No. H13, ½ Inch
No. H43, ⅞—18
No. H63, Metric
Each $1.25

Will start any motor on the first quarter turn.

Brings gasoline right to the sparking point. A good winter seller.

CHAMPION PORCELAIN CORES



No. A103.

No. A103—Conical . . . . . Each $0.45

No. B103.

No. B103—Heavy Stone . . . . . Each $0.60

No. A105.

No. A105—Champion "X" . . . . Each $0.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

A. C. SPARK PLUGS

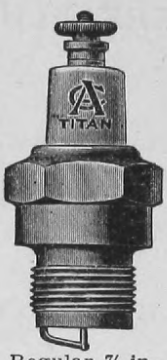
A Quality Article, Through and Through. Adopted as Regular Equipment by many of the leading manufacturers. Your opportunity of sales lies here. Note different types below and cars using same. Build good will. Sell A. C. Plugs.

A. C. TITAN

⅞ Long Body $1.00. Made for motors requiring longer body plug to be accessible. Regular equipment on the Chandler, National, Stephens, White, Crane-Simplex, Jackson.

Note.—⅞-18 S. A. E. and ⅞-18 A. L. A. M. are alike, both having the same thread.

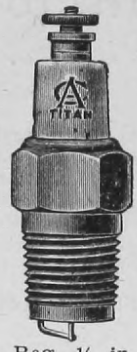
Long ⅞ in. $1.00. One of largest sellers; reg. equipment on the Buick, Chalmers Model 32, Chevrolet, Enger 12 cyl., McLaughlin Can.



Regular ⅞ in. $1.00. Reg. equipment Buick 4, Cole, Cadillac, Chalmers, Davis, Glide, G. M. C., Jeffery, Jordan, Kissel Kar, Empire, Olds, Oakland 8, Packard Twin 6, Peerless, Stutz, Pierce-Arrow, Velie, Westcott.

Regular SAE or Alam. $1.00. Stand. ⅞ in., 18 thread small body ⅞ hex. Regular equipment on Apperson 6, Haynes, Daniels, Stearns-Knight, Marmon, Murray.

Long SAE or Alam. $1.00. Same characteristics as Reg. S. A. E., but has longer shell for motors requiring extension plug. Reg. equipment on Oakland Model 32, Apperson 8, Mercer, Premier, Scripps-Booth 4.



Reg. ½ in. $1.00. Recommended for all cars using regular ½ inch size. Particularly for Cadillac to 1913, and Mitch'l, Overland 4, Oakland to 1913, Rambler to 1913, Regal, Studebaker.

Long ½ in. $1.00. For Overland up to 1914, and Winton to 1915.

Long Metric. $1.00. Length ⅞ in. from gasket shoulder to firing point. For Scripps-Booth (8).

Specify.

A. C. Titan, A. C. Cico or A. C. Standard according to grade wanted.

A. C. CICO

Long ⅞ in. 75c. Reg. equipment on the Chevrolet 490, Monroe. Recommended for Harley-Davidson.

Reg. ⅞ in. 75c. Reg. equipment on Detroiter, Dort, Hudson, the Hupp, Federal, Liberty, Paige, Paterson, Pilot and Bour-Davis.

SAE or ALAM 75c. Stand. ⅞-18 thread with small body. Reg. equipment on all Saxon cars.

Dodge. 75c. Slightly longer than Reg. ⅞ in. Especially for Dodge Bros. Exclusive equipment on all Dodge cars.

For Ford. 75c. Extra length insulation to withstand oil and carbon.

Reg. ½ in. 75c. Recommended for Studebaker, Overland, and all cars using ½ in. plugs.

Long ½ in. 75c. Reg. equipment on Reo Cars; correct size for 1914 Overland.

Metric. 75c. Suitable for motorcycle, foreign and domestic cars.

A. C. STANDARD

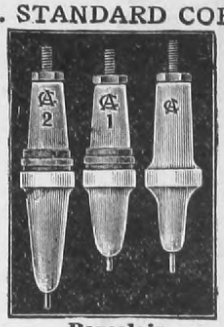
Long ⅞ in. $1.00 Buick; Reg. equipment to 1914.

For Ford. $1.00. Length of insulation helps prevent short circuiting.

Standard A. C. $1.00. ⅞ in., ½ in. and Metric. Equipment on Lexington-Howard Locomobile.

Long ½ in. $1.00. Popular for Overland cars up to 1914.

A. C. STANDARD CORES.



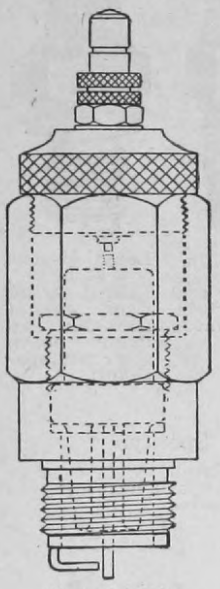
Porcelain

Nos.	For A. C. Standard Plugs	Each
AC	—Up to 1912	$0.35
AC1	—A. L. A. M., ½ inch Regular, Metric and ⅞ inch Long	.35
AC2	—½ inch Long, Ford Special	.35

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PROTECTO AND LEADER SPARK PLUGS

PROTECTO



½ and ⅞ in. Standard.

Protecto

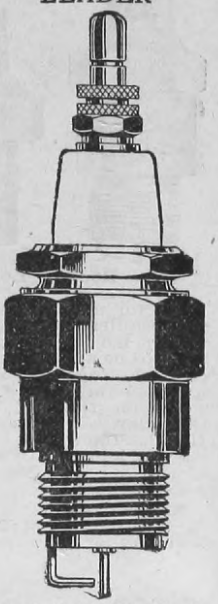
75% of the porcelains that are broken are the results of carelessness. The **Protecto** shell extends above the top of porcelain, protecting the same by means of insulation. It allows the cable to be fastened to the shell independent of the porcelain. Tightening the terminal nut with heavy pliers cannot effect the porcelain. The slight gap between terminal post and the porcelain intensifies the spark. All electrodes are made of nickel. Made in ½ inch and ⅞ inch sizes.

Protecto Spark Plugs, ½ and ⅞ inch Standard.....Each, $1.50

Extra Cores

Protecto Porcelain Cores.....Each, $0.30
Protecto Fibre Caps.....Each, .30
Protecto Wrenches.....Each, .15

LEADER



½ and ⅞ in. Standard.
½ and ⅞ in. Extension.

LEADER GIANT PLUGS

Heavy Duty Plugs, Extra Large Porcelains.

Gaskets above and below collar of porcelain. Nickel Points, 1⅛ inch Hexagon Shell Collar.

Leader Giant Plugs, { ½ and ⅞ inch Standard.....Each, $1.00
{ ½ and ⅞ inch Extension.....Each, 1.00

Extra Cores

Leader Giant Porcelain Cores.....Each, $0.30

LEADER SPARK PLUGS

Leader Spark Plugs have exceptionally large combustion chambers, nickel electrodes, strong and durable porcelains and a single design.

½ in. Ford. Porcelain. $0.75.

½ and ⅞ in. Standard. Porcelain. $0.75.

⅞ in. Buick. Porcelain. $0.75.

½ in. Overland. Porcelain. $0.75.

Cores.

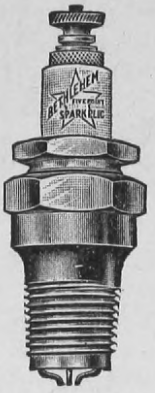
Leader Porcelain Cores for above Spark Plugs.....Each, $0.25

Note.—⅞-18 S. A. E. and ⅞-18 A. L. A. M. are alike, both having the same thread.

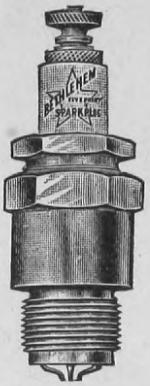
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BETHLEHEM FIVE-POINT SPARK PLUGS

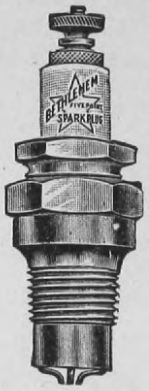
The Bethlehem Five-Point Construction is of proven superiority. Each part is absolutely accurate to within three one-thousandths of an inch—the result, a perfect spark plug—absolutely gas tight and one that will stand up under the most severe conditions.



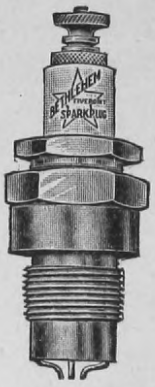
½ in. Standard.
Porcelain.
$1.00.



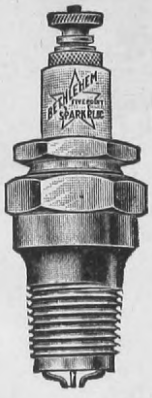
⅞ in. 18 S. A. E.
Porcelain.
$1.00



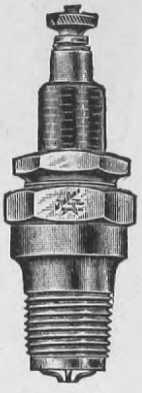
½ in. Long Type C.
Porcelain.
$1.00.



⅞ in. Long Type D.
Porcelain.
$1.00.



Type A for Ford Cars.
Porcelain.
$1.00.



½ in. Standard.
Mica.
$1.00.

½ in. and ⅞ in.
Porcelain Cores.
$0.45.

½ in. and ⅞ in.
Mica Cores.
$0.55.

MOTORCYCLE TYPE

½ in. Standard.
Mica.
$1.00.

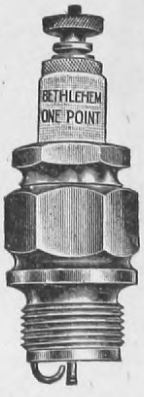
⅞ in. 18 S. A. E.
Mica.
$1.00.

Metric.
Mica.
$1.00.

½, ⅞ and Metric.
Mica Cores.
$0.40.

ONE-POINT TYPE

½ in. Standard.
½ in. Ford Special.
$0.60.



⅞ in.
18 S. A. E.
$0.60.

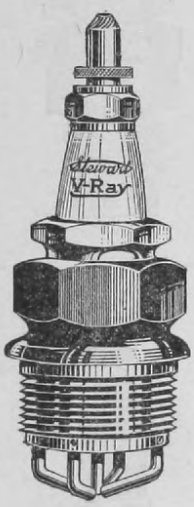
1 Point.
Porcelain Core.
$0.25.

Note.—⅞-18 S. A. E. and ⅞-18 A. L. A. M. are alike both having the same threads.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

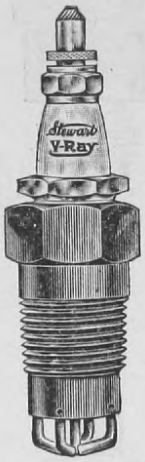
STEWART V-RAY SPARK PLUGS

The Stewart V-Ray Spark Plug has four sparking points, insuring a steady, continuous and unusually hot spark. Should one point become fouled, the spark immediately transfers to another point, and so on; the spark alternates from point to point. Never fails in service. The Porcelain Cores are Petriflint, practically unbreakable in use. There are two copper-asbestos gas-proof gaskets used in the construction.

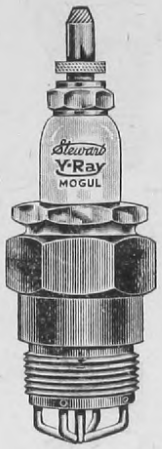


No. 134A.
⅞ in. 18 S. A. E.
Porcelain.
$1.00.

No. 134B.
½ in. Standard.
Porcelain.
$1.00.

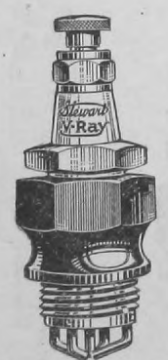


No. 134F.
½ in. Ford.
Porcelain.
$1.00.

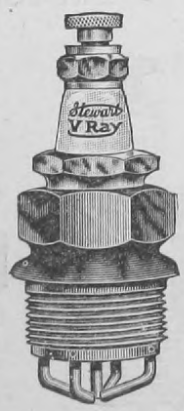


No. 135A.
⅞ in. 18 S. A. E.
Porcelain.
$1.25.

MOTORCYCLE TYPES



No. 134D.
Metric, 18 MM.
Porcelain.
$1.00.

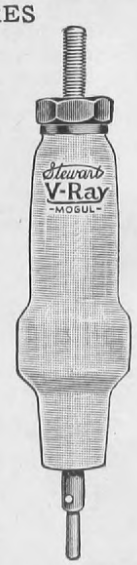


No. 134E.
⅞ in. 18 S. A. E.
Porcelain.
$1.00.

No. 134J.
⅞ in. S. A. E.
Mica.
$1.25.

V-RAY CORES

Porcelain
for 134
Series Plugs.
$0.25.



Porcelain.
for No. 135.
Mogul Plugs.
$0.50.

Note.—⅞-18 S. A. E. and ⅞-18 A. L. A. M. are alike, both having the same thread.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

INDEX OF SPARK PLUG SIZES

PLEASURE CARS

Abbott Detroit ..... ⅞"-18
Alco ..... ⅞"-18
Allen, 1914, 1915, 1916, ⅞"-18 Long Type "D"
Alter ..... ⅞"-18
Alpens ..... ⅞"-18
American ..... ⅞"-18
Amplex, 1916 ..... ⅞"-18
Prior to 1916..... Metric
Apperson, 1916:
6 cyl. ..... ⅞"-18
1916, 8 cyl., ⅞"-18 Long Type "D"
Prior models ..... ⅞"-18
Arbenz ..... ½"
Argo ..... ⅞"-18
Auburn ..... ⅞"-18
Austin ..... ⅞"-18

Bateman ..... ⅞"-18
Bell ..... ⅞"-18
Ben Hur ..... ⅞"-18
Benz ..... Metric
Biddle ..... ⅞"-18
Bour Davis ..... ⅞"-18
Brewster. ⅞"-18 Long Type "D"
Briscoe, 4 cyl..... ⅞"-18
8 cyl. ..... Type "B"
Buda Motors ..... ⅞"-18
Buick, 1911-16, ⅞"-18 Long Type "D"
Prior models ..... Type "F"
Burrows ..... Type "B"

Cadillac ..... ⅞"-18
Cameron, 1916 ..... ⅞"-18
Prior models ..... ½"
Carter Car ..... ⅞"-18
Case ..... ⅞"-18
Chadwick ..... Type "B"
Chalmers, 1916 ..... ⅞"-18
1916, Master 6..... ⅞"-18
Models 20, 20B, 26C.. ⅞"-18
Prior models ..... ⅞"-18
Chandler, 1914-15-16-17. ⅞"-18
Prior models ..... ½"
Chevrolet, 1915-16-17 ... ⅞"-18
Prior models ..... ⅞"-18
Cole ..... ⅞"-18
Columbia ..... ⅞"-18
Cornelian ..... ⅞"-18
Crawford ..... ⅞"-18
Crow-Elkhart ..... ⅞"-18
Cunningham ..... ⅞"-18
Cutting ..... ½"

Daniels ..... ⅞"-18
Davis ..... ⅞"-18
Detroiter, 1916 ..... ⅞"-18
1915, Model B..... ½"
Model D ..... ⅞"-18
Prior models ..... ½"
De Dietrich ..... Type "B"
De Dion ..... Type "B"
Dixie Flyer ..... ⅞"-18
Dodge ..... ⅞"-18
Dorris... ⅞"-18 Long Type "D"
Dort ..... ⅞"-18
Drexel.. ⅞"-18 Long Type "D"
Drummond ..... ⅞"-18

Edwards Knight .... Type "G"
Elbert ..... ⅞"-18
Elgin ..... ⅞"-18
Elcar ..... ⅞"-18
E. M. F. ..... ½"
Elmore.. ⅞"-18 Long Type "D"
Emerson ..... ½"
Empire ..... ⅞"-18
Enger ..... ⅞"-18

Flat ..... ⅞"-18
Firestone Columbus ..... ⅞"-18
Ford ..... ½" Type "A"
Fostoria. ⅞"-18 Long Type "D"
Franklin, 1914-15-16-17, ⅞"-18 Mica
Prior models ..... ½" Mica
Garford ..... ⅞"-18
Gaylord ... ½" Long Type "C"
Glide ..... ⅞"-18
Grant ..... ⅞"-18
Great Southern ..... ⅞"-18
Great Western ..... ½"

Hall ..... ⅞" Metric
H. A. L. ..... ⅞"-18
Halliday ..... ⅞"-18
Harroun ..... ⅞"-18
Haynes ..... ⅞"-18
Henderson ⅞"-18 Long Type "D"
Hollier ..... ⅞"-18
Hudson ..... ⅞"-18
Hupmobile ..... ⅞"-18

Imperial ..... ⅞"-18
Interstate, 1915-16-17, ⅞"-18 Long Type "D"
Prior models ..... ⅞"-18
Ingran .....
Issota ..... Metric

Jackson ..... ⅞"-18
1912-13 models .... Type "E"
Jeffery ..... ⅞"-18
Jordon ..... ⅞"-18

Keeton ..... ½"
King ..... ⅞"-18
Kissel Kar ..... ⅞"-18
Kline Car ..... ⅞"-18
Knox ..... ⅞"-18
Krit ..... ½"
Kunt ..... ⅞"-18

Lambert ..... ⅞"-18
Lancia .....
Lenox ..... ⅞"-18
Lewis ..... ⅞"-18
Lexington ..... ⅞"-18
Lexington-Howard ..... ⅞"-18
Liberty ..... ⅞"-18
Lincoln ..... ½"
Lion ..... ½"
Little ..... ⅞"-18
Locomobile, 1914-15-16-17, ⅞"-18
Prior models. Type "B" Metric
Lozier, 1916, 4 cyl., ⅞"-18 Long Type "D"
6 cyl. ..... ⅞"-18
Prior models ..... Metric
Luverne ..... ⅞"-18
Lyons Knight ..... Type "H"

MacFarlan ..... ⅞"-18
MacIntyre ..... ⅞"-18
Madison ..... ⅞"-18
Maibohn ..... ⅞"-18
Marathon ..... ⅞"-18
Marion ..... ½" and ⅞"-18
Marion-Handley ..... ⅞"-18
Marmon ..... ⅞"-18
Mason ..... ½"
Matheson... ½" Long Type "C"
Maxwell, 1914-15-16-17.. ⅞"-18
Prior models ..... ½"
Mecca ..... ⅞"-18
Mercer ..... ⅞"-18
Majestic ..... ⅞"-18
Mercedes ..... Type "H"
Metz. ½" Extra Long Type "E"
Michigan. ⅞"-18 Long Type "D"
Mitchell ..... ⅞"-18
Moline ..... ⅞"-18
Monarch ..... ⅞"-18
Monroe. ⅞"-18 Long Type "D"
Moon, 1914-15-16-17.... ⅞"-18
Prior model ..... ½"
Morse ..... Type "B"
Moyer ..... ⅞"-18
M. P. M. ⅞"-18 Long Type "D"
Murray ..... ⅞"-18

National ..... ⅞"-18
New Era ..... ½"
Napoleon ..... ⅞"-18
Norwalk ..... ½"
Novara ..... ⅞"-18
Oakland ..... ⅞"-18
Ohio ..... ⅞"-18
Oldsmobile, ⅞"-18 Long Type "D"
Overland Six ..... ⅞"-18
Overland, 1915-16-17 ..... ½"
Prior models ..... Type "C"
75-75B-83.... ½" Very Short
Owen ..... ⅞"-18

Packard, 1915-16-17..... ⅞"-18
Prior models. Type "B" Metric
Paige ..... ⅞"-18
Palmer Singer, ⅞"-18 Long Type "D"
Pathfinder ..... ⅞"-18
Patterson ..... ⅞"-18
Peerless, 1915-16-17..... ⅞"-18
Prior models ..... ⅞"-18
Pennsy ..... ⅞"-18
Phantom ..... Type "H"
Pierce Arrow, 1914-15-16-17, ⅞"-18
Prior models ..... Metric
Pilot ..... ⅞"-18
Pilgrim ..... ⅞"-18
Pope-Hartford ..... ⅞"-18
Pratt ..... ⅞"-18
Princess ..... ⅞"-18
Premier ..... ⅞"-18
Pullman, 1913-14-15-16-17 ⅞"-18
Prior models, ½" Long Type "F"
Puritan ..... ⅞"-18

R. C. H. ..... ½"
Rainer ..... Metric
Rambler ..... ½" and ⅞"-18
Regal ..... ½"
Remington ..... ⅞"-18
Renault ..... Type "B"
Reo ..... ½" Long Type "C"
1916 models..... ½" Short
Republic ..... ⅞"-18
Richmond ..... ⅞"-18
Rolls Royce..... ⅞" Metric
Romer ..... ⅞"-18
Ross ..... ⅞"-18

S. G. V. ..... ⅞"-18
Saxon ..... ⅞"-18
Scripps Booth ..... ⅞"-18
Selden ..... ⅞"-18
Simplex Crane, prior 1911, Type "B"
Other models ..... ⅞"-18
Singer ..... ⅞"-18
Spaulding ..... ⅞"-18
Speedwell ⅞"-18 Long Type "D"
Standard ..... ⅞"-18
States ..... ⅞"-18
Stanley ..... ½"
Stearns Knight, ⅞"-18 Long Type "G"
Sterling ..... ⅞"-18
Stephens ..... ⅞"-18
Stevens Duryea ..... ⅞"-18
Stoddard Dayton ..... ⅞"-18
Studebaker ..... ½"
Stutz ..... ⅞"-18
Sun ..... ⅞"-18

Thomas ..... ⅞"-18
Touraine ..... ½"
Tribune ..... ½"
Trumbull ..... ½"

Velie ..... ⅞"-18
Vulcan ..... ½"

Warren ..... ⅞"-18
Wescott ..... ⅞"-18

White ..... ⅞"-18
Prior models..... Type "B"
Willys Knight, ⅞"-18 Long Type "G"
Winton, 1914-15-16-17, ⅞"-18 Long Type "D"
Prior models ..... Type "C"
Wood's Dual Power..... ⅞"-18
Wood's Mobilette ..... ½"

Foreign cars ..... Metric

COMMERCIAL CARS

A. & B. ..... ⅞"-18
Abbot Downing. ⅞"-18 S. A. E.
Acason ..... ⅞"-18
Acme ..... ⅞"-18
Allis-Chalmers ..... ⅞"-18
American ..... ⅞"-18
Armleder ⅞"-18 Long Type "D"
Atlas ..... ⅞"-18
Atterbury ..... ⅞"-18
Autocar ..... ⅞"-18
Available ..... ⅞"-18
Avery. ⅞"-18 and ½" Standard

Barker ..... ⅞"-18
Bauer, ½" and ½" Long Type "C"
Beech Creek ..... ⅞"-18
Bell ..... ⅞"-18
Bethlehem ..... ⅞"-18
Blair ..... ⅞"-18
Bourne ..... ⅞"-18
Brockway ..... ⅞"-18

Carlton ..... ⅞"-18
Chase ..... ⅞"-18
Clyde ..... ⅞"-18
Collier ..... ⅞"-18
Columbia ..... ⅞"-18
Commerce ..... ⅞"-18
Corbitt ..... ⅞"-18
Couple-Gear ..... ⅞"-18
Crawford ..... ⅞"-18
Croce ..... ⅞"-18

Dayton ..... ⅞"-18
D-E ..... ⅞"-18
DeKalb ..... ⅞"-18
Denby ..... ⅞"-18
Denmo ..... ⅞"-18
Diamond-T ..... ⅞"-18
Dispatch ..... ½"
Doano ..... ⅞"-18
Dornfield ..... ½"
Dorris ..... ⅞"-18
Duplex. ⅞"-18 Long Type "D"

Ellsworth ..... ⅞"-18

Fageol ..... ⅞"-18 Long
Fawick ..... ⅞"-18
Forschler ..... ⅞"-18
F. W. D. ..... ⅞"-18

Gabriel ..... ⅞"-18
Garford ..... ⅞"-18
Gary ..... ⅞"-18
G. A. Schacht ..... ⅞"-18
Geneva ..... ½" Standard
Gersix ..... ⅞"-18
G. M. C. ..... ⅞"-18
Gramm-Bernstein ..... ⅞"-18
Great Southern ..... ⅞"-18
G. V. Mercedes..... Metric

Hahn ..... ½"
Hall ..... ⅞"-18
Harvey ..... ⅞"-18
Hawkeye, ⅞"-18 Long Type "D"
Horner. ⅞"-18 Long Type "D"
Hurlburt ..... ½"

I. H. C. ..... ⅞"-18
Independent ..... ⅞"-18
Indiana ..... ⅞"-18
International ..... ⅞"-18
Inter-State, ⅞"-18 Long Type "D"

Jacobson ..... ⅞"-18 Long
Jeffery. ⅞"-18 Long Type "D"

Kearns ..... ⅞"-18
Kelly-Springfield ..... ⅞"-18
King ..... ⅞"-18
Kissel Kar ..... ⅞"-18
Kleiber ..... ⅞"-18
Knox.. ⅞"-18 Long Type "D"
Krebs ..... ⅞"-18

Lane ..... ⅞"-18
Lange ..... ⅞"-18
Larrabee ..... ⅞"-18
Lippard-Stewart ..... ⅞"-18
Little Giant.... ⅞"-18 and ½"
Lombard ..... ⅞"-18

Maccar ..... ⅞"-18
Mack ..... ⅞"-18
Manly ..... ⅞"-18
Maxim ..... ⅞"-18
Maxwell, ⅞"-18—Metric for export
Menominee ..... ⅞"-18 Long
Metz. ½" Extra Long Type "E"
Moon ..... ⅞"-18
Moreland ..... ⅞"-18

Nelson & Le Moon..... ⅞"-18
Netco ..... ⅞"-18
New York ..... ⅞"-18
Niles ..... ⅞"-18

Old Hickory ..... ⅞"-18
Old Reliable ..... ⅞"-18
Overland ..... ½"

Packard ..... ⅞"-18
Packet ..... ½"
Palmer ..... ½"
Peerless ..... Metric
Pennsy ..... ⅞"-18
Phœnix Centiped ..... ⅞"-18
Pierce-Arrow, Metric (Large Truck) ⅞"-18 (Small Truck)
Pullman ..... ⅞"-18

Reo ..... ½"
Republic, ½" Standard (Models X, "10," "11"). ⅞"-18 (Models X, "12," "T").
Riker ..... ⅞"-18
Robinson ..... ⅞"-18
Rush ..... ⅞"-18

Salvador ..... ½"
Sanford ..... ⅞"-18
Selden ..... ⅞"-18
Signal ..... ⅞"-18
Standard ..... ⅞"-18
States ..... ⅞"-18
Steele.. ⅞"-18 Long Type "D"
Stegeman ..... ⅞"-18
Sterling. ⅞"-18 Long Type "D"
Stewart ..... ⅞"-18
Studebaker ..... ½"
Sullivan ..... ⅞"-18
Superior. ⅞"-18 Long Type "D"

Thomas ..... ⅞"-18
Tiffin ..... ⅞"-18
Transport ..... ⅞"-18

Union ..... ⅞"-18
United ..... ⅞"-18
U. S. ..... ⅞"-18

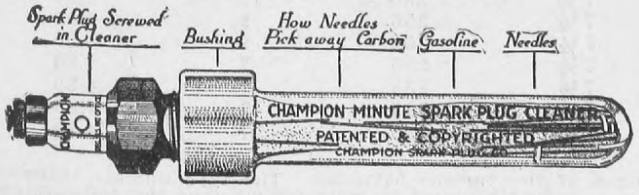
Van Winkle ..... ⅞"-18
Vim ..... ⅞"-18
Voltz ..... ⅞"-18

Walter ..... ½"
Ware ..... ⅞"-18
Watson ..... ⅞"-18
White ..... ⅞"-18
Wichita ..... ⅞"-18
Wilcox ..... ⅞"-18
Wilson ..... ⅞"-18
Winther ..... ⅞"-18
Wisconsin, ⅞"-18 Long Type "D"
Witt-Will ..... ⅞"-18

Zeitler & Lamson..... ⅞"-18

Every effort has been made to secure accurate data for this Index of Plug Sizes. The field of Motor building is one of constant change, which makes it manifestly impossible to guarantee the absolute correctness of this list.

SPARK PLUG CLEANER

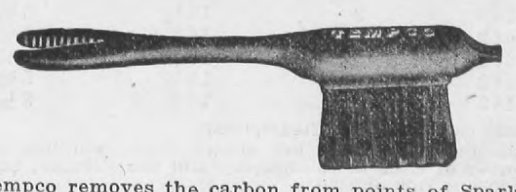


Champion Minute Spark Plug Cleaners enable any one, as well as the Expert Mechanic, to thoroughly clean Spark Plugs without taking them apart or using tools.

Champion Minute Spark Plug Cleaners, with Rubber Gaskets ..... **Each, $0.75**

Packed—Each in a separate Wood Carrying Case.

TEMPCO SPARK PLUG TOOL



Tempco removes the carbon from points of Spark Plugs with but little effort. Combines steel wire brush—best for removing carbon, screw driver tip point adjuster and wrench. Practical, Efficient, and a Time-Saver.

Tempco Spark Plug Tool..... **Each, $0.40**

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COLUMBIA MULTIPLE AND HOT SHOT BATTERIES

IN UNITS

Columbia Multiple Battery.

There are a great many places where a unit battery is desirable, and often conditions are found which preclude the use of a single series set of cells, or even a single series set of cells loosely connected. In this case a series multiple battery of dry cells, or a unit battery of even a single set of cells in series will successfully accomplish the work.

Columbia Hot Shot Battery.

COLUMBIA MULTIPLE BATTERIES

These batteries are made from specially selected cells arranged and connected to give various voltages and capacities. The cells are connected by means of heavy copper ribbon soldered to the terminals. Every cell is insulated from the case and from the other cells in such a way as to make a waterproof and practically damage proof unit battery. Columbia Multiple Battery is enclosed in an hermetically sealed, handsomely enameled metal case, with convenient handles for carrying.

Type	Voltage	Length Inches	Width Inches	Height Over All Inches	Weight Pounds	Each
146	6	11	3	8 ¾	16	$1.70
226	3	11	3	8 ¾	16	1.70
246	6	11	5 ½	8 ¾	25	3.40
426	3	11	5 ½	8 ¾	25	3.40
346	6	11	8 ⅛	8 ¾	37	5.10
436	4 ½	11	8 ⅛	8 ¾	37	5.10
266	9	11	8 ⅛	8 ¾	37	5.10
156	7 ½	13 ¾	3	8 ¾	17	2.15
256	7 ½	13 ¾	5 ½	8 ⅜	34	4.30
526	3	13 ¾	5 ½	8 ¾	34	4.30
356	7 ½	13 ¾	8 ⅛	8 ¾	50	6.40
536	4 ½	13 ¾	8 ⅛	8 ¾	50	6.40
166	9	8 ⅛	5 ½	8 ¾	20	2.55
326	3	8 ⅛	5 ½	8 ¾	20	2.55
236	4 ½	8 ⅛	5 ½	8 ¾	20	2.55

COLUMBIA HOT SHOT BATTERIES

Columbia Hot Shot is a unit battery in an attractive red, moisture proof case. Soldered copper strips connect the individually tested cells, which are entirely surrounded by a water-proof insulating compound. It is only necessary to connect two wires to the binding posts. The battery is then ready to operate. Hot Shot is particularly useful for ignition where the variety of sizes makes it adaptable for motors of all sorts—stationary, vehicle or motor boat. It is very satisfactory for carriage lighting outfits.

Type	Voltage	Length Inches	Width Inches	Height Inches	Weight of Std. Pkg. Pounds	Standard Package	Each
1361	4 ½	8	2 ¾	7 ½	315	35	$1.20
1461	6	10 ⅝	2 ¾	7 ½	290	25	1.60
1462	6	5 ⅜	5 ⅜	7 ½	290	25	1.60
2261	3	10 ⅝	2 ¾	7 ½	290	25	1.60
2262	3	5 ⅜	5 ⅜	7 ½	290	25	1.60
1561	7 ½	13 ¼	2 ¾	7 ½	284	20	2.00
1561S	7 ½	12 ¾	2 ¾	7 ¼	284	20	2.15
1562	7 ½	8	5	7 ½	274	20	2.00
1661	9	15 ¾	2 ¾	7 ½	290	17	2.40
1662	9	8	5 ⅜	7 ½	290	17	2.40
2361	4 ½	15 ¾	2 ¾	7 ½	290	17	2.40
2362	4 ½	8	5 ⅜	7 ½	290	17	2.40
2462	6	10 ⅝	5 ⅜	7 ½	280	12	3.20
4262	3	10 ⅝	5 ⅜	7 ½	280	12	3.20
2562	7 ½	13 ¼	5 ⅜	7 ½	256	9	4.00
5262	3	13 ¼	5 ⅜	7 ½	256	9	4.00
2662	9	15 ¾	5 ⅜	7 ½	235	7	4.80
2663	9	10 ⅝	8 ⅛	7 ½	235	7	4.80
3462	6	15 ¾	5 ⅜	7 ½	235	7	4.80
3463	6	10 ⅝	8 ⅛	7 ½	235	7	4.80

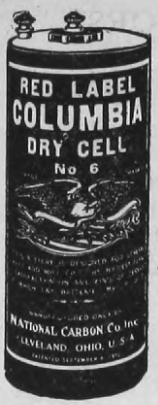
* Made especially for Stearns car.

Note.—In above table are shown sizes, weights, and voltages of the various batteries. The type number indicates the number of cells in the battery and the voltage; and if there is a fourth figure, it indicates whether the cells are arranged in one row or two.

To illustrate: The first figure shows the number of cells connected in multiple. In other words, by multiplying the amperage of one cell by the first figure you will get approximately the short circuit current of the battery. The second figure shows the number of cells connected in series. The third figure shows that the battery is made up of 6-inch cells. The fourth shows the number of rows of cells.

A 3463 battery is, therefore, made up of three cells in multiple, giving a short circuit current of about 75 amperes; 4 cells in series, giving a voltage of 6; the battery is made up of 6-inch cells, and is made in three rows.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN



DRY BATTERY CELLS

Note.—Unless otherwise specified all Batteries will be furnished with Knurled Screw connections, High or Flush Carbon Top, and in Round Cartons.

Batteries with Spring connections or in Square Cartons will be furnished when so ordered at the same prices.

Columbia Red Label and Ignitor Dry Cells, in Round Cartons

Columbia Dry Cells combine high efficiency and great recuperative power with long life, which makes them very desirable for Automobiles, Motor Boats and Gas Engine ignition, and for Telephones, Electric Bells, Annunciators, Gas Lighters, Mining Signals, Medical Batteries, etc.

Ignitor Columbia Dry Cells give a hot, snappy spark, recuperate rapidly and have long life; qualities which are very essential for successful Gas and Gasoline Engine ignition on Automobiles, Launches, Motor Boats, Stationary Engines, etc., and gives absolute satisfaction under the most extreme conditions. Especially designed for heavy service.

No. 6—2½x6 inches	F. o. b. Detroit.		F. o. b. Cleveland.	
Price per 100	Columbia	Ignitor	Columbia	Ignitor
Less than 12	$.....	.....	.....	.....
12 or less than 50	.....	.....	.....	.....
50 or less than 125	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 125 Cells. Weight 240 pounds packed.

No. 7—3x7 inches	F. o. b. Detroit.		F. o. b. Cleveland.	
Price per 100	Columbia	Ignitor	Columbia	Ignitor
Less than 6	$.....	.....	.....	.....
6 or less than 12	.....	.....	.....	.....
12 or less than 25	.....	.....	.....	.....
25 or less than 50	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 50 Cells. Weight 205 pounds packed.

No. 8—3½x8 inches	F. o. b. Detroit.		F. o. b. Cleveland.	
Price per 100	Columbia	Ignitor	Columbia	Ignitor
Less than 6	$.....	.....	.....	.....
6 or less than 12	.....	.....	.....	.....
12 or less than 25	.....	.....	.....	.....
25 or less than 50	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 50 Cells. Weight 315 pounds packed.

Red Seal Dry Cells, in Round and Square Cartons

Red Seal Dry Batteries are designed for Automobile, Motor Boat or any system of Gas or Gasoline Engine ignition, for operating Telephone Transmitters, Railway and other signal devices, cautery and electro-medical apparatus, or any work for which a dry cell is qualified. In fact, the range of work this Battery will do satisfactorily is equal to any Dry Cell on the market, and it always gives excellent results.

No. A—2½x6¾ inches	F. o. b. Detroit.		F. o. b. Ravenna, Ohio.	
Price per 100	Red Seal Round	Red Seal Square	Red Seal Round	Red Seal Square
Less than 12	$.....	.....	.....	.....
12 or less than 50	.....	.....	.....	.....
50 or less than 125	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 125 Cells. Weight 125 Pounds packed.

No. B—3x7½ inches	F. o. b. Detroit.		F. o. b. Ravenna, Ohio.	
Price per 100	Red Seal Round	Red Seal Square	Red Seal Round	Red Seal Square
Less than 6	$.....	.....	.....	.....
6 or less than 12	.....	.....	.....	.....
12 or less than 25	.....	.....	.....	.....
25 or less than 50	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 50 Cells. Weight 205 Pounds packed.

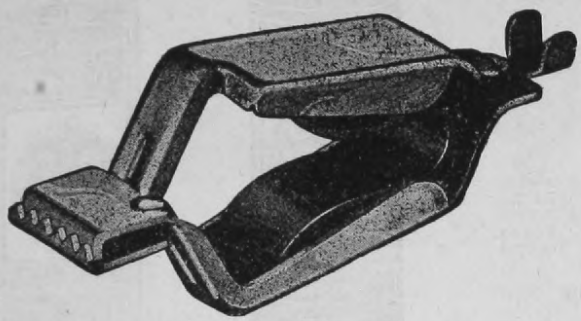
No. C—3½x8½ inches	F. o. b. Detroit.		F. o. b. Ravenna, Ohio.	
Price per 100	Red Seal Round	Red Seal Square	Red Seal Round	Red Seal Square
Less than 6	$.....	.....	.....	.....
6 or less than 12	.....	.....	.....	.....
12 or less than 25	.....	.....	.....	.....
25 or less than 50	.....	.....	.....	.....
In Full Barrel lots	.....	.....	.....	.....

Packed—Full Barrels Contain 50 Cells. Weight 315 Pounds packed.

Note.—Yearly contracts are subject to rebates according to the quantity purchased. Contract prices and rebates will be furnished on application. Columbia and Ignitor or Red Seal and Hi-Up may be aggregated to make up quantity rebates; full barrel packages, however, must contain one size and one grade only.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TEST CLIPS



No. 21A. Universal.

For Storage Battery Charging. With these Test Clips Lighting and Starter Batteries can be charged without removing them from the car. Simply fit the connecting cord with Universal Test Clips and snap them over the battery terminals. Steel, Lead Plated. 35 Amperes Capacity. Jaws spread 1½ in. Can be used repeatedly.

No. 21A—Universal Test Clips.....Per 100, $12.50
Packed—One Hundred in a Package.

BATTERY CONNECTORS

Columbia "Bull Dog."

Spring Clip Connectors made of properly insulated annealed copper wire.

Bull Dog Connectors.....Per 100, $3.50

No. 155. Fahnestock.

Special Type Fahnestock Spring Clip attached to each end of a flexible insulated wire. Can be used over and over again.

No. 155—Fahnestock.....Per 100, $3.00

No. 93B.

Flexible Insulated Wire with Punched Copper Tips.

No. 93B—Columbia.....Per 100, $3.50

No. 126. Columbia.

Soft Copper Ribbon with White Adhesive Tape.

No. 126—Columbia.....Per 100, $1.75

BATTERY CONNECTORS

No. 125. Fahnestock.

Soft Copper Ribbon with White Adhesive Tape.

No. 125—Fahnestock.....Per 100, $1.50

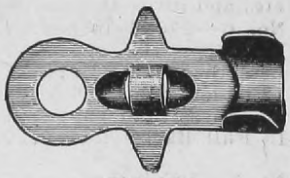
COPPER WIRE TERMINALS

No. 1.

No. 1½.

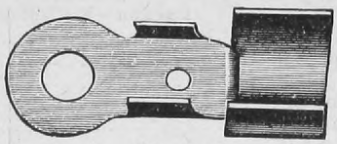
No. 1 —For Small Primary Cables...Per 1,000, $4.20
No. 1½—Heavy for Primary Cables...Per 1,000, 6.20
Packed—One Hundred in an Envelope.

No. 2.



No. 3.

No. 2—For Most Primary Cables.....Per 1,000, $ 7.70
No. 3—For Average Secondary Cables.Per 1,000, 12.00
Packed—One Hundred in an Envelope.



No. 4.

For the very largest size of cables.

No. 4—Full size cut.....Per 1,000, $15.00
Packed—Fifty in an Envelope.

No. 1 Assortment.

Connecting Wire or Cable Terminals.

No. 1—Terminal Assortment containing 130 Terminals, assorted sizes.....Per Ass't, $.....
Packed—Each Size in a Separate Compartment.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRIC AUTO LIGHTS

No. 520. Headlight.

No. 508. Sidelight.

Attractive Lamps designed for Ford cars. Heavy Silver Plated Parabolic Reflectors. Adjustable Focusing Device on outside. Dust and Waterproof. Ediswan Connectors and Sockets; 12 C. P. Tungsten Bulb. Black Enamel Finish.

Nos.	520	508
Front, inches	9	5
Depth, inches	5	4¼
Each	$3.45	1.85

Note.—No. 520 is also made up with double bracket with 7 inch centers.

OIL SIDE AND TAIL LAMPS

No. 540. Side Lamp.

No. 560. Tail Lamp.

Handsome, Serviceable and Satisfactory. Guaranteed to stay lighted in all weather. Regular Prop or Special Bolt to fit Ford 1915 or later cars

Nos.	540	560
Height, inches	9½	9½
Depth, inches	5¼	5¼
Semaphore, inches	3¼	3¼
Each	$2.05	2.10

MCKEE HEADLIGHT LENSES

Has a range of 600 feet ahead and throws the light below 42 inch dead line and gives an increased volume of light without the objectionable glare. The light beams penetrate fog and dust. The concave-convex shape diverts a strong light that illuminates the sides of the road enabling the driver to see dangerous places and around corners before making the turn.

PRICE LIST PER PAIR.

Style of Glass	Clear	Amberoid
5 to 8½ inches inclusive	$2.50	3.50
8¾ to 9½ inches inclusive	3.00	4.00
9¾ to 10½ inches inclusive	3.50	4.50
10¾ to 11½ inches inclusive	4.00	5.00

No. 706. Tail Lamp. No. 706L. Tail Lamp.

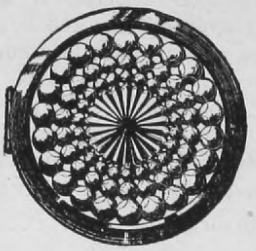
No. 706 is a Very popular Lamp with Ruby Semaphore Lens, white side light, cut out plug, 2 C. P. 6-volt Mazda Bulb. Has combination prop opening for round or flat iron. Black Enamel Finish.

No. 706—Front 3⅛ inches, Ruby 3 inches, Depth 2½ inches ..... Each, $0.84

No. 706L—With License Plate and white light on the bottom to illuminate the number. Combination prop opening. Black Enamel Finish.

No. 706L—Front 3⅛ inches, Ruby 3 inches, Depth 2½ inches, Width of Plate 9 inches.... Each, $0.96

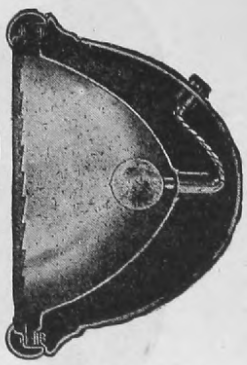
"WARNER" HEADLIGHT LENSES



The Warner Lens sheds floods of soft light on either side and far ahead. It is the same in every position. Turning of the lens in door does not affect it nor does the rise and fall of the car. It is Standard equipment on a dozen or more of the leading cars.

Size, inches	5 to 9	9¼ to 10	10¼ to 12
Per Pair	$3.50	4.00	5.00

CONAPHORE HEADLIGHT LENSES



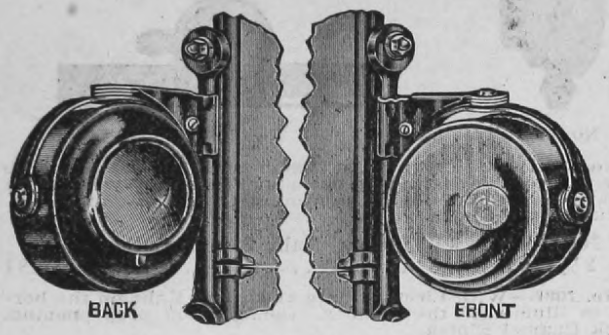
The Corning Conaphore is a scientific device for headlights which gives long range and right direction to the beam and eliminates the glare. It has a smooth outer surface and a series of horizontal corrugations on the inside. It gives a headlight a range of 500 feet with a standard bulb of 21 candle power. It penetrates dust or smoke and its strong side light illuminates the roadside. It never clogs in summer or winter conditions. Made of Clear Glass or Noviol Glass, equal in range, but the Noviol has the advantage of eliminating the back glare and penetrating fog.

PRICE LIST PER PAIR.

Style of Glass	Noviol	Clear
3 to 4⅞ inches inclusive	$1.30	.80
5 to 6⅞ inches inclusive	2.40	1.60
7 to 8½ inches inclusive	3.50	2.50
8⅝ to 10 inches inclusive	4.50	3.00
10⅛ to 11½ inches inclusive	6.00	4.00

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

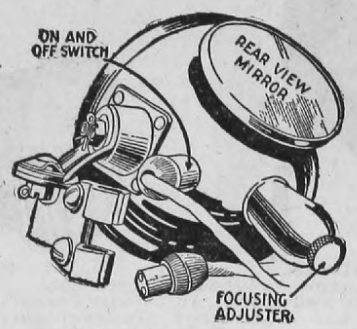
SPOT LIGHTS



Stewart.

The Stewart V-Ray Searchlight is not an ordinary spotlight It is a real searchlight, which throws a big brilliant beam of light in whatever direction it is needed. It is constructed after improved designs and is compact and efficient. It is equipped with a full 6 inch curved lens and is sealed into the front of the case to make it moisture and dust proof. It has a 3½ inch reducing mirror located in the center of the back. It is not necessary to twist the light out of position to use the mirror. The Universal bracket makes it possible to turn the light in any direction.

Stewart—V-Ray with bracket.....Each, $5.00



No. 4. Day Ray.

The No. 4 Day Ray has powerful Light producing qualities. Is scientifically designed and constructed of the highest quality materials in the most workmanlike manner. It is 6 inches in diameter with heavily silvered parabolic reflector, bayonet door fastening, mirror, focus adjustment, switch in socket at body of lamp, double cord, universal adjustable bracket and is finished in baked enamel.

No. 4—Day Ray as described.....Each, $5.00

Red Spot. Side View.

Red Spot. Front View.

The Red Spot Searchlight is the only light combining a White Spot and a Red Danger Signal. For city driving the headlights can be turned out entirely. The Red Spot can be focused to conform to all regulations. Each Red Spot Searchlight is furnished with Silvered Parabolic Reflector, 6-7 volt 15 c. p. lamp, 6 feet of Duplex Cable, copper terminals and switch. Regularly equipped with No. 100-V type bracket suitable for the majority of cars. Black enamel and nickel finish. **Can be** instantly changed from a White Light to a Red Light Danger Signal and Focused in any direction, giving protection from approaching danger. Especially useful if stalled in a dangerous position. A Push Button operates the Danger Signal.

No. 1613—Red Spot Searchlight, without mirror..... Each, $6.50

No. 1616—Red Spot Searchlight, with mirror..... Each, 7.00

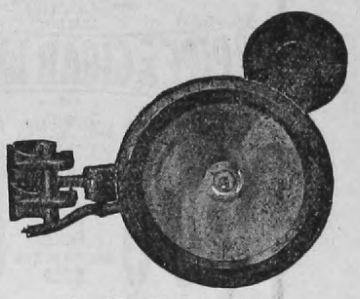
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

OLD SOL SPOT LIGHTS

No. 77. Side View.

"Old Sol" Windshield Spot Light, No. 77. Equipped with patented Universal Bracket; fits on all cars with tapered or straight windshield supports—special bracket on request for Studebaker; on and off switch in the handle on the push-in type; handle for moving lamp in any direction at the rear of lamp body; 3 inch adjustable mirrorscope which can be turned in any direction desired independent of the lamp movement; door frame can be removed from lamp body in a few seconds for changing bulbs, etc; six inch face; highly polished silver plated reflector and highly efficient powerful Nitrogen bulb throws sharp pencil beam of light. Black enamel finish.

No. 77—24 C. P. Bulb, 6-8 Voltage..... ...Each, $5.00



No. 77. Front View.

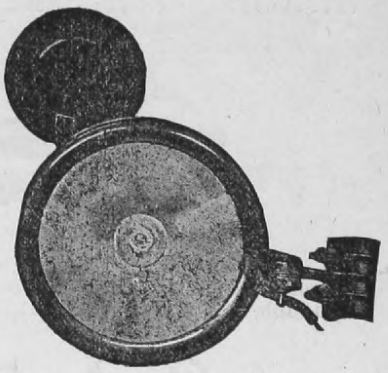
OLD SOL WINDSHIELD SEARCH LIGHTS

No. 70. Side View.

"Old Sol" No. 70 Windshield Search Light. Equipped with handle at rear of lamp, same having combination switch for turning light on and off and focusing device to obtain clear pencil beam light for long distance or diffused light for short distance; door frame quickly removed for replacement of bulb; switch and door construction entirely changed and different from previous models; highly efficient Nitrogen bulb; silver plated polished reflector; Universal Bracket fits all makes of cars and straight or tapered Windshields—special bracket supplied for Studebaker; adjustable mirrorscope which can be turned in any direction independent of lamp.

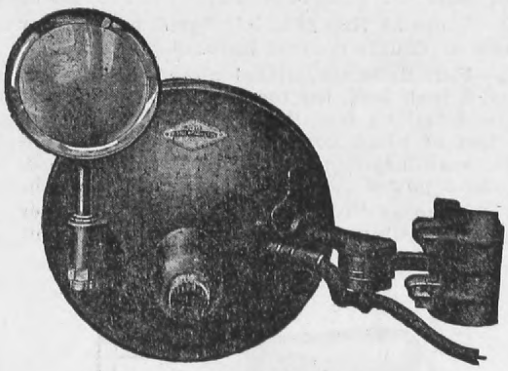
Regular equipment includes central beam 24 c. p. bulb controlled by "on" and "off" switch in handle.

No. 70—24 C. P. Bulb, 6-8 Voltage..Each, $7.00



No. 70. Front View.

OLD SOL NITROJECTORS



No. 100. Rear View.

No. 100. Side View.

"Old Sol" Nitrojector No. 100 Windshield Driving Light. Complies with state lighting laws for head lights and spot lights; many improvements and changes embodied in this model; new improved switch and focusing device in handle at rear of lamp; triple reflectors silver plated and highly polished in conjunction with the tubular No-Glare device, producing a clear, soft, powerful light which, for driving purposes and general Spot Light utility, is unequaled by any lamp on the market; recommended and endorsed by all State Legislators; equipped with 4 inch rear sight mirrorscope, adjustable independently from lamp; switch plug in lamp body in addition to switch in handle allows for the lamp to be removed from Windshield and used as a trouble light.

No. 100—Old Sol Nitrojector, complete as described.....Each, $10.00

Note.—Display Stands furnished gratis with orders for 6 No. 100 or 12 No. 70 or 77 Lights.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

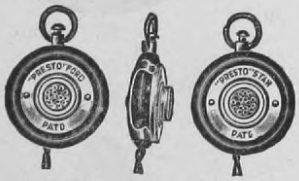
PRESTO CIGAR LIGHTERS AND TROUBLE LAMPS

Pipe Lighters on Cards.

No. 199—Pipe Lighters mounted six on a card with easel back ready to display on show case or in windows, packed one card in a box ready for shipping purposes.....Each Card of Six, $12.00

No. 199. Pipe and Cigar Lighter.

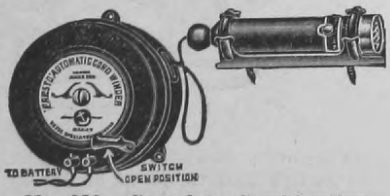
No. 199—Pipe and Cigar Lighter complete with chromium nickel tip and holder, either single or double contact plug.....Each, $2.00



No. 204. No. 205.

No. 204—Cigar Lighter for Fords which gets its power direct from the magneto equipped with a lighter tip which is especially suited for the Ford magneto, furnished with 10 feet of cord and has a special tip for Ford cars previous to 1915 and a regular tip for 1915, 1916 and 1917 cars. In ordering state the year and model of car. Complete with holder...Each $3.35

No. 205—Star Cigar Lighter, constructed the same as No. 204, but has a tip for all other makes of cars, the same tip as used on other cigar lighters. Complete with holder.....Each, 3.35

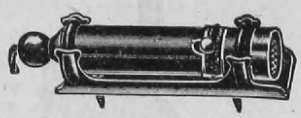


No. 252. Complete Combination.

No. 252—Combination consists of Automatic Cord Winder No. 240, Cigar Lighter No. 202, and Holder for the same.....Each, $6.70

No. 250—Combination consists of Automatic Cord Winder with Cigar Lighter No. 200, which is a combination of the cigar lighter and trouble lamp combined. Complete with holder. Each, 8.00

No. 200. Combination.



No. 202. Lighter with Holder.

New design, handle of ebony finish, nickel plated cigar Lighter Tip and Reflector. Polished ivory finish push buttons. Furnished with 10 feet of silk cord.

	Each
No. 200—Complete with regular terminals.....	$4.70
No. 202—Complete with regular terminals.....	3.35

Cigar Lighter Tips

	Each
6, 7 or 8 Volt	$1.60
12 Volt	2.40
18 Volt	3.20
21 Volt	4.00
Ford, special cars previous to 1915.....	1.60
1915, 1916, 1917 tips for Ford cars.....	1.60

Pipe Lighter Tips

	Each
6, 7 or 8 Volt.....	$0.80
10, 12 or 14 Volt.....	1.20
16, 18 or 21 Volt.....	1.60

All Cigar Lighters are equipped with 6 volt tips unless otherwise specified.

A Nickel Plated Holder is furnished with each Cigar Lighter which can be attached anywhere in the car.

Presto Inspection and Trouble Lamps

Nos. 281 and 282. Nos. 286 and 287.

No. 281—Full Reflector, 3 inch diameter, nickel plated, highly polished, 10 feet of black cotton cord, regular battery terminals, bayonet lamp socket and 6 volt, 4 candle power Edi-Swan base bulb .....Each, $1.35

No. 282—Same as No. 281, but fitted with either single or double contact bayonet plug..... 1.70

No. 286—Full Reflector, nickel plated, highly polished 3 inch lens, for reading street signs and house numbers from the car. Complete with 10 feet of black cord, regular battery terminals, with bayonet lamp socket, and 6 volt, 4 candle power Edi-Swan base bulb...Each, 1.70

No. 287—Same as No. 286, but fitted with either single or double contact bayonet plug..Each, 2.00

Nos. 276 and 277.

No. 276—One-third reflector wire guard, 10 feet of black cotton cord, regular battery terminals, adjustable hook hanger, bayonet lamp socket and 6 volt, 4 candle power tungsten bulb .....Each, $1.35

No. 277—Same as No. 276, but fitted with either single or double contact bayonet plug. Each, 1.70

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ELECTRIC HAND HOUSE LAMPS AND LANTERNS

EVEREADY

No. 4706.

Eveready House Lamps with Convenient Carrying Handle and Contact Switch. Heavily Nickel Plated and Polished. Uses Battery No. 703 and Bulb No. 2.

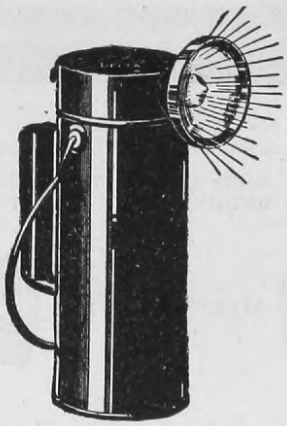
No. 4706– 3⅝x2¼ inches.....Complete, Each, $2.00

No. 4709.

Eveready Railroad Type Lanterns with Large Swinging Bail, Heavy Guard over Standard Glass Globe. Uses Battery No. 734 and Bulb No. 1199.

No. 4709—9x5½ inches. Nickeled.....
.....Complete, Each, $2.00

DELTA



No. 7.

Delta—A safe and convenient hand lamp for the home. Operates on one No. 6 Common Round Dry Battery, and burns from 25 to 40 hours. Furnished with 1½ Volt Electric Bulb but without battery.

Has a Big Bail, convenient handle and stands alone. Every home will eventually have one of these famous lamps because they are so reliable and cheap to burn.

Substantially constructed from sheet steel finished in handsome gloss baked enamel and trimmed in nickel plate. Equipped with powerful silver plated parabolic reflector, throwing a light hundreds of feet as well as a broad spreading light to the sides.

No. 7—7½ inch high, **Without** Battery..
.....Each, $.....

DAD'S

No. 175.

Dad's Electric Hand Lanterns for extra long service provide a very bright light. Made with Heavy Rolled Steel Case with Removable Lid, Steel Handle and Wire Bail. Ground Bull's Eye Lens 3 in. in diameter. Equipped with Aluminum Reflector and 3 Volt Mazda Bulb and **operates** on two No. 6 Round Dry Batteries. Finished in Red Enamel. Throws its light 300 feet ahead and spreads its light 15 to 20 feet 3 to 5 feet from the Reflector. Easy Grip Handle, Push Button Switch. Burns from 40 to 60 hours.

No. 175—7½x5½x3 inches, **Without** Batteries .....Each, $.....

DELTA

No. 10.

Delta New Electric Hand Lantern. Constructed substantially from sheet steel, handsomely finished in Rich Baked Red Enamel and is trimmed in polished nickel plate. Powerful 3 Volt Electric Bulb made especially for this lantern. **Operates** on two No. 6 Dry Batteries. Extra powerful silver plated Reflector polished to a mirror finish. Throws light hundreds of feet ahead as well as a wide spreading light to all sides. A fine mechanical job. Burns from 40 to 60 hours.

No. 10—7¾x5½x3 inches, **Without** Batteries .....Each, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FLASH LIGHTS

EVEREADY

Nos. 2602, 2604 and 2612.

Nickel Trimmings, Sliding Lock Contact, Heavy Convex Bull's Eye Lens.

Nos.	Description	Complete Each
2602	1¼x5 inch Vulcanized Fibre Case	$1.00
2604	1½x6½ inch Vulcanized Fibre Case	1.20
2612	1½x8½ inch Vulcanized Fibre Case	1.40

Renewal Batteries and Bulbs

For Light No.	2602	2604	2612
Battery No.	791	790	705
Bulb No.	1	7	6

Nos. 2630, 2631 and 2632.

Full Nickel Plated, Sliding Lock Contact, Heavy Convex Bull's Eye Lens.

Nos.	Description	Complete Each
2630	1¼x5 inch Full Nickeled Case	$1.25
2631	1½x6½ inch Full Nickeled Case	1.50
2632	1½x8½ inch Full Nickeled Case	1.75

Renewal Batteries and Bulbs

For Light No.	2630	2631	2632
Battery No.	791	790	705
Bulb No.	1	7	6

Nos. 2628 and 2627.
Nickel Trimmings, Sliding Lock Contact, Heavy Convex Bull's Eye Lens.

No. 2628—1½x6½ inch Enameled Metal Case, using Battery 790 and Bulb 6.....Complete, Each, $0.75
No. 2627—1½x8½ inch Enameled Metal Case, using Battery 705 and Bulb 6.....Complete, Each, .90

MINER'S TYPE

Nos. 2616 and 2619.

Nickel Trimmings, Sliding Lock Contact, Extra Large Double Convex Lens.

Nos.	Description	Complete Each
2616	1½x6½ inch Vulcanized Fibre Case	$1.50
2619	1½x8½ inch Vulcanized Fibre Case	1.70

Renewal Batteries and Bulbs

For Light No.	2616	2619
Battery No.	790	705
Bulb No.	7	6

Nos. 2634 and 2633.

Full Nickel Plated, Sliding Lock Contact, Extra Large Double Convex Lens.

Nos.	Description	Complete Each
2634	1½x6½ inch Full Nickeled Case	$2.00
2633	1½x8½ inch Full Nickeled Case	2.40

Renewal Batteries and Bulbs

For Light No.	2634	2633
Battery No.	790	705
Bulb No.	7	6

SEARCH LIGHTS

No. 2659.

Nickel Trimmings, Sliding Lock Contact, Parabolic Reflector, Accurately Ground Lens.

Nos.	Description	Complete Each
2659	1½x8½ inch Knurled Fibre Case	$3.00

Renewal Batteries and Bulbs

For Light No.	2659
Battery No.	705
Bulb No.	6

Nos. 2638 and 2637.

Full Nickel Plated, Sliding Lock Contact, Parabolic Reflector, Accurately Ground Lens.

Nos.	Description	Complete Each
2638	1½x6½ inch Full Nickeled Case	$2.75
2637	1½x8½ inch Full Nickeled Case	3.25

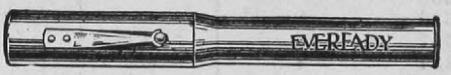
Renewal Batteries and Bulbs

For Light No.	2638	2637
Battery No.	790	705
Bulb No.	7	6

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

FLASH LIGHTS

EVEREADY



Nos. 2683 and 2684.

Fountain Light. Vest Pocket Style with clip to prevent loss.

No. 2683—5 inch Black Enameled Case.....Complete, Each, $1.00
No. 2684—5 inch Nickel Plated Case.....Complete, Each, 1.00

Using Renewal Battery No. 706 and Bulb No. 5.

Nos. 6991 and 6992.

Cigarette Case Type, Hinged at Side, Heavily Nickel Plated and Polished.

No. 6991—3½x1⅞ inches.....Complete, Each, $1.00
No. 6992—3⅛x2⅜ inches.....Complete, Each, 1.25

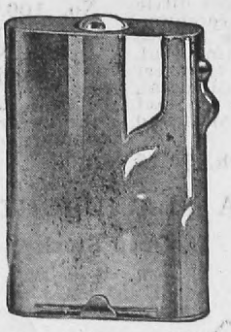
No. 6991 Uses No. 750 Battery and No. 3 Bulb.
No. 6992 Uses No. 751 Battery and No. 4 Bulb.

No. 6954.

Hinged Bottom Case with Push and Slide Contact. Battery is inserted at the bottom. Heavily Nickel Plated and Polished.

No. 6954—3½x1⅞ inches.....Complete, Each, $1.00

Uses No. 792 Battery and No. 1 Bulb.



Nos. 6961 and 6962.

Hinged Bottom Type

Push and Slide Contact Battery is inserted at the bottom. Heavily Nickel Plated and Polished.

No. 6961—2 15/16x1⅜ inches.....Complete, Each, $0.75
No. 6962—2 15/16x2 inches.....Complete, Each, 1.00

No. 6961 Uses No. 750 Battery and No. 3 Bulb.
No. 6962 Uses No. 751 Battery and No. 4 Bulb.

No. 1657.

Electric Candle Type, equipped with Switch providing permanent contact. Height 5½ in., Base 4 in. Heavily Nickel Plated and Polished.

No. 1657—Complete.....Each, $1.00

Uses No. 791 Battery and No. 7 Bulb.

No. 2675.

Electric, Pistol Type, contact made by pulling the trigger Opened for renewal of battery by depressing the sight. Handsome Gun Metal Finish.

No. 2675—3½x2⅞ inches.....Complete, Each, $1.50

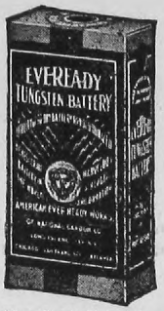
Uses No. 750 Battery and No. 3 Bulb.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

FLASHLIGHT BATTERIES

Tubular Light.

Nos.	Flashlight No.	Height, in.	Width, in.	Depth, in.	Each
700	6900, 6970	1 7/8	1 1/8	9/16	$0.30
703	4706, 6909	2 5/8	2 7/16	7/8	.35
705	2612, 2632 2619, 2633 2659, 2637	7	1 3/8	....	.40
706	2683, 2684	4	9/16	....	.25
734	4703, 4709	3	4	1 3/8	.45
750	2675, 6961 6981, 6991	2 1/4	1 5/16	1 1/16	.30
751	6962, 6972	2 1/4	2	1 1/16	.35
790	2604, 2616 2628, 2631 2634, 2638	4 3/4	1 3/8	....	.30
791	1657, 2602 2630	3 3/4	1	....	.30
792	6954	2 1/2	1 5/8	1 3/16	.30



Pocket Light.

BATTERY AND BULB TESTERS

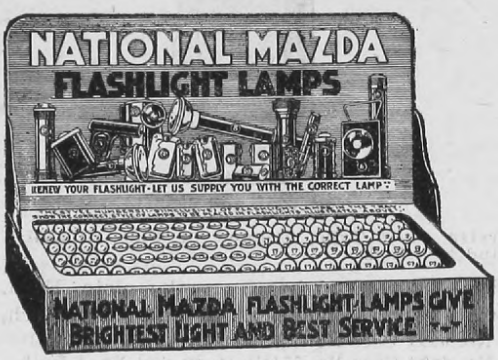
EVEREADY

No. 6291.

Every dealer should have one of these efficient little instruments, both for his own convenience and protection and for the protection of his customers. Through its use every flashlight battery can be tested without breaking seal, and all flashlight bulbs can be tested without having to insert same in flashlight case. Strongly made of stamped metal, having terminal contact post at bottom and three contact wires which connect with sockets for 2.7 volt, 3.8 volt, and 6.2 volt bulbs.

No. 6291—Testers, Bulbs **not** included. . . . .Each, $0.75

MAZDA FLASHLIGHT LAMPS



No. 100A. Assortment.

No. 100A—Assortment contains 100 lamps, 10 each of Nos. 1, 2, 4, 5, 6, 7, 8 and 9, and 20 of No. 3, all of which appear in Open Stock as listed below. . . . . .Each Assortment, $15.00

Note.—The number on any Flashlight case illustrated on the cover of the cabinet indicates the corresponding style number of the proper flashlight lamp to be supplied.

Packed—One Assortment in a Box.

MAZDA FLASHLIGHT LAMPS

In Open Stock

FE-3 3/4
15/32 in. Flat End
Opal Back.

FE-4 1/4
17/32 in. Flat End
Opal Back.

G-3 1/2
7/16 in. Round.

G-4 1/2
9/16 in. Round.

G-5 1/2
11/16 in. Round.

G-5 1/2
Standard Dry Battery for One and Two Cell Service.

Comparative Numbers of Lamps			Description of Lamps			Make and Catalog No. of Battery		Price
Our No.	Eveready	Franco	Volts	Amperes	Bulb Type	Eveready Tungsten	Franco Radio	Each
1	1182	520	2.7	.35	G3 1/2	791, 792	1029	$0.15
2	1190	521	3.8	.35	G3 1/2	703	.....	.15
3	1180	535	2.5	.35	FE3 3/4	706, 750	1008, 1040	.15
4	1181	536	3.8	.35	FE3 3/4	703, 751	1020, 1041	.15
5	1179	537	2.5	.25	FE4 1/4	700	1042	.15
6	1193	543	3.8	.35	G4 1/2	705, 734	1027, 1030	.15
7	1198	540	2.9	.35	G4 1/2	709	1028	.15
8	1195	544	6.2	.35	G5 1/2	.....	.....	.15
9	1451	550	1.5	.60	G5 1/2	For 1 Cell Lanterns		.15
10	Special	555	3.0	.80	G5 1/2	For 2 Cell Lanterns		.15

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MINIATURE MAZDA AUTO LAMPS

"IN KITS"

NATIONAL MAZDA AUTO LAMP KIT ASSORTMENTS

Headlights in these Assortments are gas-filled and give whiter and brighter light for less current than older types of headlight lamps. They are designated as MAZDA C headlights.

Number of Lamps	Round Bulb, Type & Size	Volts	Amp.	Candle Power
Single Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 1 ..... Each, $1.87				
No. 129SC—2 C Headlights..	G-12 1½″	6-8V	2.5A	20CP
No. 81SC—2 Sidelights	G- 8 1 ″	6-8V	.84A	5CP
No. 63SC—2 Rear & Dash..	G- 6 ¾″	6-8V	.42A	2CP
Double Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 2 ..... Each, $1.87				
No. 130DC—2 C Headlights..	G-12 1½″	6-8V	2.5A	20CP
No. 82DC—2 Sidelights	G- 8 1 ″	6-8V	.84A	5CP
No. 64DC—2 Rear & Dash.	G- 6 ¾″	6-8V	.42A	2CP
Single Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 3 ..... Each, $1.87				
No. 129SC—2 C Headlights..	G-12 1½″	6-8V	2.5A	20CP
No. 63SC—4 Rear & Dash..	G- 6 ¾″	6-8V	.42A	2CP

NATIONAL MAZDA AUTO LAMP KIT ASSORTMENTS—Cont'd.

Headlights in these Assortments are gas-filled and give whiter and brighter light for less current than older types of headlight lamps. They are designated as MAZDA C headlights.

Number of Lamps	Round Bulb, Type & Size	Volts	Amp.	Candle Power
Double Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 4 ..... Each, $1.87				
No. 130DC—2 C Headlights..	G-12 1½″	6-8V	2.5A	20CP
No. 64DC—4 Rear & Dash.	G- 6 ¾″	6-8V	.42A	2CP
Double Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 5 ..... Each, $1.87				
130DC—2 C Headlights.....	G-12 1½″	6-8V	2.5A	20CP
82DC—4 Side, Rear & Dash	G- 8 1 ″	6-8V	.84A	5CP
Single Contact Bayonet Base Lamps for Three Cell Storage Battery-Generator Lighting Systems				
Assortment No. 6 ..... Each, $1.87				
No. 129SC—2 C Headlights..	G-12 1½″	6-8V	2.5A	20CP
No. 81SC—2 Sidelights	G- 8 1 ″	6-8V	.84A	5CP
(3-4 volts—to be burned two in series.)				
No. 61SC—2 Rear & Dash..	G- 6 ¾″	3-4V	.84A	2CP
Single Contact Bayonet Base Lamps for Six Cell Storage Battery-Generator Lighting Systems				
Assortment No. 7 ..... Each, $2.07				
No. 141SC—2 C Headlights..	G-12 1½″	12-16V	1.5A	30CP
No. 89SC—2 Sidelights	G- 8 1 ″	12-16V	.42A	6CP
No. 67SC—2 Rear & Dash..	G- 6 ¾″	12-16V	.26A	3CP
Double Contact Bayonet Base Lamps for Six Cell Storage Battery-Generator Lighting Systems				
Assortment No. 8 ..... Each, $2.07				
No. 142DC—2 C Headlights..	G-12 1½″	12-16V	1.5A	30CP
No. 90DC—2 Sidelights	G- 8 1 ″	12-16V	.42A	6CP
No. 68DC—2 Rear & Dash..	G- 6 ¾″	12-16V	.26A	3CP

No. 1-8—Assortment containing 8 Kits, One each Nos. 1 to 8 inclusive as listed above ..... Each, $15.36

Packed—Each Kit in a Separate Box, with all necessary information for selling and using.

MAZDA AUTO LAMPS IN DISPLAY CABINETS

100 Assorted Lamps

100 Lamps, assorted, as shown in accompanying table, packed in a Display Cabinet and sold in full packages of one complete assortment.

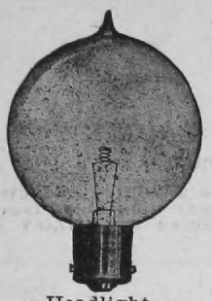
Quantity of Lamps	Volts	Amperes	Candle Power	Type of Bulb	Bayonet Contact
Headlights					
5	6-8	2.5	20	G-12	Double No. 130DC
5	6-8	2.5	20	G-12	Single No. 129 SC
5	6-8	3.5	24	G-16½	Double No. 170DC
5	6-8	3.5	24	G-16½	Single No. 169 SC
5	6-8	2.5	17	G-16½	Double No. 166DC
5	6-8	2.5	17	G-16½	Single No. 165 SC
Sidelights					
10	6-8	.84	5	G-8	Double No. 82DC
10	6-8	.84	5	G-8	Single No. 81 SC
Rear and Dash Lamps					
10	6-8	.42	2	G-6	Double No. 64DC
10	6-8	.42	2	G-6	Single No. 63 SC
10	3-4	.84	2	G-6	Double No. 62DC
10	3-4	.84	2	G-6	Single No. 61 SC
For 1915 and Later Ford Headlights					
5	9	2.0	21	G-12	Double No. 136 D C
For 1912, 1913 and 1914 Ford Headlights					
5	6-8	2.0	14	G-12	Double No. 124 D C

No. 100A—Assortment containing a Selected Stock of 100 popular types of Auto Lamps ..... Each, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MINIATURE MAZDA AUTO LAMPS

In Unit Packages


Headlight. G16½ Bulb.

Headlight. G12 Bulb.

Sidelight. G8 Bulb.

Rear and Dash G6 Bulb.

Single Contact Bayonet Base.

Double Contact Bayonet Base.

Candelabra Screw Base.

Miniature Base.

National Quality MAZDA Auto Lamps are designed for the proper lighting of all automobiles and electric vehicles. They stay uniformly bright and burn for a long period, producing clear, penetrating light for the least possible current consumption.

Bases—Lamps on these schedules are fitted with regular auto lamp bases (Double or Single Contact Bayonet) but can be supplied with Candelabra Screw Base without extra charge when specially ordered. **Specify** Base wanted.

Description	Volts*	Amperes	Approximate Candle Power	Type and Size Bulb	Diameter of Bulb Inches	Maximum Over All Length Inches	Unit Package Quantity.	List Price Clear‡
Stock—The following lamps are regularly carried in stock and should be ordered whenever possible.								
For 3 Cell (Lead Type) Storage Battery—Generator Lighting Systems—6-8 Volts								
Rear and Dash (two in series) No. 61 S C No. 62 D C	3-4	.84	2	G-6	¾	1⅜	10	$0.23
Rear and Dash..... No. 63 S C No. 64 D C	6-8	.42	2	G-6	¾	1⅜	10	.23
Side ..... No. 81 S C No. 82 D C	6-8	.84	5	G-8	1	1 1/16	10	.23
Headlight, Mazda B..... No. 125 S C No. 126 D C	6-8	2.50	17	G-12	1½	2½	5	.30
Headlight, Mazda B..... No. 165 S C No. 166 D C	6-8	2.50	17	G-16½	2 1/16	3⅛	5	.30
Headlight, Mazda C..... No. 87 S C No. 88 D C	6-8	1.50	12	G-8	1	1⅞	10	.40
Spotlight, Mazda C..... No. 103 S C No. 104 D C	6-8	2.50	20	G-10	1¼	2¼	10	.35
Headlight, Mazda C..... No. 127 S C No. 128 D C	6-8	1.50	12	G-12	1½	2½	5	.40
Headlight, Mazda C..... No. 129 S C No. 130 D C	6-8	2.50	20	G-12	1½	2½	5	.35
Headlight, Mazda C..... No. 131 S C No. 132 D C	6-8	3.50	28	G-12	1½	2½	5	.50
For 6 Cell (Lead Type) Storage Battery—Generator Lighting Systems—12-16 Volts								
Rear and Dash (two in series) No. 63 S C No. 64 D C	6-8	.42	2	G-6	¾	1⅜	10	$0.23
Rear and Dash..... No. 67 S C No. 68 D C	12-16	.26	3	G-6	¾	1⅜	10	.27
Side ..... No. 89 S C No. 90 D C	12-16	.42	6	G-8	1	1 1/16	10	.27
Headlight, Mazda B..... No. 139 S C No. 140 D C	12-16	1.00	16	G-12	1½	2½	5	.33
Headlight, Mazda B..... No. 175 S C No. 176 D C	12-16	1.00	16	G-16½	2 1/16	3⅛	5	.33
Spotlight, Mazda C..... No. 105 S C No. 106 D C	12-16	1.25	25	G-10	1¼	2¼	10	.37
Headlight, Mazda C..... No. 141 S C No. 142 D C	12-16	1.50	30	G-12	1½	2½	5	.37
For Ford Magneto Lighting Systems—(Regularly Fitted with Double Contact Bayonet Base)								
Headlight, Mazda B (two in series)..... No. 136 D C	9	2.00	21	G-12	1½	2½	5	$0.30
Headlight, Mazda B (two in series)..... No. 174 D C	9	2.00	21	G-16½	2 1/16	3⅛	5	.30
Headlight, Mazda C (two in series)..... No. 138 D C	9	2.00	27	G-12	1½	2½	5	.35
Note.—Because of limited demand the following lamps are **not** regularly carried in stock but may be obtained on order.								
For 3 Cell (Lead Type) Storage Battery—Generator Lighting Systems—6-8 Volts								
Rear and Dash..... No. 65 S C No. 66 D C	6-8	.84	4	G-6	¾	1⅜	10	$0.27
Side ..... No. 83 S C No. 84 D C	6-8	1.25	7	G-8	1	1 1/16	10	.27
Side (Focusing) ..... No. 85 S C No. 86 D C	6-8	1.00	7	G-8	1	2⅛	10	.35
Headlight, Mazda B..... No. 101 S C No. 102 D C	6-8	1.50	10	G-10	1¼	2¼	10	.30
Headlight, Mazda B..... No. 121 S C No. 122 D C	6-8	1.50	10	G-12	1½	2½	5	.30
Headlight, Mazda B..... No. 123 S C No. 124 D C	6-8	2.00	14	G-12	1½	2½	5	.30
Headlight, Mazda B..... No. 167 S C No. 168 D C	6-8	3.00	20	G-16½	2 1/16	3⅛	5	.30
Headlight, Mazda B..... No. 169 S C No. 170 D C	6-8	3.50	24	G-16½	2 1/16	3⅛	5	.35
Headlight, Mazda B..... No. 171 S C No. 172 D C	6-8	4.00	27	G-16½	2 1/16	3⅛	5	.35
Headlight, Mazda C..... No. 133 S C No. 134 D C	6-8	4.00	32	G-12	1½	2½	5	.75
For 6 Cell (Lead Type) Storage Battery—Generator Lighting Systems—12-16 Volts								
Headlight, Mazda B..... No. 177 S C No. 178 D C	12-16	1.50	24	G-16½	2 1/16	3⅛	5	$0.33
Headlight, Mazda C..... No. 143 S C No. 144 D C	12-16	2.00	39	G-12	1½	2½	5	.75
For 9 Cell (Lead Type) Storage Battery—Generator Lighting Systems—18-24 Volts								
Rear and Dash (two in series) No. 69 S C No. 70 D C	10	.26	2	G-6	¾	1⅜	10	$0.30
Rear and Dash..... No. 71 S C No. 72 D C	18-24	.17	3	G-6	¾	1⅜	10	.35
Side ..... No. 91 S C No. 92 D C	18-24	.26	5	G-8	1	1 1/16	10	.40
Headlight, Mazda B..... No. 179 S C No. 180 D C	18-24	1.00	22	G-16½	2 1/16	3⅛	5	.50
Headlight, Mazda C..... No. 145 S C No. 146 D C	18-24	1.00	27	G-12	1½	2½	5	.75

For Use on Lead and Alkaline Type Electric Vehicle Storage Battery Circuits

Note.—These lamps are regularly carried in stock and should be ordered whenever possible—**Specify** Voltage.

Description	Watts	Type and Size Bulb	Diameter of Bulb Inches	Maximum Over All Length Inches	Unit Package Quantity	List Price Clear‡
*Volts 30-34 40-44 60-64 80-84						
Rear and Dash..... No. 108 No. 110 No. 112 No. 114	8	G-10	1¼	2¼	10	$0.60
†Side ..... No. 148 No. 150 No. 152 No. 154	15	G-12	1½	2½	5	.60
†Headlight ..... No. 182 No. 184 No. 186 No. 188	25	G-16½	2 1/16	3⅛	5	.60

†If fitted with Medium Screw Base or with Medium Bayonet Base, $0.05 list additional.

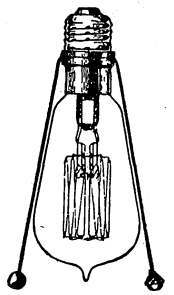
*The lamp voltages indicate that the lamps have been designed for operation on automobile and electric vehicle lighting systems whose voltage varies between the limits shown. Lamps have voltage labels as listed and will give satisfactory service under normal running conditions on automobiles equipped with lighting systems for which these lamps are designed.

‡Prices Effective January 1, 1918, and Subject to Change Without Notice.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

HYLO-ECONOMICAL ELECTRIC LAMPS

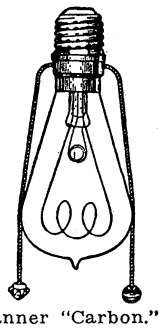
Lamps ¼ Scale.



Banner "Mazda."

For use in Halls, Sleeping Rooms, Bath Rooms, Dens, Dining Rooms, Nurseries, Pantries and on Porches. Convenient, safe and economical.

Standard Edison Base. High, Low and Out. Saves 85% when Low.

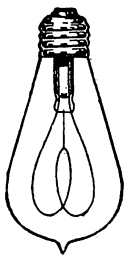


Banner "Carbon."

Hylo-Economical or Turn-Down Lamps are designed to give two or more combinations of candle-power at the same voltage and are adapted for use in Standard Sockets.

MAZDA					CARBON				
Voltage	Watts	Candle Power	Standard Package	Each	Voltage	Watts	Candle Power	Standard Package	Each
110 to 125	25	20 to 1.2	100	$.....	105 to 125	30	8 to ½	100	$.....
	40	30 to 1.2	100	.....		60	16 to 1	100	.....
						120	32 to 1	100	.....

CARBON LAMPS



Banner Gem and Banner Carbon.
Straight Side.

Banner Gem, Straight Side

These Lamps are decidedly the best for the purposes for which they are intended. They yield a superior quality of light and on an equal amount of light rendered consume about ⅓ less current than ordinary carbon lamps, or in other words they may be operated at approximately ⅔ the expense.

Banner Carbon, Straight Side

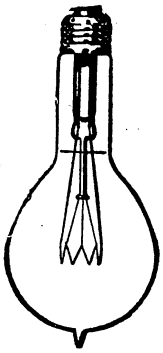
These lamps are guaranteed to give satisfactory service to people who still use them to meet special requirements.

CLASS OF LAMP. Med. Screw Base.	Volts	Size of Lamps in Watts.	Watts per Candle Power	Approximate Candle Power.	Type	Standard Package.	List Prices. Clear Each.	List Prices. Frosted Each.	Discounts to Anyone Broken Pkgs.	Discounts to Anyone Full Pkgs.	Discount on Contract Basis. $150.00 Broken	$150.00 Full Pkgs.	$300.00 Broken	$300.00 Full Pkgs.	$600.00 Broken	$600.00 Full Pkgs.	$1200 Broken	$1200 Full Pkgs.
GEM. Straight Side.	100 to 130	20	4.00	5	S17	200	$0.22	$0.24½	Net at List									
		30	3.00	10	S17	200	.22	.24½										
		40	2.56	16	S19	200	.22	.24½										
		50	2.50	20	S19	200	.22	.24½										
		60	2.50	24	S19	200	.22	.24½		%	%	%	%	%	%	%	%	%
CARBON. Straight Side.	105 to 125	20	4.15	4	S17	200	.18	.21	Carbon Lamps are not sold on contract. Standard Carbon Lamps only are listed above. Any style voltage or lamps not listed can be furnished. Write, giving specifications for quotations.									
		30	3.23	8	S17	200	.18	.21										
		50	2.97	16	S19	200	.18	.21										
		60	2.97	20	S19	200	.18	.21										
	220 to 250	35	4.40	8	P19	200	.20	.23										
		60	3.69	16	P21	200	.20	.23										

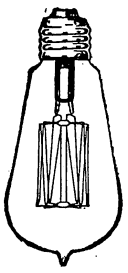
Note.—Lamps up to 60 Watts **Packed** 5 in a Carton and in Standard Packages as listed above.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

BANNER INCANDESCENT ELECTRIC LAMPS

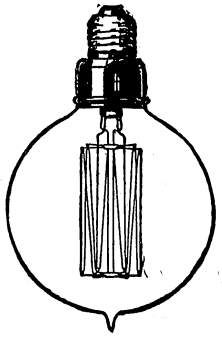


100 Watts.
110-125 Volts.
Banner Mazda.
Pear Shape, Type C.



25, 40 and 50 Watts.
110-125 Volts.
Banner Mazda.
Straight Side, Type B.

25 Watts.
110-125 Volts.
Banner Mazda.
Tubular, Type B.



100 Watts.
110-125 Volts.
Banner Mazda.
Round, Type B.

Banner Mazda, Pear Shape, Type C

The Type C Lamp sometimes known as "Nitrogen Gas Filled" we know to be the best lamp on the market for Domestic, Commercial, Mill and Factory use.

Banner Mazda, Straight Side, Type B

This Lamp combines in its manufacture, the essentials of all worthy lamp developments, and will give light of almost daylight color value. The Drawn Wire Filament assures greater ruggedness and dependability. May be used for any service in the home, factory, office or street. Yields 3 times as much light as an ordinary carbon lamp of same size on the same amount of current used, or yields the same amount of light at ⅓ the expense as compared to an ordinary carbon lamp.

Banner Mazda, Tubular Pattern, Type B

For special work where space is limited or the requirement peculiar this shape is especially adapted. The efficiency is equal to that of the Straight Side Lamps of the same rating.

Banner Mazda, Round Pattern, Type B

For use in some patterns of lighting fixtures this pattern is preferred on account of its proportionally short length, consequently more appropriate or harmonious in appearance. Its efficiency is the same as that of the Straight Side Lamps of the same rating.

Class of Lamp	Volts.	Size of Lamps in Watts.	Watts Per Candle Power.	Approximate Candle Power.	Type.	Base Regularly Supplied.	Standard Pkgs. Contain	List Prices. Clear Each.	List Prices. Frosted Each.	Without Contract. Broken Pkgs.	Without Contract. Full Pkgs.	Discount on Contract Basis $150.00 Broken Pkgs.	$150.00 Full Pkgs.	$300.00 Broken Pkgs.	$300.00 Full Pkgs.	$600.00 Broken Pkgs.	$600.00 Full Pkgs.	1200.00 Broken Pkgs.	1200.00 Full Pkgs.
MAZDA "B" Straight Side.	100 to 130	10	1.67	6	S17	Med. Screw	100	$0.30	$0.33	Net at List	%	%	%	%	%	%	%	%	%
		15	1.47	10	S17	Med. Screw	100	.30	.33										
		25	1.37	20	S19	Med. Screw	100	.30	.33										
		40	1.33	30	S19	Med. Screw	100	.30	.33										
		50	1.32	40	S19	Med. Screw	100	.30	.33										
		60	1.29	50	S21	Med. Screw	100	.35	.39										
		100	1.24	80	S30	Med. Sc. Sk.	24	.70	.77										
MAZDA "B" Straight Side.	200 to 260	25	1.65	15	S19	Med. Screw	100	.35	.38	Net at List	%	%	%	%	%	%	%	%	%
		50	1.49	34	S19	Med. Screw	100	.35	.38										
		100	1.39	72	S30	Med. Sc. Sk.	24	.85	.92										
		150	1.33	113	S35	Med. Sc. Sk.	24	1.30	1.40										
		250	1.20	208	S40	Med. Sc. Sk.	12	2.20	2.35										
MAZDA "C" Pear Shape.	100 to 130	75	1.09	70	PS22	Med. Screw	50	.70	.75	Net at List	%	%	%	%	%	%	%	%	%
		100	1.00	100	PS25	Med. Screw	24	1.10	1.15										
		150	0.92	163	PS25	Med. Screw	24	1.65	1.70										
		200	0.86	232	PS30	Med. Screw	24	2.20	2.27										
		300	0.78	385	PS35	Mog. Screw	24	3.25	3.35										
		400	0.82	490	PS40	Mog. Screw	12	4.30	4.45										
		500	0.78	650	PS40	Mog. Screw	12	4.70	4.85										
		750	0.74	1000	PS52	Mog. Screw	8	6.50	6.75										
		1000	0.70	1430	PS52	Mog. Screw	8	7.50	7.75										
MAZDA "C" Pear Shape.	200 to 260	200	1.00	200	PS30	Med. Screw	24	2.40	2.47	Net at List	%	%	%	%	%	%	%	%	%
		300	0.92	325	PS35	Mog. Screw	24	3.90	4.00										
		400	0.86	465	PS40	Mog. Screw	12	5.10	5.25										
		500	0.85	600	PS40	Mog. Screw	12	5.60	5.75										
		750	0.82	900	PS52	Mog. Screw	8	7.70	7.95										
		1000	0.78	1200	PS52	Mog. Screw	8	9.00	9.25										
MAZDA "B" Tubular.	100 to 130	25	1.38	1¼x5⅞	T10	Med. Screw	100	.55	.60	Net at List	%	%	%	%	%	%	%	%	%
		25)		1x12	T8	Med. Screw	50	1.00	1.10										
		40)				Med. Screw	50	1.00	1.10										
MAZDA "B" Round.	100 to 130	15	1.43	10	G25	Med. Screw	50	.50	.55	Net at List	%	%	%	%	%	%	%	%	%
		25	1.35	11	G25	Med. Screw	50	.50	.55										
		40	1.33	30	G25	Med. Screw	50	.50	.55										
		60	1.23	50	G30	Med. Screw	24	.70	.77										
		100	1.18	85	G35	Med. Sc. Sk.	24	1.00	1.10										

Note.—Lamps up to 60 Watts **Packed** 5 in a Carton; Over 60 Watts 1 in a Carton, and in Standard Packages as listed.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

BRASS SHELL LAMP SOCKETS

Keyless; 660 Watts, 250 Volts.

No. 3667.

No. 3669.

No. 3733.

No. 3754.

No. 3667—⅛ in., 25 in a carton.....Each, $0.30
No. 3771—¼ in., 25 in a carton.....Each, .39
No. 3668—⅜ in., 25 in a carton.....Each, .36
No. 3669—Pendent, 25 in a carton.....Each, .30

Small Concealed Base.
No. 3733—10 in a carton.....Each, $0.41
Insulated Ceiling Base, 3¼ in. Outlet Box.
No. 3754—2 in a carton.....Each, $0.60

S. P. Key; 250 Watts, 250 Volts.

No. 3664.

No. 3666.

No. 3732.

No. 3752.

No. 3664—⅛ in., 25 in a carton.....Each, $0.33
No. 3770—¼ in., 25 in a carton.....Each, .42
No. 3665—⅜ in., 25 in a carton.....Each, .39
No. 3666—Pendent, 25 in a carton.....Each, .33

Small Concealed Base.
No. 3732—10 in a carton.....Each, $0.44
Insulated Ceiling Base, 3¼ in. Outlet Box.
No. 3752—2 in a carton.....Each, $0.63

Pull; 250 Watts, 250 Volts.

No. 3618.

No. 3620.

No. 3731.

No. 3750.

No. 3618—⅛ in., 25 in a carton.....Each, $0.60
No. 3769—¼ in., 25 in a carton.....Each, .69
No. 3619—⅜ in., 25 in a carton.....Each, .66
No. 3620—Pendent, 25 in a carton.....Each, .60

Small Concealed Base.
No. 3731—10 in a carton.....Each, $0.71
Insulated Ceiling Base, 3¼ in. Outlet Box.
No. 3750—18 in. Chain, 2 in a carton....Each, $0.98

BRASS SHELL PULL SWITCHES

Carrying Capacity—1 Ampere on 250 Volts or 3 Amperes on 125 Volts.

No. 5702.

No. 5704.

No. 5795.

No. 6358.

No. 5702—⅛ in., 10 in a carton.....Each, $0.60
No. 5724—¼ in., 10 in a carton.....Each, .69
No. 5703—⅜ in., 10 in a catron.....Each, .66
No. 5704—Pendent, 10 in a carton.....Each, .60

Small Concealed Base.
No. 5795—10 in a carton.....Each, $0.71
Insulated Ceiling Base, 3¼ in. Outlet Box.
No. 6358—2 in a carton.....Each, $0.90

No. 6361.

No. 6364.

No. 5900.

No. 5906.

No. 6361—⅛ in., 10 in a carton.....Each, $0.60
No. 6362—¼ in., 10 in a carton.....Each, .69
No. 6363—⅜ in., 10 in a carton.....Each, .66
No. 6364—Pendent, 10 in a carton.....Each, .60

Small Concealed Base.
No. 5900—10 in a carton.....Each, $0.71
Insulated Ceiling Base, 3¼ in. Outlet Box.
No. 5906—2 in a carton.....Each, $0.90

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

BRASS SHELL LAMP SOCKETS

No. 13 Keyless.
660 Watts, 250 Volts

No. 10 S. P. Key
250 Watts, 250 Volts

No 15 Pull.
250 Watts, 250 Volts.

No. 17 Twin Pull.
Top; 250 Watts, 250 Volts
Side; 660 Watts, 250 Volts

No. 13—Body only. 25 in a Carton.....Each, $0.23
No. 10—Body only. 25 in a Carton.....Each, .26

No. 15—Body only. 25 in a Carton.....Each, $0.53
No. 17—Body only. 10 in a Carton.....Each, 1.08

SWITCHES

No. 20 S. P. Pull Ceiling
3 Amperes, 125 Volts
1 Ampere, 250 Volts

ROSETTES

No. 25 Pull Switch
3 Amperes, 125 Volts
1 Ampere, 250 Volts

No. 20—Body only. 10 in a Carton.....Each, $0.53
No. 25—Body only. 10 in a Carton.....Each, .53

SOCKET CAPS

No. AA.

No. AB.

No. AA—⅛ inch. 25 in a Carton.....Each, $0.07
No. AB—¼ inch. 25 in a Carton.....Each, .16

SOCKET CAPS

No. AC.

No. AM.

No. AC—⅜ inch. 25 in a Carton.....Each, $0.13
No. AM—⅛ inch Angle. 25 in a Carton....Each, .12

PENDENT CAPS

No. AT.

SOCKET BASES

No. AX.

No. AT—Caps, 25 in a Carton.....Each, $0.07
No. AX—Slotted, 10 in a Carton.....Each, .18

SOCKET BASES

No. AZ.
2⅞ in. Concealed Base.

No. BH.
2 5/16 in. Covered Base.

No. BL.
3¼ in. Box Base.

No. BM.
4 in. Box Base.

No. AZ—10 in a Carton.....Each, $0.23
No. BH—10 in a Carton.....Each, .28

No. BL—10 in a Carton.....Each, $0.37
No. BM—5 in a Carton.....Each, .67

Note.—For other combinations of Switches and Sockets see following pages.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

KEYLESS SOCKET

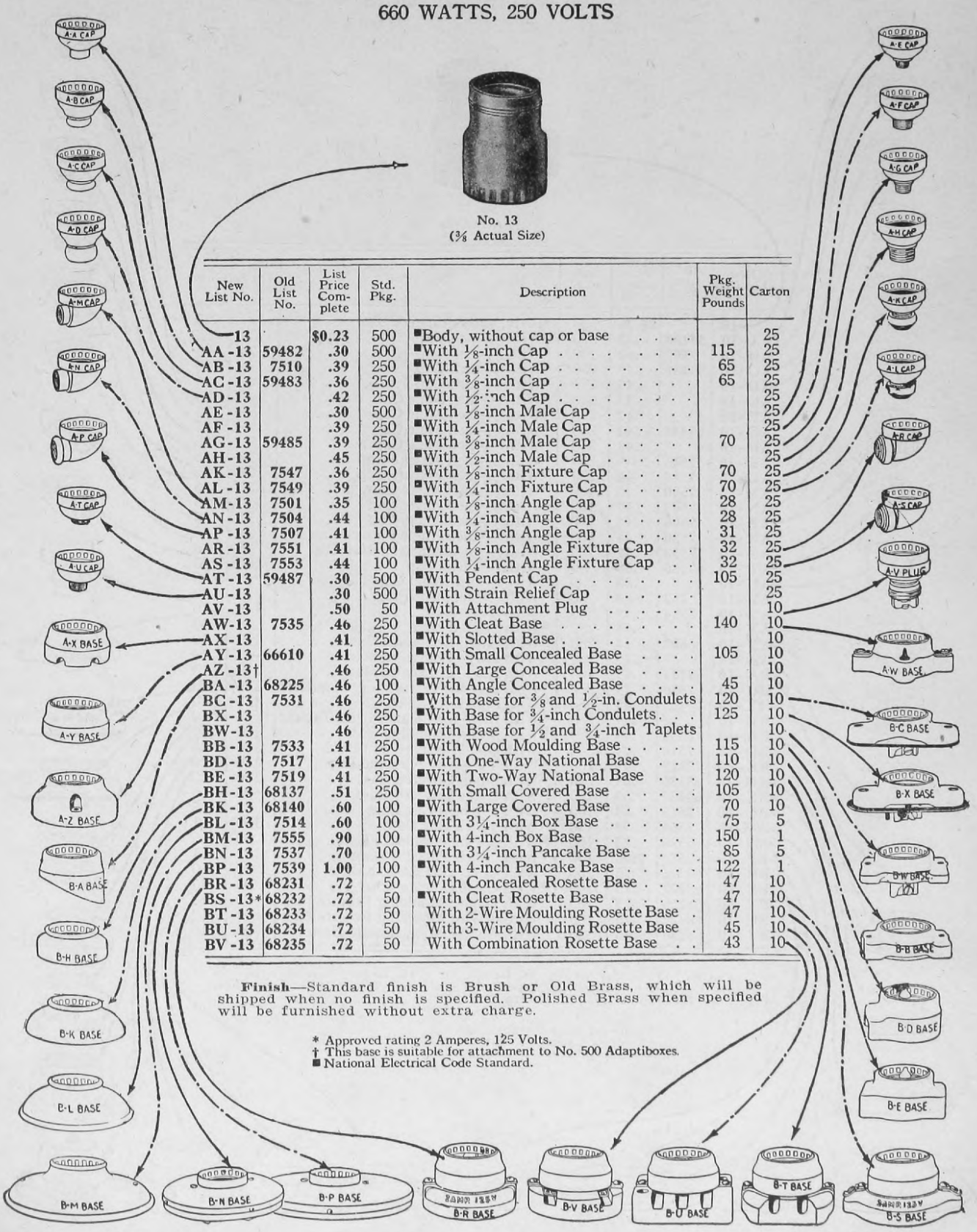
660 WATTS, 250 VOLTS

No. 13
(⅜ Actual Size)

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
13		$0.23	500	■Body, without cap or base		25
AA-13	59482	.30	500	■With ⅛-inch Cap	115	25
AB-13	7510	.39	250	■With ¼-inch Cap	65	25
AC-13	59483	.36	250	■With ⅜-inch Cap	65	25
AD-13		.42	250	■With ½-inch Cap		25
AE-13		.30	500	■With ⅛-inch Male Cap		25
AF-13		.39	250	■With ¼-inch Male Cap		25
AG-13	59485	.39	250	■With ⅜-inch Male Cap	70	25
AH-13		.45	250	■With ½-inch Male Cap		25
AK-13	7547	.36	250	■With ⅛-inch Fixture Cap	70	25
AL-13	7549	.39	250	■With ¼-inch Fixture Cap	70	25
AM-13	7501	.35	100	■With ⅛-inch Angle Cap	28	25
AN-13	7504	.44	100	■With ¼-inch Angle Cap	28	25
AP-13	7507	.41	100	■With ⅜-inch Angle Cap	31	25
AR-13	7551	.41	100	■With ⅛-inch Angle Fixture Cap	32	25
AS-13	7553	.44	100	■With ¼-inch Angle Fixture Cap	32	25
AT-13	59487	.30	500	■With Pendent Cap	105	25
AU-13		.30	500	■With Strain Relief Cap		25
AV-13		.50	50	■With Attachment Plug		10
AW-13	7535	.46	250	■With Cleat Base	140	10
AX-13		.41	250	■With Slotted Base		10
AY-13	66610	.41	250	■With Small Concealed Base	105	10
AZ-13†		.46	250	■With Large Concealed Base		10
BA-13	68225	.46	100	■With Angle Concealed Base	45	10
BC-13	7531	.46	250	■With Base for ⅜ and ½-in. Condulets	120	10
BX-13		.46	250	■With Base for ¾-inch Condulets	125	10
BW-13		.46	250	■With Base for ½ and ¾-inch Taplets		10
BB-13	7533	.41	250	■With Wood Moulding Base	115	10
BD-13	7517	.41	250	■With One-Way National Base	110	10
BE-13	7519	.41	250	■With Two-Way National Base	120	10
BH-13	68137	.51	250	■With Small Covered Base	105	10
BK-13	68140	.60	100	■With Large Covered Base	70	10
BL-13	7514	.60	100	■With 3¼-inch Box Base	75	5
BM-13	7555	.90	100	■With 4-inch Box Base	150	1
BN-13	7537	.70	100	■With 3¼-inch Pancake Base	85	5
BP-13	7539	1.00	100	■With 4-inch Pancake Base	122	1
BR-13	68231	.72	50	With Concealed Rosette Base	47	10
BS-13*	68232	.72	50	■With Cleat Rosette Base	47	10
BT-13	68233	.72	50	With 2-Wire Moulding Rosette Base	47	10
BU-13	68234	.72	50	With 3-Wire Moulding Rosette Base	45	10
BV-13	68235	.72	50	With Combination Rosette Base	43	10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.



Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

S. P. KEY SOCKET

250 WATTS, 250 VOLTS

No. 10
(⅜ Actual Size)

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
10		$0.26	500	■Body, without cap or base		25
AA-10	59480	.33	500	■With ⅛-inch Cap	139	25
AB-10	7509	.42	250	■With ¼-inch Cap	70	25
AC-10	59481	.39	250	■With ⅜-inch Cap	70	25
AD-10		.45	250	■With ½-inch Cap		25
AE-10		.33	500	■With ⅛-inch Male Cap		25
AF-10		.42	250	■With ¼-inch Male Cap		25
AG-10	59484	.42	250	■With ⅜-inch Male Cap		25
AH-10		.48	250	■With ½-inch Male Cap		25
AK-10	7546	.39	250	■With ⅛-inch Fixture Cap	78	25
AL-10	7548	.42	250	■With ¼-inch Fixture Cap	78	25
AM-10	7500	.38	100	■With ⅛-inch Angle Cap	30	25
AN-10	7503	.47	100	■With ¼-inch Angle Cap	30	25
AP-10	7506	.44	100	■With ⅜-inch Angle Cap	33	25
AR-10	7550	.44	100	■With ⅛-inch Angle Fixture Cap	35	25
AS-10	7552	.47	100	■With ¼-inch Angle Fixture Cap	35	25
AT-10	59486	.33	500	■With Pendent Cap	100	25
AU-10		.33	500	■With Strain Relief Cap		25
AV-10	462	.53	50	■With Attachment Plug	25	10
AW-10	7534	.49	250	■With Cleat Base	145	10
AX-10		.44	250	■With Slotted Base		10
AY-10	66609	.44	250	■With Small Concealed Base	110	10
AZ-10†		.49	250	■With Large Concealed Base		10
BA-10	68224	.49	100	■With Angle Concealed Base	50	10
BC-10	7530	.49	250	■With Base for ⅜ and ½-in. Condulets	125	10
BX-10		.49	250	■With Base for ¾-inch Condulets	125	10
BW-10		.49	250	■With Base for ½ and ¾-in. Taplets		10
BB-10	7532	.44	250	■With Wood Moulding Base	120	10
BD-10	7516	.44	250	■With One-Way National Base	120	10
BE-10	7518	.44	250	■With Two-Way National Base	130	10
BH-10	68136	.54	250	■With Small Covered Base	110	10
BK-10	68139	.63	100	■With Large Covered Base	75	10
BL-10	7513	.63	100	■With 3¼-inch Box Base	80	5
BM-10	7554	.93	100	■With 4-inch Box Base	150	1
BN-10	7536	.73	100	■With 3¼-inch Pancake Base	90	5
BP-10	7538	1.03	100	■With 4-inch Pancake Base	127	1
BR-10	68226	.75	100	With Concealed Rosette Base	90	10
BS-10*	68227	.75	100	■With Cleat Rosette Base	90	10
BT-10	68228	.75	100	With 2-Wire Moulding Rosette Base	90	10
BU-10	68229	.75	100	With 3-Wire Moulding Rosette Base	90	10
BV-10	68230	.75	100	With Combination Rosette Base	90	10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

PULL SOCKET

250 WATTS, 250 VOLTS

No. 15
(⅜ Actual Size

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
15		$0.53	250	■Body, without cap or base		25
AA-15	65250	.60	250	■With ⅛-inch Cap	65	25
AB-15	4511	.69	100	■With ¼-inch Cap	27	25
AC-15	65251	.66	100	■With ⅜-inch Cap	30	25
AD-15		.72	50	■With ½-inch Cap		25
AE-15		.60	250	■With ⅛-inch Male Cap		25
AF-15		.69	100	■With ¼-inch Male Cap		25
AG-15	4512	.69	100	■With ⅜-inch Male Cap	30	25
AH-15		.75	50	■With ½-inch Male Cap		25
AK-15	4547	.66	100	■With ⅛-inch Fixture Cap	34	25
AL-15	4549	.69	100	■With ¼-inch Fixture Cap	34	25
AM-15	4502	.65	50	■With ⅛-inch Angle Cap	18	25
AN-15	4505	.74	50	■With ¼-inch Angle Cap	18	25
AP-15	4508	.71	50	■With ⅜-inch Angle Cap	22	25
AR-15	4551	.71	50	■With ⅛-inch Angle Fixture Cap	20	25
AS-15	4553	.74	50	■With ¼-inch Angle Fixture Cap	20	25
AT-15	65252	.60	250	■With Pendent Cap	60	25
AU-15		.60	250	■With Strain Relief Cap		25
AV-15	463	.80	50	■With Attachment Plug	25	10
AW-15	4535	.76	100	■With Cleat Base	62	10
AX-15		.71	100	■With Slotted Base		10
AY-15	66611	.71	100	■With Small Concealed Base	35	10
AZ-15†		.76	100	■With Large Concealed Base		10
BA-15	68236	.76	50	■With Angle Concealed Base	25	10
BC-15	4531	.76	100	■With Base for ⅜ and ½-in. Condulets	50	10
BX-15		76	100	■With Base for ¾-inch Condulet	50	10
BW-15		.76	100	■With Base for ½ and ¾-inch Taplets		10
BB-15	4533	.71	100	■With Wood Moulding Base	45	10
BD-15	4517	.71	100	■With One-Way National Base	45	10
BE-15	4519	.71	100	■With Two-Way National Base	50	10
BH-15	68138	.81	100	■With Small Covered Base	30	10
BK-15	68128	.90	50	■With Large Covered Base	35	10
BL-15	4515	.90	50	■With 3¼-inch Box Base	40	5
BM-15	4555	1.20	50	■With 4-inch Box Base	85	1
BN-15	4537	1.00	50	■With 3¼-inch Pancake Base	45	5
BP-15	4539	1.30	50	■With 4-inch Pancake Base	70	1
BR-15	68237	1.02	20	With Concealed Rosette Base	15	10
BS-15*	68238	1.02	20	■With Cleat Rosette Base	15	10
BT-15	68239	1.02	20	With 2-Wire Moulding Rosette Base	15	10
BU-15	68240	1.02	20	With 3-Wire Moulding Rosette Base	15	10
BV-15	68241	1.02	20	With Combination Rosette Base	15	10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

Chain—Sockets are regularly furnished with 8 inches of chain.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

TWIN PULL SOCKETS

(Side outlet On all the time; bottom outlet On and Off)

BOTTOM OUTLET
250 WATTS, 250 VOLTS

SIDE OUTLET
660 WATTS, 150 VOLTS

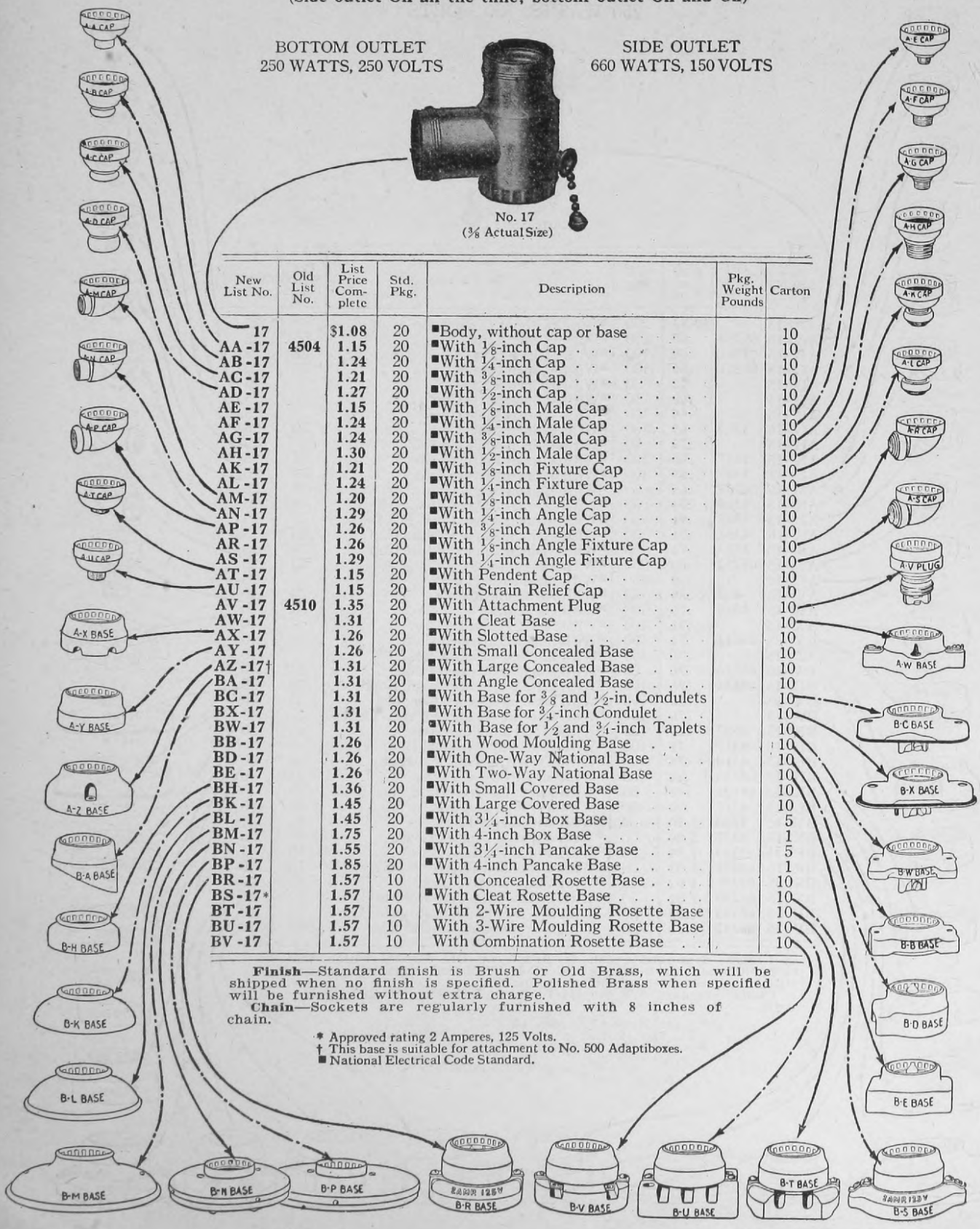
No. 17
(⅜ Actual Size)

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
17		$1.08	20	■Body, without cap or base		10
AA-17	4504	1.15	20	■With ⅛-inch Cap		10
AB-17		1.24	20	■With ¼-inch Cap		10
AC-17		1.21	20	■With ⅜-inch Cap		10
AD-17		1.27	20	■With ½-inch Cap		10
AE-17		1.15	20	■With ⅛-inch Male Cap		10
AF-17		1.24	20	■With ¼-inch Male Cap		10
AG-17		1.24	20	■With ⅜-inch Male Cap		10
AH-17		1.30	20	■With ½-inch Male Cap		10
AK-17		1.21	20	■With ⅛-inch Fixture Cap		10
AL-17		1.24	20	■With ¼-inch Fixture Cap		10
AM-17		1.20	20	■With ⅛-inch Angle Cap		10
AN-17		1.29	20	■With ¼-inch Angle Cap		10
AP-17		1.26	20	■With ⅜-inch Angle Cap		10
AR-17		1.26	20	■With ⅛-inch Angle Fixture Cap		10
AS-17		1.29	20	■With ¼-inch Angle Fixture Cap		10
AT-17		1.15	20	■With Pendent Cap		10
AU-17		1.15	20	■With Strain Relief Cap		10
AV-17	4510	1.35	20	■With Attachment Plug		10
AW-17		1.31	20	■With Cleat Base		10
AX-17		1.26	20	■With Slotted Base		10
AY-17		1.26	20	■With Small Concealed Base		10
AZ-17†		1.31	20	■With Large Concealed Base		10
BA-17		1.31	20	■With Angle Concealed Base		10
BC-17		1.31	20	■With Base for ⅜ and ½-in. Condulets		10
BX-17		1.31	20	■With Base for ¾-inch Condulet		10
BW-17		1.31	20	■With Base for ½ and ¾-inch Taplets		10
BB-17		1.26	20	■With Wood Moulding Base		10
BD-17		1.26	20	■With One-Way National Base		10
BE-17		1.26	20	■With Two-Way National Base		10
BH-17		1.36	20	■With Small Covered Base		10
BK-17		1.45	20	■With Large Covered Base		10
BL-17		1.45	20	■With 3¼-inch Box Base		5
BM-17		1.75	20	■With 4-inch Box Base		1
BN-17		1.55	20	■With 3¼-inch Pancake Base		5
BP-17		1.85	20	■With 4-inch Pancake Base		1
BR-17		1.57	10	With Concealed Rosette Base		10
BS-17*		1.57	10	■With Cleat Rosette Base		10
BT-17		1.57	10	With 2-Wire Moulding Rosette Base		10
BU-17		1.57	10	With 3-Wire Moulding Rosette Base		10
BV-17		1.57	10	With Combination Rosette Base		10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

Chain—Sockets are regularly furnished with 8 inches of chain.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.



Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

PULL SWITCH ROSETTE

1 AMPERE, 250 VOLTS—3 AMPERES, 125 VOLTS

No. 25
(⅜ Actual Size)

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
25		$0.53	50	■Body, without cap or base		10
AA-25		.60	20	■With ⅛-inch Cap		10
AB-25		.69	20	■With ¼-inch Cap		10
AC-25		.66	20	■With ⅜-inch Cap		10
AD-25		.72	20	■With ½-inch Cap		10
AE-25		.60	20	■With ⅛-inch Male Cap		10
AF-25		.69	20	■With ¼-inch Male Cap		10
AG-25		.69	20	■With ⅜-inch Male Cap		10
AH-25		.75	20	■With ½-inch Male Cap		10
AK-25		.66	20	■With ⅛-inch Fixture Cap		10
AL-25		.69	20	■With ¼-inch Fixture Cap		10
AM-25		.65	20	■With ⅛-inch Angle Cap		10
AN-25		.74	20	■With ¼-inch Angle Cap		10
AP-25		.71	20	■With ⅜-inch Angle Cap		10
AR-25		.71	20	■With ⅛-inch Angle Fixture Cap		10
AS-25		.74	20	■With ¼-inch Angle Fixture Cap		10
AT-25		.60	20	■With Pendent Cap		10
AU-25		.60	20	■With Strain Relief Cap		10
AV-25	464	.80	20	■With Attachment Plug	5	10
AW-25	422	.76	20	■With Cleat Base	20	10
AX-25		.71	20	■With Slotted Base		
AY-25	395	.71	20	■With Small Concealed Base	18	10
AZ-25†		.76	20	■With Large Concealed Base		10
BA-25		.76	20	■With Angle Concealed Base		10
BC-25	461	.76	20	■With Base for ⅜ and ½-in. Condulets	20	10
BX-25		.76	20	■With Base for ¾-inch Condulet	20	10
BW-25		.76	20	■With Base for ½ and ¾-inch Taplets		10
BB-25	423	.71	20	■With Wood Moulding Base	20	10
BD-25		.71	20	■With One-Way National Base		10
BE-25		.71	20	■With Two-Way National Base		10
BH-25		.81	20	■With Small Covered Base		10
BK-25	396	.90	20	■With Large Covered Base	25	10
BL-25		.90	20	■With 3¼-inch Box Base		5
BM-25		1.20	20	■With 4-inch Box Base		1
BN-25		1.00	20	■With 3¼-inch Pancake Base		5
BP-25		1.30	20	■With 4-inch Pancake Base		1
BR-25	414	1.02	20	With Concealed Rosette Base	25	10
BS-25*	415	1.02	20	■With Cleat Rosette Base	25	10
BT-25	416	1.02	20	With 2-Wire Moulding Rosette Base	25	10
BU-25	417	1.02	20	With 3-Wire Moulding Rosette Base	25	10
BV-25	418	1.02	20	With Combination Rosette Base	25	10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

Chain—Bodies are regularly furnished with short chain and 10 feet of best quality linen cord.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE "NEW WRINKLE" LINE

S. P. PULL CEILING SWITCH

3 AMPERES, 125 VOLTS — 1 AMPERE, 250 VOLTS

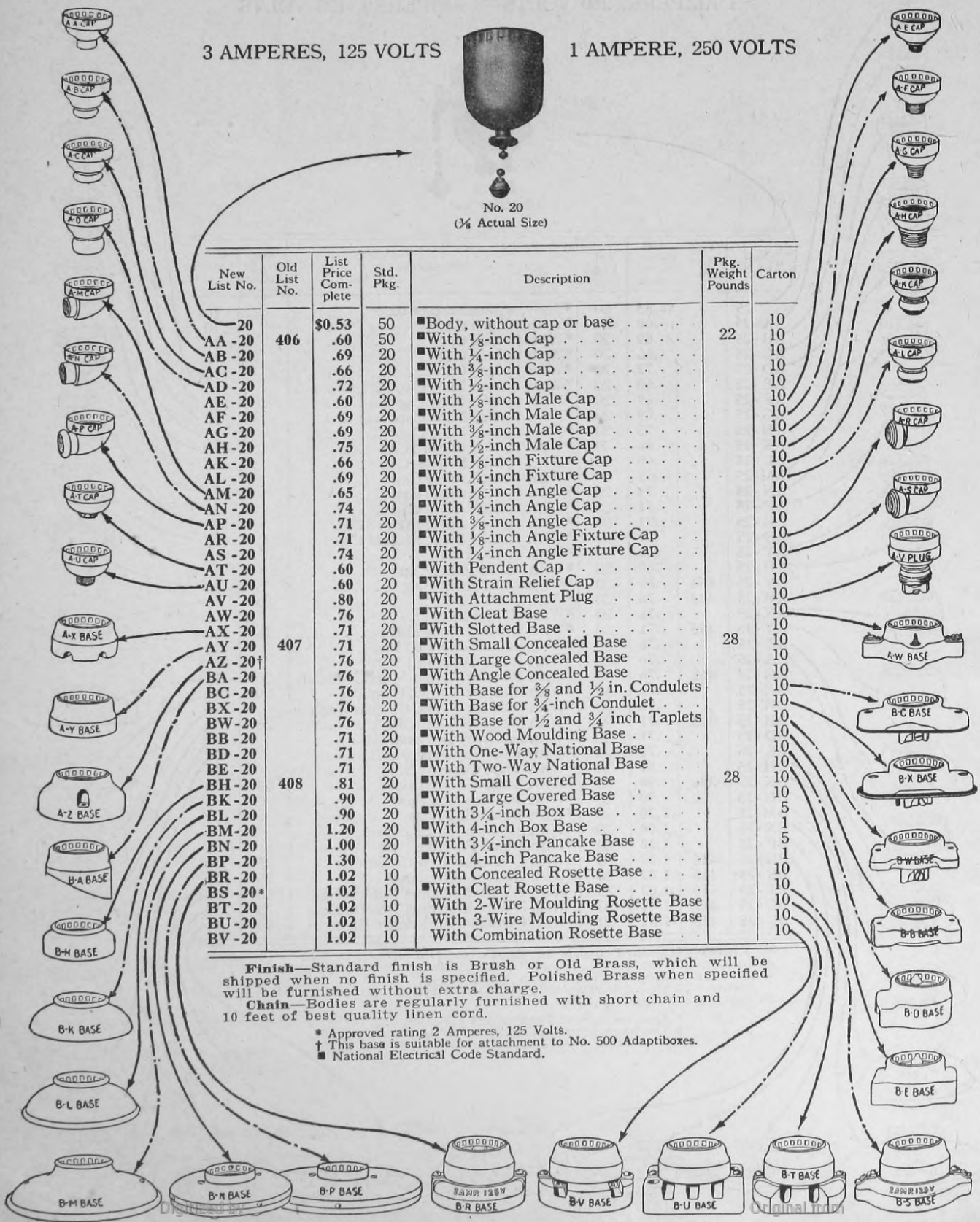
No. 20
(⅜ Actual Size)

New List No.	Old List No.	List Price Complete	Std. Pkg.	Description	Pkg. Weight Pounds	Carton
20		$0.53	50	■Body, without cap or base		10
AA-20	406	.60	50	■With ⅛-inch Cap	22	10
AB-20		.69	20	■With ¼-inch Cap		10
AC-20		.66	20	■With ⅜-inch Cap		10
AD-20		.72	20	■With ½-inch Cap		10
AE-20		.60	20	■With ⅛-inch Male Cap		10
AF-20		.69	20	■With ¼-inch Male Cap		10
AG-20		.69	20	■With ⅜-inch Male Cap		10
AH-20		.75	20	■With ½-inch Male Cap		10
AK-20		.66	20	■With ⅛-inch Fixture Cap		10
AL-20		.69	20	■With ¼-inch Fixture Cap		10
AM-20		.65	20	■With ⅛-inch Angle Cap		10
AN-20		.74	20	■With ¼-inch Angle Cap		10
AP-20		.71	20	■With ⅜-inch Angle Cap		10
AR-20		.71	20	■With ⅛-inch Angle Fixture Cap		10
AS-20		.74	20	■With ¼-inch Angle Fixture Cap		10
AT-20		.60	20	■With Pendent Cap		10
AU-20		.60	20	■With Strain Relief Cap		10
AV-20		.80	20	■With Attachment Plug		10
AW-20		.76	20	■With Cleat Base		10
AX-20		.71	20	■With Slotted Base		10
AY-20	407	.71	20	■With Small Concealed Base	28	10
AZ-20†		.76	20	■With Large Concealed Base		10
BA-20		.76	20	■With Angle Concealed Base		10
BC-20		.76	20	■With Base for ⅜ and ½ in. Condulets		10
BX-20		.76	20	■With Base for ¾-inch Condulet		10
BW-20		.76	20	■With Base for ½ and ¾ inch Taplets		10
BB-20		.71	20	■With Wood Moulding Base		10
BD-20		.71	20	■With One-Way National Base		10
BE-20		.71	20	■With Two-Way National Base		10
BH-20	408	.81	20	■With Small Covered Base	28	10
BK-20		.90	20	■With Large Covered Base		10
BL-20		.90	20	■With 3¼-inch Box Base		5
BM-20		1.20	20	■With 4-inch Box Base		1
BN-20		1.00	20	■With 3¼-inch Pancake Base		5
BP-20		1.30	20	■With 4-inch Pancake Base		1
BR-20		1.02	10	With Concealed Rosette Base		10
BS-20*		1.02	10	■With Cleat Rosette Base		10
BT-20		1.02	10	With 2-Wire Moulding Rosette Base		10
BU-20		1.02	10	With 3-Wire Moulding Rosette Base		10
BV-20		1.02	10	With Combination Rosette Base		10

Finish—Standard finish is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

Chain—Bodies are regularly furnished with short chain and 10 feet of best quality linen cord.

* Approved rating 2 Amperes, 125 Volts.
† This base is suitable for attachment to No. 500 Adaptiboxes.
■ National Electrical Code Standard.



Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

THE INTERCHANGEABLE PORCELAIN LINE

S. P. KEY SOCKET

250 WATTS, 250 VOLTS

PT
Pendent cap, **5c**
Standard package, **250**
Carton, **10**

PA
⅛-in. cap, **10c**
Standard package, **100**
Carton, **10**

PB
¼-in. cap, **10c**
Standard package, **50**
Carton, **10**

***PC**
⅜-in. cap, **10c**
Standard package, **100**
Carton, **10**

PD
½-in. cap, **25c**
Standard package, **50**
Carton, **10**

***PP**
⅜-in. angle cap, **15c**
Standard package, **30**
Carton, **10**

RW
½-in. angle cap, **30c**
Standard package, **30**
Carton, **10**

PW
Cleat base, **10c**
Standard package, **100**
Carton, **10**
Holes for supporting screws are spaced on 1 15/16-in. centers

†PZ
Large concealed base, **10c**
Standard package, **100**
Carton, **10**
Outside diameter, 2¾ in.
Holes for supporting screws are spaced on 1⅛ in. and 2 5/16 in. centers

RB
Wood moulding base, **10c**
Standard package, **50**
Carton, **10**
Holes for supporting screws are spaced on 2-in. centers

RL
3½-in. box base, **20c**
Standard package, **50**
Carton, **10**
Outside diameter, 3½ in. Holes for supporting screws spaced 2¾ in. on centers

RM
4-in. box base, **25c**
Standard package, **50**
Carton, **5**
Outside diameter, 4½ in.
Holes for supporting screws spaced 3½ in. on centers

All Illustrations ⅜ Actual Size.

No. 70

(⅜ Actual Size)

New List Nos.	Old List No.	List Price Complete	Standard Package	Description	Package Wt. Lbs.	Carton
70		$0.25	250	■ Body, without Cap or Base		10
PT70	9395	.30	250	■ With Pendent Cap . .	105	10
PA70	50799	.35	100	■ With ⅛-in. Cap . . .	50	10
PB70	4058	.35	100	■ With ¼-in. Cap . . .	55	10
PC70	34947	.35	100	■ * With ⅜-in. Cap . . .	55	10
PD70	4065	.50	100	■ With ½-in. Cap (Aluminum)	50	10
PP70		.40	100	■ * With ⅜-in. Angle Cap .		10
RW70		.55	100	■ With ½-in. Angle Cap (Aluminum)		10
PW70	4007	.35	100	■ With Cleat Base . . .	55	10
PZ70	4009	.35	100	■ † With Large Concealed Base	55	10
RB70	4011	.35	100	■ With Wood Moulding Base	55	10
RL70	4045	.45	100	■ With 3¼-in. Box Base .	85	10
RM70	4048	.50	100	■ With 4-in. Box Base . .	136	1

Finish—Standard finish of brass caps is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

* This cap can be furnished in aluminum at 15 cents list extra.

† This base is suitable for attachment to No. 500 Adaptiboxes.

■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE INTERCHANGEABLE PORCELAIN LINE

PULL SOCKET

No. 75
(⅜ Actual Size)

250 WATTS
250 VOLTS

New List Nos.	Old List No.	List Price Complete	Standard Package	Description	Package Weight Lbs.	Carton
75		$0.75	100	■ Body, without Cap or Base		10
PT75	4015	.80	100	■ With Pendent Cap . .	55	10
PA75	4016	.85	50	■ With ⅛-in. Cap . . .	30	10
PB75	4060	.85	50	■ With ¼-in. Cap . . .	30	10
PC75	4017	.85	50	■ * With ⅜-in. Cap . . .	30	10
PD75	4067	1.00	50	■ With ½-in. Cap (Aluminum)	32	10
PP75		.90	50	■ * With ⅜-in. Angle Cap .		10
RW75		1.05	50	■ With ½-in. Angle Cap (Aluminum)		10
PW75	4018	.85	50	■ With Cleat Base . . .	30	10
PZ75	4019	.85	50	■ † With Large Concealed Base	30	10
RB75	4020	.85	50	■ With Wood Moulding Base	30	10
RL75	4047	.95	50	■ With 3¼-in. Box Base .	50	10
RM75	4050	1.00	50	■ With 4-in. Box Base .	50	1

Finish—Standard finish of brass caps is Brush or Old Brass which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

Chain—Sockets are regularly furnished with 8 inches of chain with insulation.

*This cap can be furnished in aluminum at 15 cents list extra.

†This base is suitable for attachment to No. 500 Adaptiboxes.

■National Electrical Code Standard.

PT
Pendent cap, 5c
Standard package, 250
Carton, 10

PA
⅛-in. cap, 10c
Standard package, 100
Carton, 10

PB
¼-in. cap, 10c
Standard package, 50
Carton, 10

***PC**
⅜-in. cap, 10c
Standard package, 100
Carton, 10

PD
½-in. cap, 25c
Standard package, 50
Carton, 10

***PP**
⅜-in. angle cap, 15c
Standard package, 30
Carton, 10

RW
½-in. angle cap, 30c
Standard package, 30
Carton, 10

PW
Cleat base, 10c
Standard package, 100
Carton, 10
Holes for supporting screws are spaced on 1 15/16-in. centers

†PZ
Large concealed base, 10c
Standard package, 100
Carton, 10
Outside diameter, 2¾ in.
Holes for supporting screws are spaced on 1⅛ in. and 2 5/16 in. centers

RB
Wood moulding base, 10c
Standard package, 50
Carton, 10
Holes for supporting screws are spaced on 2-in. centers

RL
3½-in. box base, 20c
Standard package, 50
Carton, 10
Outside diameter, 3½ in. Holes for supporting screws spaced 2¾ in. on centers

RM
4-in. box base, 25c
Standard package, 50
Carton, 5
Outside diameter, 4½ in.
Holes for supporting screws spaced 3½ in. on centers

All Illustrations ⅜ Actual Size.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THE INTERCHANGEABLE PORCELAIN LINE

KEYLESS SOCKET

660 WATTS, 250 VOLTS

PT
Pendent cap, 5c
Standard package, 250
Carton, 10

PA
⅛-in. cap, 10c
Standard package, 100
Carton, 10

PB
¼-in. cap, 10c
Standard package, 50
Carton, 10

***PC**
⅜-in. cap, 10c
Standard package, 100
Carton, 10

PD
½-in. cap, 25c
Standard package, 50
Carton, 10

***PP**
⅜-in. angle cap, 15c
Standard package, 30
Carton, 10

RW
½-in. angle cap, 30c
Standard package, 30
Carton, 10

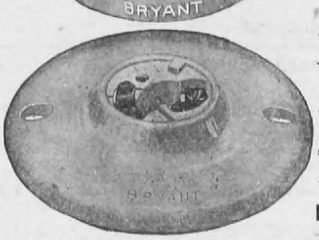
PW
Cleat base, 10c
Standard package, 100
Carton, 10
Holes for supporting screws are spaced on 1 15/16-in. centers

†PZ
Large concealed base, 10c
Standard package, 100
Carton, 10
Outside diameter, 2¾ in.
Holes for supporting screws are spaced on 1⅛ in. and 2 5/16 in. centers

RB
Wood moulding base, 10c
Standard package, 50
Carton, 10
Holes for supporting screws are spaced on 2-in. centers

RL
3½-in. box base, 20c
Standard package, 50
Carton, 10
Outside diameter, 3½ in. Holes for supporting screws spaced 2¾ in. on centers

RM
4-in. box base, 25c
Standard package, 50
Carton, 5
Outside diameter, 4½ in.
Holes for supporting screws spaced 3½ in. on centers



All Illustrations ⅜ Actual Size.

No. 73.
(⅜ Actual Size)

New List Nos.	Old List Nos.	List Price Complete	Standard Package	Description	Package Weight Lbs.	Carton
73		$0.20	250	■ Body without Cap or Base		10
PT73	9393	.25	250	■ With Pendent Cap	80	10
PA73	50896	.30	100	■ With ⅛-in. Cap	45	10
PB73	4059	.30	100	■ With ¼-in. Cap	35	10
PC73	34948	.30	100	■ * With ⅜-in. Cap	35	10
PD73	4066	.45	100	■ With ½-in. Cap (Aluminum)	40	10
PP73		.35	100	■ * With ⅜-in. Angle Cap		10
RW73		.50	100	■ With ½-in. Angle Cap (Aluminum)		10
PW73	4008	.30	100	■ With Cleat Base	55	10
PZ73	4010	.30	100	■ † With Large Concealed Base	55	10
RB73	4012	.30	100	■ With Wood Moulding Base	55	10
RL73	4046	.40	100	■ With 3¼-in. Box Base	75	10
RM73	4049	.45	100	■ With 4-in. Box Base	132	1

Finish—Standard finish of brass caps is Brush or Old Brass, which will be shipped when no finish is specified. Polished Brass when specified will be furnished without extra charge.

---

*This cap can be furnished in aluminum at 15 cents list extra.
†This base is suitable for attachment to No. 500 Adaptiboxes.
■National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MINIATURE AND CANDELABRA SOCKETS

75 WATTS, 125 VOLTS

No. 434.

The standard finish on brass shell Miniature and Candelabra Sockets is Brush Brass, which will be shipped, when no finish is specified. Polished Brass, when specified, will be furnished without extra charge.

List Nos.	List Price	Standard Package	Description	Package Weight Pounds	Carton
433	$0.33	100	■ Miniature Key Socket, ⅛-inch Cap .	20	25
434	.33	100	■ Candelabra Key Socket, ⅛-inch Cap	23	25

The above Sockets can be furnished with metal keys and to take special metal keys.

No. 321.

Keyless Sockets with Screw Cap

320	$0.23¼	200	■ Miniature Keyless Socket, ⅛-in. Cap	17	50
321	.23½	200	■ Candelabra Keyless Socket, ⅛-in. Cap	19	50

No. 386.

Keyless Sockets with Two-Point Cap

470	$0.23¼	200	■ Miniature, Keyless Socket, ⅛-in. Cap	17	50
471	.23½	200	■ Candelabra, Keyless Socket, ⅛-in. Cap	19	50

Pull Sockets

385	$0.60	50	■ Miniature Pull Socket, ⅛-inch Cap .	10	10
386	.60	50	■ Candelabra Pull Socket, ⅛-inch Cap .	12	10

The above Sockets can be furnished with extension chain guides. On special orders—Prices quoted on application. The standard length of chain on Miniature and Candelabra Pull Sockets is 4 inches.

No. 474.

Turn Sockets

473	$0.60	50	■ Miniature Turn Socket, ⅛-inch Cap	7	10
474	.60	50	■ Candelabra Turn Socket, ⅛-inch Cap	8	10

Candle Sockets with Male Thread Stud

327	$0.12	200	■ Miniature Socket for Candle Fixtures	9	50
328	.12	200	■ Candelabra Socket for Candle Fixtures	10	50

The supporting stud of the above Sockets is threaded .312 inch, 27 threads per inch. The outside diameter of the porcelain shell is ¾ inch.

No. 328. No. 347.

Candle Sockets with Female Thread Stud

346	$0.12	200	■ Miniature Socket for Candle Fixtures	10	50
347	.12	200	■ Candelabra Socket for Candle Fixtures	11	50

The nipple of the above Sockets is ⅛ inch for pipe, .405 inch outside diameter, 27 threads per inch. The outside diameter of the porcelain shell is ¾ inch.

No. 323.

Decorative Sockets

322	$0.12	200	■ Miniature Weatherproof Pendent Socket	9	25
323	.13½	200	■ Candelabra Weatherproof Pendent Socket	10	25

Made in green-glazed porcelain.

Each Socket fitted with 6 inches of No. 18 B. & S. green braid, stranded rubber-covered wire. Sockets with longer wires furnished on special order.

■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

BAYONET SOCKETS

No. 50717.
Pony Wall.

No. 9184.
For Concealed Work.

No. 60018.
With Covered Base.

No. 50717—Keyless Pony Wall. 660 Watts, 250 Volts. 10 in a Carton.....Each, $0.25
No. 88258—Slotted Base, otherwise the same as No. 50717 .....Each, .25
No. 9184—With Key. 250 Watts, 250 Volts. 10 in a Carton .....Each, .44
No. 9185—Keyless. 660 Watts, 250 Volts. 10 in a Carton .....Each, .41
No. 60018—With Key. 250 Watts, 250 Volts. 10 in a Carton .....Each, .44
No. 60019—Keyless. 660 Watts, 250 Volts. 10 in a Carton .....Each, .41

CEILING RECEPTACLES

No. 4102.

No. 4100.

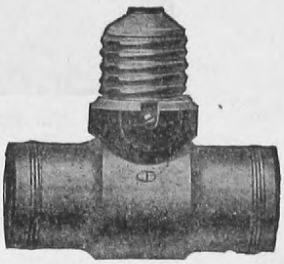
No. 4104.

No. 4102—For 3¼ inch Outlet Boxes. 660 Watts, 250 Volts. 1 in a Carton.....Each, $0.45
No. 4100—For 3¼ and 4 inch Outlet Boxes. 660 Watts, 250 Volts. 1 in a Carton.....Each, .60
No. 4104—For 3¼ and 4 inch Outlet Boxes. 250 Watts, 250 Volts. 1 in a Carton.....Each, 1.30

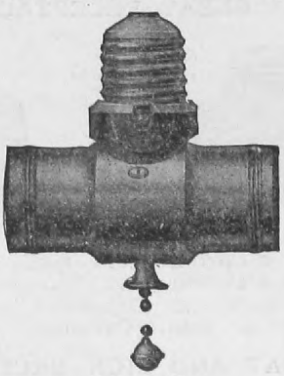
Nos. 4102 and 4100 are Keyless, with Binding Posts.
No. 4104 has Pull and Binding Posts.

MISCELLANEOUS SOCKETS

No. 4004.



No. 4061.



No. 4029.

No. 399.

No. 43310.

No. 4004—For Candle Fixtures, Keyless. 660 Watts, 250 Volts. 25 in a Carton.....Each, $0.30
No. 4061—Twin Extension, Keyless, with Edison Plug. 10 in a Carton.....Each, 1.00
No. 4029—Twin Pull Extension, controlling both ends at once, with Edison Plug. 250 Watts, 250 Volts. 5 in a Carton.....Each, 1.35
No. 4039—Twin Pull Extension, controlling by successive pulls—First, end No. 1; Second, both ends; Third, end No. 2; Fourth, both off. With Edison Plug. 250 Watts, 250 Volts. 5 in a Carton.....Each, 1.35
No. 4040—Twin Pull Extension, controlling one end only; other end connected permanently. With Edison Plug. 5 in a Carton.....Each, 1.35
No. 399—Porcelain Weatherproof, with 6 inch rubber covered wire. 10 in a Carton.....Each, .12½
No. 43310—Moulded Weatherproof, with 6 inch rubber covered wire. 10 in a Carton.....Each, .22

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

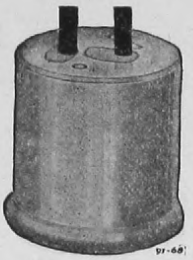
ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

SOCKETS FOR MOGUL BASE LAMPS

No. 4021.

No. 4073.



No. 4081.

No. 4021—Keyless, ⅜ inch Cap, 1,500 Watts, 600 Volts. 10 in a Carton.....Each, $1.00
No. 4022—Keyless, ½ inch Cap, 1,500 Watts, 600 Volts. 10 in a Carton.....Each, 1.00
No. 4081—Weatherproof Keyless, 15 inch leads. 1 in a Carton .....Each, .70
No. 4073—Cleat Receptacle. 1,500 Watts, 600 Volts. 1 in a Carton.....Each, .75

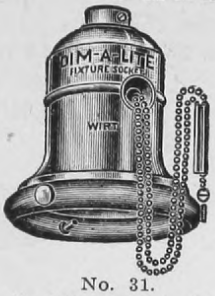
SOCKET PLUGS

Skedoodle.

For Direct or Alternating Current.

No. 162—Self-Flashing. 20-60 Watts, 100-125 Volts. 2¾x1 3/16 inches.....Each, $0.75

DIM-A-LITE SOCKETS



No. 31.

No. 32.

An Attachment—Not a Lamp—Fits any Socket.

The **Dim-A-Lite** turns your electric light up or down, "just like gas," giving five changes, **full, half, dim, nite-lite** and **out.**

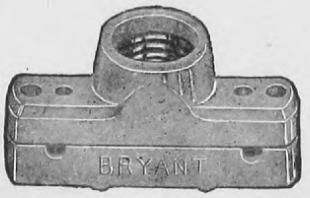
No. 31 — Permanent type with 2¼ inch shade-holder to be installed on fixture in place of key or pull chain socket... .....Each, $.....
No. 32—As 31 but without shade-holder... .....Each, ...

CLEAT RECEPTACLES

No. 9402.

No. 28795.

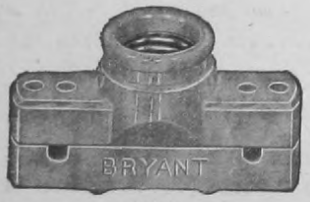
No. 9171.



No. 58300.

No. 9402—660 Watts, 250 Volts. 10 in a Carton.....Each, $0.15
No. 28795—660 Watts, 250 Volts. 10 in a Carton.....Each, .15
No. 9171—660 Watts, 250 Volts. 10 in a Carton. One screw .....Each, .10
No. 58300—For Weatherproof Shade-Holders. 5 in a Carton .....Each, .30

CLEAT AND SIGN RECEPTACLES



No. 58301.

No. 4063.

No. 61988.

No. 59108.

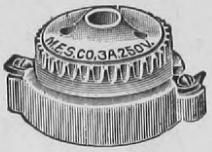
No. 58301—Cleat Receptacles. 660 Watts, 250 Volts. 5 in a Carton.....Each, $0.25
No. 4063—Sign Receptacles. 660 Watts, 250 Volts. 10 in a Carton.....Each, .14
No. 61988—With Screw Ring, 1 inch back. 10 in a Carton .....Each, .20
No. 59108—With Screw Ring, ⅝ inch back. 10 in a Carton .....Each, .20

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

PONY FUSELESS ROSETTES



No. 16445.

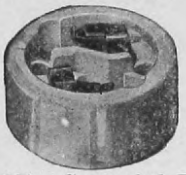
No. 16446.

No. 16447.

No. 16445—Cleat Rosette, 3 Amperes, 250 Volts..... Each, $0.15
No. 16446—Moulding Rosettes, 3 Amperes, 250 Volts..... Each, .15
No. 16447—Concealed Rosettes, 3 Amperes, 250 Volts..... Each, .15

FUSIBLE AND FUSELESS ROSETTES

No. 297. Cleat Base.


No. 298. Concealed Base.

Fusible Cap.
2 Amperes, 125 Volts.

No. 299. Moulding Base.

No. 1999.

Fuseless Cap.
3 Amperes, 250 Volts.

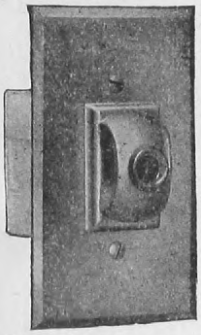
No. 1501—**Cleat** Base with **Fusible** Cap. 10 in a carton..... Each, $0.16
No. 297—**Cleat** Base, with **Fuseless** Cap. 10 in a carton..... Each, 15
No. 1502—**Concealed** Base with **Fusible** Cap. 10 in a carton..... Each, .16
No. 298—**Concealed** Base with **Fuseless** Cap. 10 in a carton..... Each, .15
No. 1503—Wood **Moulding** Base with **Fusible** Cap. 10 in a carton..... Each, .16
No. 299—Wood **Moulding** Base with **Fuseless** Cap. 10 in a carton..... Each, .15
No. 1999—One Piece **Fuseless** Cleat and Concealed Base Combined..... Each, .08
No. 384—One Piece **Fuseless**, 2-Wire Wood Moulding Base..... Each, .08

RECEPTACLES

D. D.

Disappearing Door Flush Receptacles

10 Amperes, 250 Volts.

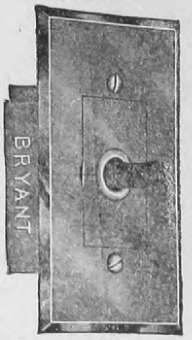

Nos. 430, 431 and 432.

No. 430—DD Gang Receptacle, 10 in a carton.....Each, $0.50
No. 432—DD Plug, Brass Covered, 10 in a carton.....Each, .60
No. 494—DD Plug, No Cover, 10 in a carton.....Each, .60
No. 539—DD Plug, Polarity, 10 in a carton.....Each, .60
No. 431—Single Plate, 4½x2¾ in. 25 in a carton.....Each, .45
No. 520—Single Plate, Solid, 4½x2¾ in. 25 in a carton.....Each, .70
No. 523—Two Gang Plate, Solid, 4½x4$^{9}/_{16}$ in. 10 in a carton.....Each, 1.40
No. 524—Three Gang Plate, Solid, 4½x6⅜ in. 5 in a carton...Each, 2.10
No. 525—Four Gang Plate, Solid, 4½x8$^{3}/_{16}$ in. 5 in a carton.....Each, 2.80

CHAPMAN

Chapman Receptacles

12 Amperes, 250 Volts.



Nos. 1363, 1110 and 1364.

No. 1363—Chapman Gang Receptacle. 10 in a carton..... Each, $0.40
No. 1110—Chapman Porcelain Plug. 25 in a carton..... Each, .20
No. 486—Chapman Porc. Plug. Polarity. 25 in a carton..... Each, .20
No. 397—Chapman Indestructible Plug. 25 in a carton..... Each, .40

Chapman Receptacle Plates

No. 1364—Single Plate, Stamped, 4½x2¾ in. 25 in a carton..... Each, $0.45
No. 543—Single Plate, Solid, 4½x2¾ in. 25 in a carton..... Each, .70
No. 1365—Two Gang Plate, Solid, 4½x4$^{9}/_{16}$ in. 10 in a carton..... Each, 1.40
No. 1366—Three Gang Plate, Solid, 4½x6⅜ in. 5 in a carton..... Each, 2.10
No. 1367—Four Gang Plate, Solid, 4½x8$^{3}/_{16}$ in. 5 in a carton..... Each, 2.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

SPARTAN PLUGS AND RECEPTACLES

10 Amperes, 250 Volts.

No. 115.

KA.

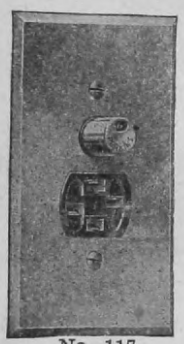
KB.

KC.

KE.

KF.

Flush Receptacles with Round Plate


No. 117.

No. 115—Receptacle Body (Receptacle and Plate). 1 in a carton	Each,	$0.85
No. KA115—Body with Standard Cap. 1 in a carton	Each,	1.00
No. KB115—Body with Brass Covered Cap. 1 in a carton	Each,	1.10
No. KC115—Body with Finger Grip Cap. 1 in a carton	Each,	1.20
No. KE115—Body with Pilot Cap (125 volts). 1 in a carton	Each,	1.80
No. KF115—Body with Edison Adapter Cap (660 Watts). 1 in a carton	Each,	1.05

Receptacle with Type "O" Flush Switch

No. 117—Device, Complete, Without Cap, 1 in a carton	Each,	$2.00
No. KA117—Body with Standard Cap. 1 in a carton	Each,	2.15
No. KB117—Body with Brass Covered Cap. 1 in a carton	Each,	2.25
No. KC117—Body with Finger Grip Cap. 1 in a carton	Each,	2.35
No. KE117—Body with Pilot Cap (125 volts). 1 in a carton	Each,	2.95
No. KF117—Body with Edison Adapter Cap (660 Watts). 1 in a carton	Each,	2.20

Standard Flush Receptacles

No. 120.

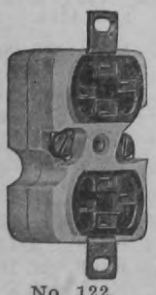
No. 120—Flush Receptacle Body. 10 in a carton	Each,	$0.60
No. KA120—Body with Standard Cap. 10 in a carton	Each,	.75
No. KB120—With Brass Covered Cap. 10 in a carton	Each,	.85
No. KC120—With Finger Grip Cap. 10 in a carton	Each,	.95
No. KE120—With Pilot Cap (125 volts). 10 in a carton	Each,	1.55
No. KF120—With Edison Adapter Cap. 10 in a carton	Each,	.80

Standard Flush Receptacle Plates

No. 429.

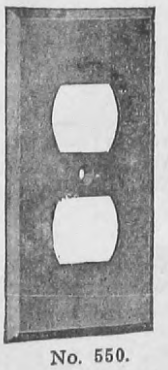
No. 429—Single, Stamped, 4½x2¾ in. 25 in a carton	Each,	$0.35
No. 545—Single, Solid, 4½x2¾ in. 25 in a carton	Each,	.50
No. 529—Two Gang, Solid, 4½x4 9/16 in. 10 in a carton	Each,	1.00
No. 530—Three Gang, Solid, 4½x6⅜ in. 5 in a carton	Each,	1.50
No. 531—Four Gang, Solid, 4½x8 3/16 in. 5 in a carton	Each,	2.00

Duplex Flush Receptacles


No. 122.

No. 122—Duplex Receptacle Body. 10 in a carton	Each,	$0.85
No. KA122—Body with 2 Standard Caps. 10 in a carton	Each,	1.15
No. KB122—With 2 Brass Covered Caps. 10 in a carton	Each,	1.35
No. KC122—With 2 Finger Grip Caps. 10 in a carton	Each,	1.55
No. KE122—With 2 Pilot Caps (125 volts). 1 in a carton	Each,	2.75
No. KF122—With 2 Edison Adapter Caps. 1 in a carton	Each,	1.25

Duplex Receptacle Plates


No. 550.

No. 550—Single, Stamped, 4½x2¾ in. 25 in a carton	Each,	$0.40
No. 551—Single, Solid, 4½x2¾ in. 25 in a carton	Each,	.65
No. 552—Two Gang, Solid, 4½x4 9/16 in. 10 in a carton	Each,	1.30
No. 553—Three Gang, Solid, 4½x6⅜ in. 5 in a carton	Each,	1.95
No. 554—Four Gang, Solid, 4½x8 3/16 in. 5 in a carton	Each,	2.60

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

HUBBELL FLUSH RECEPTACLES AND CAPS

Screw Base Plugs, 660 Watts, 250 Volts; All Others, 6 Amperes, 250 Volts.

Flush Receptacle.

No. 5547.

Flush Receptacle For Lift Cover.

No. 5579.

Duplex Flush Receptacle.

No. 6257.

Porcelain Cap.

No. 5419.

Composition Cap.

No. 5420.

Br. Cov. Compo. "Knostrain" Bushing.

No. 5657.

Porcelain Lamp Receptacle.

No. 5424.

No. 5547—Flush Receptacle, less Plate. 10 in a carton ..... Each, $0.60
No. 5579—Flush Receptacle only for Plate with Lift Cover. 10 in a carton ..... Each, .60
No. 6257—Duplex Flush Receptacle, less Plate. 10 in a carton ..... Each, .85
No. 5419—Porcelain Cap. 10 in a carton ..... Each, .15
No. 5420—Composition Cap. 10 in a carton ..... Each, .20
No. 5657—Brass Covered, Composition Cap with "Knostrain" Bushing. 10 in a carton ..... Each, .45
No. 5424—Porcelain Lamp Receptacle. 10 in a carton ..... Each, .25

Composition Polarized Caps

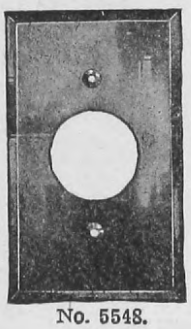
No. 6918.

No. 6918—Small 6 Ampere Caps. 10 in a carton ..... Each, $0.15
No. 6921—"Knostrain" 6 Ampere Caps. 10 in a carton ..... Each, .25

No. 6921.

FLUSH PLATES FOR RECEPTACLES

Without Hinged Cover for Hubbell No. 5547 Receptacles

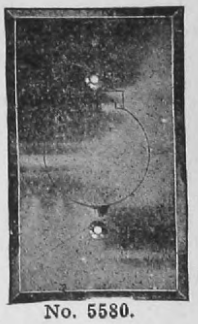


No. 5548.

No. 5548—Single, Stamped ....4½x2¾ in....10 in a carton....Each, $0.35
No. 6585—Single, Solid.....4½x2¾ in... 10 in a carton....Each, .65
No. 5549—Two Gang, Stamped.4½x4 9/16 in.... 1 in a carton....Each, 1.00
No. 6586—Two Gang, Solid.....4½x4 9/16 in.... 1 in a carton....Each, 1.30
No. 5550—Three Gang, Solid...4½x6⅜ in.... 1 in a carton....Each, 1.95
No. 5599—Four Gang, Solid....4½x8 3/16 in.... 1 in a carton....Each, 2.60

With Hinged Cover for Hubbell No. 5579 Receptacles

No. 5580—Single, Solid .....4½x2¾ in....10 in a carton....Each, $1 40
No. 5581—Two Gang, Solid.....4½x4 9/16 in.... 1 in a carton....Each, 2.80
No. 5582—Three Gang, Solid...4½x6⅜ in.... 1 in a carton....Each, 4.20
No. 5600—Four Gang, Solid....4½x8 3/16 in.... 1 in a carton....Each, 5.60



No. 5580.

Without Hinged Cover for Hubbell No. 6257 Receptacles

No. 6258—Single, Stamped .....4½x2¾ in...10 in a carton....Each, $0.40
No. 6587—Single, Solid .....4½x2¾ in....10 in a carton....Each, .65
No. 6259—Two Gang, Stamped..4½x4 9/16 in.... 1 in a carton....Each, 1.30
No. 6588—Two Gang, Solid....4½x4 9/16 in.... 1 in a carton....Each, 1.50
No. 6260—Three Gang, Solid....4½x6⅜ in.... 1 in a carton....Each, 2.25
No. 6261—Four Gang, Solid....4½x8 3/16 in.... 1 in a carton....Each, 3.00

HUBBELL FLUSH RECEPTACLES WITH PLATES AND CAPS

Nos. 5547-5548-5419—Receptacle, Plate and Cap, complete, ... Each, $1.10
Nos. 5547-5548-5420—Receptacle, Plate and Cap, complete ..... Each, 1.15
Nos. 5547-5548-5657—Receptacle, Plate and Cap, complete ..... Each, 1.40
Nos. 5547-5548-5424—Receptacle, Plate and Cap, complete ..... Each, 1.20
Nos. 5579-5580-5419—Receptacle, Plate and Cap, complete ..... Each, 2.15
Nos. 5579-5580-5420—Receptacle, Plate and Cap, complete ..... Each, 2.20
Nos. 5579-5580-5657—Receptacle, Plate and Cap, complete ..... Each, 2.45
Nos. 5579-5580-5424—Receptacle, Plate and Cap, complete ..... Each, 2.25
Nos. 6257-6258-5419—Receptacle, Plate and Caps (2), complete..... Each, 1.40
Nos. 6257-6258-5420—Receptacle, Plate and Caps (2), complete..... Each, 1.45
Nos. 6257-6258-5657—Receptacle, Plate and Caps (2), complete..... Each, 1.70
Nos. 6257-6258-5424—Receptacle, Plate and Caps (2), complete..... Each, 1.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

SCREW PLUG FLUSH RECEPTACLES

660 Watts, 250 Volts.

This Receptacle will receive Edison Attachment Plug.

Nos. 1708 and 1709.

No. 1708—Screw Plug Gang Receptacles. 10 in a carton.....Each, $0.30

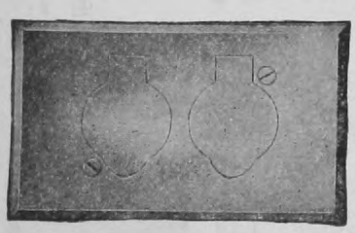
Plates With Lids

No. 1709—Single, Stamped, 4½x2¾ in. 25 in a carton....Each, $0.40
No. 544—Single, Solid, 4½x2¾ in. 25 in a carton.....Each, .60
No. 526—Two Gang, Solid, 4½x4 9/16 in. 10 in a carton.....Each, 1.20
No. 527—Three Gang, Solid, 4½x6⅜ in. 5 in a carton.....Each, 1.80
No. 528—Four Gang, Solid, 4½x8 3/16 in. 5 in a carton.....Each, 2.40

Plates Without Lids

No. 429—Single, Stamped, 4½x2¾ in. 25 in a carton.....Each, $0.35
No. 545—Single, Solid, 4½x2¾ in. 25 in a carton.....Each, .50
No. 529—Two Gang, Solid, 4½x4 9/16 in. 10 in a carton.....Each, 1.00
No. 530—Three Gang, Solid, 4½x6⅜ in. 5 in a carton.....Each, 1.50
No. 531—Four Gang, Solid, 4½x8 3/16 in. 5 in a carton.....Each, 2.00

No. 429.



Nos. 546 and 547.

DUPLEX SCREW PLUG FLUSH RECEPTACLES

Each Outlet 660 Watts, 250 Volts.

Receives Edison Plugs; Installs in any Standard Single Switch Box.

No. 546—Duplex Receptacle. 10 in a carton.....Each, $0.45
No. 547—Solid Plate with Lids, 2¾x4½ in. 25 in a carton.....Each, .80
No. 548—Solid Plate without Lids, 2¾x4½ in. 25 in a carton.....Each, .60

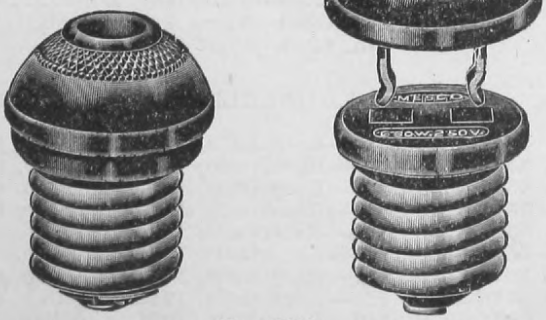
SEPARABLE ATTACHMENT PLUGS

Nos. 16405, 16406.

No. 16410.

Nos. 16407 to 16409.

No. 16405—Porcelain Base only.....Each, $0.15
No. 16406—Porcelain Cap only.....Each, .15
No. 16410—Porcelain Plug, complete .....Each, .25
No. 16407—Composition Cap only.....Each, .20
No. 16408—Composition Base only.....Each, .20
No. 16409—Composition Plug, complete...Each, .35



No. 16433.

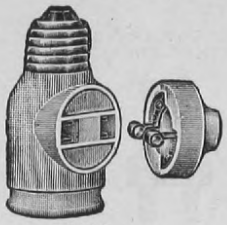
Separable Plug. Composition.

No. 16433—Plug complete, ...Each, $0.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish



No. 16414.

CURRENT TAPS

Combination Socket and Attaching Plug.
660 Watts, 250 Volts.

One Piece Glazed Porcelain Body with deeply imbedded Phosphor Bronze Clips.

No. 16414—Current Tap Multiple.....Each, $0.50
No. 16402—Current Tap without Cap.....Each, .35
No. 16406—Porcelain Cap, only.....Each, .15

Standard Packages contain 50 items.

SPARTAN PLUGS AND INTERCHANGEABLE CAPS

660 Watts, 250 Volts.

No. 100.

KA.

KB.

KC.

KE.

KF.

PLUGS AND INTERCHANGEABLE CAPS

No. 100—Edison Screw Body. 10 in a carton.....Each, $0.10
No. KA—Standard Plug Caps. 10 in a carton.....Each, .15
No. KB—Brass Covered Caps. 10 in a carton.....Each, .25
No. KC—Brass Covered Caps with Finger Grip. 10 in a carton.....Each, .35
No. KE—Pilot Caps (125 volts). 10 in a carton.....Each, .95
No. KF—Edison Adapter Caps (660 Watts). 10 in a carton.....Each, .20

No. 101.

ATTACHMENT PLUGS WITH INTERCHANGEABLE CAPS

660 Watts, 250 Volts.

No. KA100—Body with Standard Plug Cap. 10 in a carton *.....Each, $0.25
No. KB100—Body with Brass Covered Cap. 10 in a carton.....Each, .35
No. KC100—Body with Finger Grip Cap. 10 in a carton.....Each, .45
No. KE100—Body with Pilot Cap (125 volts). 10 in a carton.....Each, 1.05
No. KF100—Body with Edison Adapter Cap. 10 in a carton.....Each, .30

CURRENT TAPS WITH INTERCHANGEABLE CAPS

No. 101—Multiple Current Tap Body. 10 in a carton.....Each, $0.35
No. KA101—Body with Standard Cap. 10 in a carton.....Each, .50
No. KB101—Body with Brass Covered Cap. 10 in a carton.....Each, .60
No. KC101—Body with Finger Grip Cap. 10 in a carton.....Each, .70
No. KE101—Body with Pilot Cap (125 volts). 10 in a carton.....Each, 1.30
No. KF101—Body with Edison Adapter Cap. 10 in a carton.....Each, .55

ATTACHMENT PLUGS

Spartan

660 Watts, 250 Volts.

No. 700.

No. 700—Separable Plugs. 10 in a carton *.....Each, $0.25
No. 500—One-Piece Fuseless with Binding Screws. 10 in a carton.....Each, .10

No. 500.

*Nos. KA100 and 700 are alike in all respects and may be ordered by either number.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

CAPS FOR ATTACHMENT PLUGS AND CURRENT TAPS

Porcelain Cap.

No. 5419.

Composition Cap.

No. 5420.

Porcelain Lamp Receptacle.

No. 5424.

Br. Cov. Compo. "Knostrain."

No. 5657.

No. 5419—Porcelain Plug Cap, 6 amperes. 10 in a carton ..... Each, $0.15
No. 5420—Composition Plug Cap, 6 amperes. 10 in a carton ..... Each, .20
No. 5424—Porcelain Lamp Receptable, 660 Watts. 10 in a carton ..... Each, .25
No. 5657—Brass Covered Composition Cap, "Knostrain" Bushing. 10 in a carton ..... Each, .45

ATTACHMENT PLUG BASES

Porcelain Base.

No. 5607.

Composition Base.

No. 5612.

Composition Base Cartridge Fuse.

No. 5826.

No. 6287.

No. 6288.

No. 5607—Standard Porcelain Plug Base only. 10 in a carton ..... Each, $0.15
No. 5612—Standard Composition Plug Base only. 10 in a carton ..... Each, .20
No. 5826—Composition Base for Cartridge Fuse Plugs. 10 in a carton ..... Each, .75
No. 6287—Two Outlet Multiple, less Caps, Edison Base. 5 in a carton ..... Each, .70
No. 6288—Three Outlet Multiple, less Caps, Edison Base. 5 in a carton ..... Each, 1.05

ATTACHMENT PLUGS COMPLETE

No. 5406.

No. 5467.

No. 5824.

No. 5493.

No. 5406—Base 5607 and Cap 5419. 10 in a carton ..... Each, $0.30
No. 5467—Base 5612 and Cap 5420. 10 in a Carton ..... Each, .40
No. 5824—Base 5826 and Cap 5420. 10 in a carton ..... Each, .95
No. 5493—Base 5612 and Cap 5657. 10 in a carton ..... Each, .65

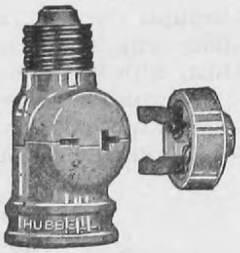
CURRENT TAPS

No. 6295.

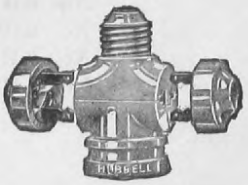
No. 6297.

No. 5638.

No. 5735.



No. 5736.



No. 6553.

No. 6295—Multiple Current Tap Body only. 10 in a carton ..... Each, $0.35
No. 6297—Multiple Current Tap Body for Shade Holder. 10 in a carton ..... Each, .35
No. 5638—Body 6295 and Cap 5419. 10 in a carton ..... Each, .50
No. 5639—Body 6295 and Cap 5424. 10 in a carton ..... Each, .60
No. 5735—Body 6297 and Cap 5419. 10 in a carton ..... Each, .50
No. 5736—Side Outlet Tap for Shade Holder, complete. 10 in carton ..... Each, .50
No. 6553—Body with 2 No. 5419 Caps. 10 in a carton ..... Each, .80
No. 6554—Current Tap No. 6553 without Caps. 10 in a carton ..... Each, .50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

CORD CONNECTORS

Caps, Bodies and Complete Connectors.

No. 5419. No. 6087. No. 5519. No. 5420. No. 5574. No. 5518. No. 5700 No. 6095. No. 5699.

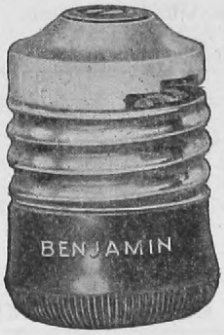
No. **5419**—Porcelain Plug Cap, 6 amperes. 10 in a Carton.....Each, $0.15
No. **6087**—Porcelain Cord Connector Body only. 10 in a Carton .....Each, .25
No. **5519**—Body No. 6087 with Cap No. 5419. 10 in a Carton .....Each, .40

No. **5420**—Composition Plug Cap, 6 amperes. 10 in a Carton .....Each, .20
No. **5574**—Composition Cord Connector Body only. 10 in a Carton .....Each, .30
No. **5518**—Body No. 5574 with Cap No. 5420. 10 in a Carton .....Each, .50

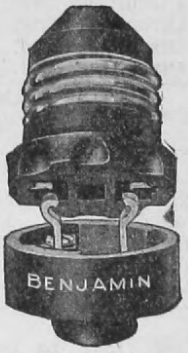
No. **5700**—Brass Covered Composition Cap, Knostrain Bushing. 10 in a Carton.....Each, .55
No. **6095**—Composition Body with Knostrain Bushing. 10 in a Carton.....Each, .80
No. **5699**—Body No. 6095 with Cap No. 5700. 10 in a Carton .....Each, 1.35

BENJAMIN ATTACHMENT PLUGS

No. 903.



No. 907.



No. 919.

No. **903**—With Standard Bushing. 660 Watts, 250 Volts.....Each, $0.25
No. **907**—Bushing ($13\frac{3}{32}$ inch Opening). 660 Watts, 250 Volts .....Each, .15
No. **919**—Separable Plug, Bushing ($13\frac{3}{32}$ inch Opening).....Each, .25

PLUG CLUSTERS

Benjamin

No. 92.

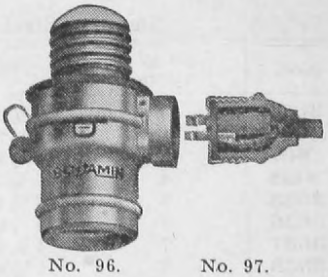
No. 94.

No. **92**—2 Lights. 10 in a Carton.....Each, $1.00
No. **93**—3 Lights. 10 in a Carton.....Each, 1.30
No. **94**—4 Lights. 10 in a Carton.....Each, 1.60

CURRENT TAPS

Benjamin

No. 95.



No. 96. No. 97.

No. **95** —Multiple .....Each, $0.50
No. **95½**—Series .....Each, .50
No. **96**—Multiple with Plug.....Each, .80
No. **97**—Plug only .....Each, .25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

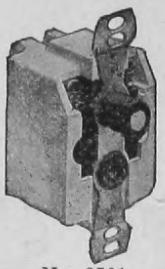
FLUSH PUSH BUTTON SWITCHES

No. 602.

No. 2202.

No. 2625.

No. 2295.



No. 2701.

Bryant Gang Switches

Nos.	Description	Amperes 125 Volts	Amperes 250 Volts	In a Carton	Each
601	Single Pole ..	10	5	10	$0.72
603	Three Point..	10	5	10	.88
604	Four Point ..	10	5	10	2.00
602	Double Pole .	10	10	10	.88
609	Double Pole .	20	20	10	1.40

Perkins Gang Switches

Nos.	Description	Amperes 125 Volts	Amperes 250 Volts	In a Carton	Each
2201	Single Pole ..	10	5	10	$0.45
2203	Three Point ..	10	5	10	.70
2204	Four Point ..	10	5	10	2.00
2202	Double Pole .	10	10	10	.70
2623	Double Pole ..	20	20	10	1.00

Perkins Gang Electrolier Switches

Nos.	Positions	In a Carton	Each
2625	1st; Circuit 1; 2nd, Circuit 2; 3rd, Circuits 1 and 2; 4th, Off	10	$1.05
2626	1st; Circuit 1; 2nd, Circuits 1 and 2; 3rd, Circuit 1; 4th, Off	10	1.05
2627	1st; Circuit 1; 2nd, Circuits 1 and 2; 3rd, Circuits 1 and 2 and 3; 4th, Off	10	1.05
2628	1st; Circuit 1; 2nd, Off; 3rd, Circuit 2; 4th, Off	10	1.05
2629	1st; Circuit 1; 2nd, Off; 3rd, Circuits 1 and 2; 4th, Off	10	1.05
2630	1st; Circuit 1; 2nd, Circuits 1 and 2; 3rd, Off	10	1.05
2631	1st; Circuit 1; 2nd, Circuit 2; 3rd, Off	10	1.05
2632	1st; Circuit 1; 2nd, Circuit 2; 3rd, Circuit 3; 4th, Off	10	1.05

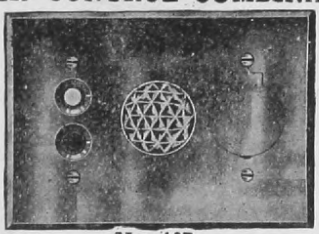
Perkins Lock Gang Switches

Nos.	Description	Amperes 125 Volts	Amperes 250 Volts	In a Carton	Each
2295	Single Pole .	10	5	10	$1.06
2296	Three Point .	10	5	10	1.30
2297	Four Point ..	10	5	10	2.50
2298	Double Pole .	10	10	10	1.30
2624	Double Pole .	20	20	10	1.50

Capax Gang Switches

Nos.	Description	Amperes 125 Volts	Amperes 250 Volts	In a Carton	Each
2701	Single Pole ..	10	5	10	$0.31
2703	Three Point .	10	5	10	.42

HEATER CONTROL COMBINATIONS



No. 467.

No. 467—Ready Wired Heater Control Combines Double Pole Switch, Lamp, Plug Receptacle and Plate with Lid.....Each, $5.75

STAMPED FLUSH PLATES

Nos. 3666, 3632.

SOLID FLUSH PLATES

Nos. 3640, 3622.

Stamped Steel Flush Plates

Nos.	No. of Switches	Size, in.	In a Carton	Each
3665	1	4½x2¾	25	$0.14
3666	2	4½x4 9/16	10	.28
3667	3	4½x6⅜	5	.42
3634	4	4½x8 3/16	5	.88
3635	5	4½x10	5	1.10
3636	6	4½x11 13/16	1	1.32
3637	7	4½x13⅝	1	1.54
3638	8	4½x15 7/16	1	1.76

Stamped Steel Flush Plates

3631	1	4½x2¾	25	$0.14
3632	2	4½x4 9/16	10	.28
3633	3	4½x6⅜	5	.42

Standard Solid Brass Flush Plates

Nos.	No. of Switches	Size, in.	In a Carton	Each
3639	1	4½x2¾	25	$0.50
3640	2	4½x4 9/16	10	1.00
3167	3	4½x6⅜	5	1.50
3168	4	4½x8 3/16	5	2.00
3169	5	4½x10	5	3.00
3170	6	4½x11 13/16	1	3.60
3171	7	4½x13⅝	1	4.20
3172	8	4½x15 7/16	1	4.80

Solid Steel Flush Plates

3621	1	4½x2¾	25	$0.12
3622	2	4½x4 9/16	10	.24
3623	3	4½x6⅜	5	.36

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PERKINS 125-250 VOLT SURFACE SWITCHES

No. 2000
(⅜ Actual Size)

Single Pole, Small Size—5 Amperes, 125 Volts—3 Amperes, 250 Volts

List Nos.	List Price Each	Standard Package	Description	Package Weight Pounds	Carton
2000	$0.28	250	■ Slotted	75	10
*2220	.28	250	■ Solid	75	10
2047	.32	250	■ Slotted, Indicating	75	10
*2035	.32	250	■ Solid, Indicating	75	10

Outside diameter of base is 2 inches.
Holes for supporting screws are spaced 1⅜ inches on centers.

No. 2002
(⅜ Actual Size)

Single Pole, Large Size—5 Amperes, 125 Volts—3 Amperes, 250 Volts

2170	$0.36	100	■ Solid	30	10
2002	.36	100	■ Slotted	30	10
2254	.40	100	■ Solid, Indicating	30	10
2255	.40	100	■ Slotted, Indicating	30	10

Outside diameter of base is 2¼ inches.
Holes for supporting screws are spaced 1½ inches on centers.

No. 2001
(⅜ Actual Size)

Single Pole—10 Amperes, 125 Volts—5 Amperes, 250 Volts

2001	$0.48	100	■ Slotted	45	10
†2221	.48	100	■ Solid	45	10
2048	.54	100	■ Slotted, Indicating	45	10
†2036	.54	100	■ Solid, Indicating	45	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

No. 2455
(⅜ Actual Size)

Three-Point—3 Amperes, 125 Volts—1 Ampere, 250 Volts

*2455	$0.48	100	■ Solid	25	10
2456	.48	100	■ Slotted	25	10

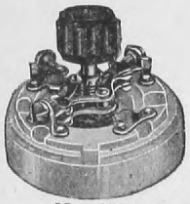
Outside diameter of base is 2 inches.
Holes for supporting screws are spaced 1⅜ inches on centers.

No. 2175
(⅜ Actual Size)

Three Point—5 Amperes, 125 Volts—3 Amperes, 250 Volts

2175	$0.56	100	■ Solid	25	10
2027	.56	100	■ Slotted	25	10

Outside diameter of base is 2¼ inches.
Holes for supporting screws are spaced 1½ inches on centers.



No. 2176
(⅜ Actual Size)

Three Point—10 Amperes, 125 Volts—5 Amperes, 250 Volts

†2176	$0.76	50	■ Solid	25	10
2030	.76	50	■ Slotted	25	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

Four Point—5 Amperes, 125 Volts—2 Amperes, 250 Volts

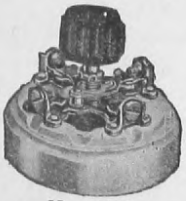
Four-point switches are used in connection with two three-point Switches where current is to be controlled from any one of more than two points. A four-point Switch is installed between the three-point Switches at each additional point.

Four-point Switches can also be used individually as pole-changing Switches.

†2183	$0.86	30	■ Solid	15	10
2033	.86	30	■ Slotted	15	10

Outside diameter of base is 2 7/16 inches.

Holes for supporting screws are spaced 1 23/32 inches on centers.



No. 2183
(⅜ Actual Size)

Any Switch on this page can be converted into a Lock Switch by removing the handle and substituting a Universal Lock Attachment.

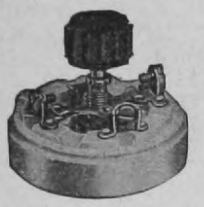
* This Switch can also be furnished on a base measuring 1¾ inches in diameter, which is likewise the diameter of the cover.

† This Switch can also be furnished on a base measuring 2¼ inches in diameter, which is likewise the diameter of the cover.

■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PERKINS 125-250 VOLT SURFACE SWITCHES—Continued



No. 2216
(⅜ Actual Size)

2 Circuit Electrolier, 1-2-1 & 2-Off—10 Amperes, 125 Volts—5 Amperes, 250 Volts

1st position: Circuit 1; 2d position: Circuit 2; 3d position: Circuits 1 and 2; 4th position: Off.

List Nos.	List Price Each	Standard Package	Description	Package Weight Pounds	Carton
*2216	$0.76	30	■ Solid	15	10
2215	.76	30	■ Slotted	15	10
*2188	.86	30	■ Solid, Indicating	15	10
2074	.86	30	■ Slotted, Indicating	15	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

No. 2649
(⅜ Actual Size)

2 Circuit Electrolier, 1-1 & 2-1-Off—10 Amperes, 125 Volts—5 Amperes, 250 Volts

1st position: Circuit 1; 2d position: Circuits 1 and 2; 3d position: Circuit 1; 4th position: Off.

*2649	$0.90	30	■ Solid	15	10
2650	.90	30	■ Slotted	15	10
*2651	1.00	30	■ Solid, Indicating	15	10
2652	1.00	30	■ Slotted, Indicating	15	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

No. 2653
(⅜ Actual Size)

2 Circuit Electrolier, 1-Off-2-Off—10 Amperes, 125 Volts—5 Amperes, 250 Volts

1st position: Circuit 1; 2d position: Off; 3d position: Circuit 2; 4th position: Off.

*2653	$0.90	30	■ Solid	15	10
2654	.90	30	■ Slotted	15	10
*2655	1.00	30	■ Solid, Indicating	15	10
2656	1.00	30	■ Slotted, Indicating	15	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

No. 2657
(⅜ Actual Size)

2 Circuit Electrolier, 1-Off-1 & 2-Off—10 Amperes, 125 Volts—5 Amperes, 250 Volts

1st position: Circuit 1; 2d position: Off; 3d position: Circuit 1 and 2; 4th position: Off.

*2657	$0.90	30	■ Solid	15	10
2658	.90	30	■ Slotted	15	10
*2659	1.00	30	■ Solid, Indicating	15	10
2660	1.00	30	■ Slotted, Indicating	15	10

Outside diameter of base is 2 7/16 inches.
Holes for supporting screws are spaced 1 23/32 inches on centers.

No. 2661
(⅜ Actual Size)

2 Circuit Electrolier, 1-1 & 2-Off—10 Amperes, 125 Volts—5 Amperes, 250 Volts

1st position: Circuit 1; 2d position: Circuits 1 and 2; 3d position: Off.

*2661	$0.90	30	■ Solid	15	10
2662	1.00	30	■ Solid, Indicating	15	10

Outside diameter of base is 2¼ inches, which is likewise the diameter of the cover.
There are three supporting screw holes equally spaced on a circle having a diameter of 1¾ inches.
The above Switches cannot be supplied on slotted bases.

Any Switch on this page can be converted into a lock Switch by removing the handle and substituting a Universal Lock Attachment.

* This Switch can also be furnished on a base measurnig 2¼ inches in diameter, which is likewise the diameter of the cover.

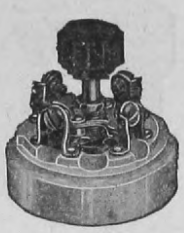
■ National Electrical Code Standard.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

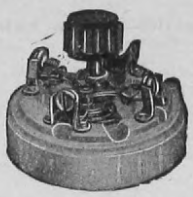
ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish

PERKINS 125-250 VOLT SURFACE SWITCHES



No. 2391.
Double Pole.
5 Amperes, 250 Volts.
Diam. of Base, 2 inches.



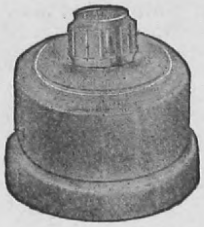
No. 2009.
Double Pole.
10 Amperes, 250 Volts.
Diam. of Base, $2\frac{7}{16}$ inches.

No. 2011.
Double Pole.
20 Amperes, 250 Volts.
Diam. of Base, 3 inches.

Nos.	Description.	In Carton.	Each.	Nos.	Description.	In Carton.	Each.	Nos.	Description.	In Carton.	Each
2391	Solid	10	$0.56	**2009**	Solid	10	$0.66	**2011**	Solid	10	$1.40
2392	Slotted	10	.56	**2017**	Slotted	10	.66	**2019**	Slotted	10	1.40
2393	Solid, Indicating	10	.64	**2038**	Solid, Indicating	10	.76	**2040**	Solid, Indicating	10	1.50
2394	Slotted, Indicating	10	.64	**2050**	Slotted, Indicating	10	.76	**2052**	Slotted, Indicating	10	1.50

SURFACE SWITCHES WITH PORCELAIN COVERS

No. 2601.



No. 2141.

Small Size, Base Diameter 2 Inches

Nos.	Description.	Amperes. 125 Volts.	Amperes. 250 Volts.	In a Carton.	Each.
2601	Single Pole, Solid	5	3	10	$0.32
2602	Single Pole, Slotted	5	3	10	.32
2603	Single Pole, Solid, Indicating	5	3	10	.36
2604	Single Pole, Slotted, Indicating	5	3	10	.36
2605	Three Point, Solid	5	3	10	.52
2606	Three Point, Slotted	5	3	10	.52
2607	Double Pole, Solid	5	5	10	.52
2608	Double Pole, Slotted	5	5	10	.52
2609	Double Pole, Solid, Indicating	5	5	10	.60
2610	Double Pole, Slotted, Indicating	5	5	10	.60

Large Size, Base Diameter 2½ Inches

2141	Single Pole	10	5	10	$0.64
2435	Single Pole, Indicating	10	5	10	.74
2140	Three Point	10	5	10	.92
2142	Four Point	10	5	10	1.02
2264	2-Circuit Electrolier	10	5	10	.96
2436	2-Circuit Electrolier, Indicating	10	5	10	1.06
2263	3-Circuit Electrolier	10	5	10	1.06
2437	3-Circuit Electrolier, Indicating	10	5	10	1.16
2139	Double Pole	10	10	10	.82
2438	Double Pole, Indicating	10	10	10	.92

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Brushed Brass Finish.

HEATER SWITCHES

Indicating Handle Heater Switches

No. 2635.
(⅔ Actual Size.)

Mica Insulated.

Series Parallel—Single Pole.

Operating High, Medium, Low, Off.

Composition Cover and Base.

15 Amperes, 125 Volts; 10 Amperes, 250 Volts.

No. 2635—Solid, 10 in a carton.....Each, $1.00
No. 2636—Slotted. 10 in a carton.....Each, 1.00

CEILING PULL SWITCHES

No. 2387.

Perkins Ceiling Pull Switches

Nos.	Description	Amperes 125 V.	Amperes 250 V.	In a Carton	Each
2387	Single Pole, Solid	10	5	10	$1.00
2309	Single Pole, Slotted	10	5	10	1.00
2388	Three Point, Solid	10	5	10	1.18
2310	Three Point, Slotted	10	5	10	1.18
2389	Four Point, Solid	10	5	1	1.18
2311	Four Point, Slotted	10	5	1	1.18
2390	Electrolier, 2 Circuit, Solid	10	5	1	1.18
2312	Electrolier, 2 Circuit, Slotted	10	5	1	1.18
2395	Electrolier, 3 Circuit, Solid	10	5	1	1.18
2313	Electrolier, 3 Circuit, Slotted	10	5	1	1.18
2396	Double Pole, Solid	10	10	10	1.18
2314	Double Pole, Slotted	10	10	10	1.18

Note—Each switch supplied with 10 feet best quality linen cord.

PENDENT SWITCHES

No. 2370.

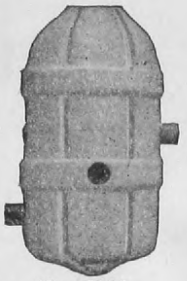
No. 2572.

Single Pole.

6 Amperes, 125 Volts; 3 Amperes, 250 Volts.

No. 2370—Pendent Cap. 10 in a carton...Each, $0.50
No. 2572—Pendent Cap. 10 in a carton...Each, .50

No. 7000.



No. 7020.

All Porcelain—Gray Finish.

Nos.	Description	Amperes 125 V.	Amperes 250 V.	In a Carton	Each
7000	Single Pole ..	6	3	10	$0.50
7010	Single Pole ..	10	5	10	.70
7020	Two Circuit ..	6	3	10	1.00

TYPE "O" PENDENT SWITCHES

No. 2440.

Perkins Type "O" Pendent Switches

Nos.	Description	Amperes 125 V.	Amperes 250 V.	In a Carton	Each
2440	Single Pole .	10	5	10	$1.20
2417	Three Points	10	5	10	1.20
2419	2 - Circuit Electrolier, 1-2-1 and 2-off	5	2	10	1.20
2420	3 - Circuit Electrolier, 1-1 and 2-1 and 3-off...	5	2	10	1.20

STRAIGHT THROUGH SWITCHES

No. 2592.

Perkins "Straight-Through" Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts.

No. 2592—Single Pole. 10 in a carton....Each, $0.60

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Plain Finish.

KAPPA KNIFE SWITCHES

Front Connections, **Single Throw,** Slate Base.

30 Amperes, 250 Volts.

No. 22.

No. 30.

No. 33.

Nos.	FUSELESS Pole	Each	Nos.	FUSIBLE BOTTOM Pole	Each	Nos.	FUSIBLE TOP Pole	Each
20	Single	$0.38	30	Double	$0.97	33	Double	$0.97
22	Double	.60	31	Three	1.45	34	Three	1.45
23	Three	.90						

TYPE "C" KNIFE SWITCHES

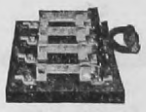
Front Connections, **Single Throw,** Slate Base, Fuseless.

250 Volts D.C. and 500 Volts A.C.

Single Pole.

Double Pole.

Three Pole.



Four Pole.

Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each
3002	30	$0.66	3042	30	$1.06	3082	30	$1.60	5902	30	$2.14
3003	60	.74	3043	60	1.22	3083	60	1.84	5903	60	2.44
3005	100	1.50	3045	100	2.50	3085	100	3.76	5905	100	5.00
3006	200	2.70	3046	200	4.50	3086	200	6.76	5906	200	9.00

TYPE "C" KNIFE SWITCHES

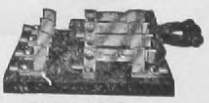
Front Connections, **Double Throw,** Slate Base, Fuseless.

250 Volts D.C. and 500 Volts A.C.

Single Pole.

Double Pole.

Three Pole.



Four Pole.

Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each
3022	30	$1.16	3062	30	$1.70	3102	30	$2.66	5922	30	$3.84
3023	60	1.30	3063	60	2.00	3103	60	3.10	5923	60	4.40
3025	100	2.94	3065	100	4.50	3105	100	6.90	5925	100	9.80
3026	200	4.88	3066	200	7.50	3106	200	11.60	5926	200	15.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Plain Finish

TYPE "C" KNIFE SWITCHES

Front Connections, **Single Throw**, Slate Base, High Jaws

Fusible Bottom—250 Volts D.C. and A.C.

Single Pole.

Double Pole.

Three Pole.

Four Pole.

Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each
1120	30	$0.70	**1130**	30	$1.06	**1140**	30	$1.60	**1150**	30	$2.12
1121	60	1.18	**1131**	60	1.80	**1141**	60	2.70	**1151**	60	3.60
1123	100	2.38	**1133**	100	3.66	**1143**	100	5.50	**1153**	100	7.30
1124	200	4.40	**1134**	200	6.76	**1144**	200	10.14	**1154**	200	13.50

TYPE "C" KNIFE SWITCHES

Front Connections, **Single Throw**, Slate Base, High Jaws.

Fusible Top—250 Volts D.C. and A.C.

Single Pole.

Double Pole.

Three Pole.

Four Pole.

Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each
1160	30	$0.70	**1170**	30	$1.06	**1180**	30	$1.60	**1190**	30	$2.12
1161	60	1.18	**1171**	60	1.80	**1181**	60	2.70	**1191**	60	3.60
1163	100	2.38	**1173**	100	3.66	**1183**	100	5.50	**1193**	100	7.30
1164	200	4.40	**1174**	200	6.76	**1184**	200	10.14	**1194**	200	13.50

TYPE "C" KNIFE SWITCHES

Front Connections, **Double Throw**, Slate Base, Fusible, High Jaws

250 Volts D.C and A.C.

Single Pole.

Double Pole.

Three Pole.

Four Pole.

Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each	Nos.	Amperes	Each
3131	30	$1.54	**3151**	30	$2.20	**3171**	30	$3.52	**3191**	30	$4.84
3132	60	2.38	**3152**	60	3.40	**3172**	60	5.44	**3192**	60	7.48
3134	100	5.18	**3154**	100	7.40	**3174**	100	11.84	**3194**	100	16.28
3135	200	9.80	**3155**	200	13.00	**3175**	200	20.80	**3195**	200	26.60

Note—No Fuses included in above prices.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard—Plain Finish

A. C. MOTOR STARTING SWITCHES

For N. E. C. Standard Fuses—One End Only

Type A.

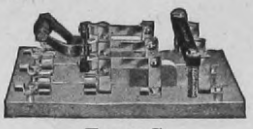
Front and Back Connections—250 Volts D. C. and A. C.

Marked "Start" and "Run" to avoid errors.

Back Connections on slate base, mounted on corner feet of iron. Wires on back.

Double Throw.

Nos.	Amperes	Description	Each
1300	30	Double Pole	$4.12
1301	60	Double Pole	5.50
1303	100	Double Pole	10.50
1305	30	Three Pole	5.50
1306	60	Three Pole	7.30
1308	100	Three Pole	14.00
1310	30	Four Pole	7.30
1311	60	Four Pole	9.75
1313	100	Four Pole	18.66



Type C..

Front Connections only—250 Volts D. C. and A. C.

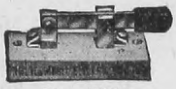
Marked "Start" and "Run" to avoid errors.

Back Connections on slate base, mounted on corner feet of iron. Wires on back.

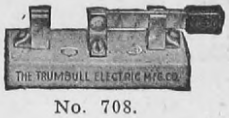
Double Throw.

Nos.	Amperes	Description	Each
1350	30	Double Pole	$3.75
1351	60	Double Pole	4.75
1353	100	Double Pole	9.90
1355	30	Three Pole	5.00
1356	60	Three Pole	6.30
1358	100	Three Pole	13.20
1360	30	Four Pole	6.68
1361	60	Four Pole	8.40
1363	100	Four Pole	17.60

TELEPHONE OR BATTERY SWITCHES

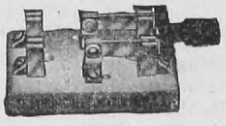


No. 707.

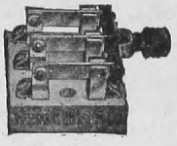


No. 708.

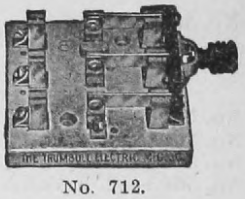
No. 709.



No. 710.



No. 711.



No. 712.

Front Connections—25 Amperes—Porcelain Base

Nos.	Description	Each
707	Single Pole, Single Throw, 10 in a carton	$0.20
708	Single Pole, Double Throw, 5 in a carton	.32
709	Double Pole, Single Throw, 10 in a carton	.35
710	Double Pole, Double Throw, 5 in a carton	.50
711	Three Pole, Single Throw, 5 in a carton	.56
712	Three Pole, Double Throw, 5 in a carton	.90

JUNIOR BATTERY SWITCHES

Composition Base—25 Amperes

No. 1.

No. 2.

No. 5.

Nos.	Description	Each
1	Single Pole, Single Throw, 10 in a carton	$0.20
2	Single Pole, Double Throw, 10 in a carton	.30
5	Spring holds lever in neutral position and in each contact; 5 in a carton	.40

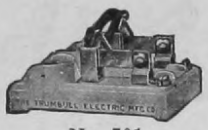
Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard. Plain Finish.

COMBINATION SWITCHES

For Plug Fuses.



No. 701.

No. 703.

Nos.	Description	Each
701—Double Pole, Fusible Top, 125 Volts, 30 Amperes		$0.90
721—Double Pole, Fusible Bottom, 125 Volts, 30 Amperes		.90
703—Three Pole, Fusible Top, 125—250 Volts, 30 Amperes		1.40
723—Three Pole, Fusible Bottom, 125—250 Volts, 30 Amperes		1.40

COMBINATION SWITCHES IN SAFETY BOXES

No. 5640. Box Open.

No. 5640. Box Closed.

No. 5600. Cast Iron Box.

No. 5630. Bent Up Steel Box.

Nos. 701 and 703 in Steel Boxes Externally Operated.

Three Knock-Outs in each end. 30 Amperes. No Bushings, no Padlocks

No. 5640—125 Volts, Double Pole, Fusible Top	Each, $3.50
No. 5642—125—250 Volts, Three Pole, Fusible Top	Each, 5.85

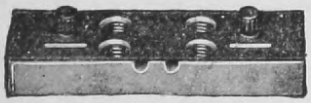
Nos. 701 to 723 in Cast Iron Boxes, not Drilled.

No. 5600—125 Volts, Double Pole Plug, Fusible Top	Each, $2.56
No. 5601—125 Volts, Double Pole Plug, Fusible Bottom	Each, 2.56
No. 5604—250 Volts, Three Pole Plug, Fusible Top	Each, 3.90
No. 5605—250 Volts, Three Pole Plug, Fusible Bottom	Each, 3.90

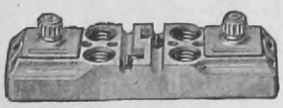
Nos. 701 and 721 in Bent Up Steel Boxes.

Three Knock-Outs in each end. 30 Amperes. No Bushings.

No. 5630—125 Volts, Double Pole Plug, Fusible Top	Each $1.64
No. 5631—125 Volts, Double Pole Plug, Fusible Bottom	Each 1.64



No. 2599. With Dead Front.



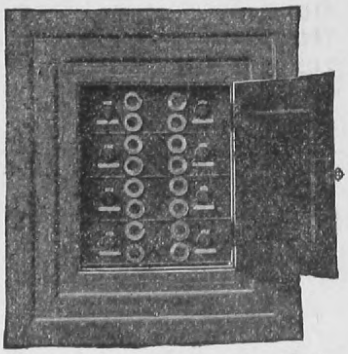
No. 2300. With Open Front.

PERKINS PANEL SWITCHES

With Connection For Plug Fuses

10 Amperes, 125 Volts.

Each branch is fitted with a 10 Ampere Double Pole Switch, which is mounted on a separate base and may be removed without disturbing either main or branch connections. Minimum depth of cabinet, 3 inches.



Illustrating appearance of No. 2599 Switches installed in a Gutter Cabinet. 4

With Dead Fronts and Rotary Switches

No. 2598—Double Pole, Single Branch, 6¼ x 3 inches	Each $2.00
No. 2599—Double Pole, Double Branch, 10½ x 3 inches	Each 2.50

Note.—The Covers of these Switches are steel, lined with insulating material.

With Open Fronts and Rotary Switches

No. 2400—Double Pole, Single Branch, 6¼ x 3 inches	Each $1.60
No. 2300—Double Pole, Double Branch, 10½ x 3 inches	Each 2.25

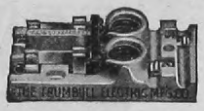
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

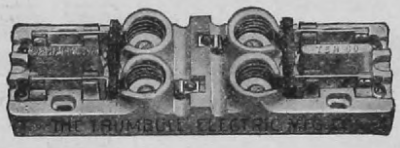
National Electrical Code Standard.

PANEL CUT-OUTS

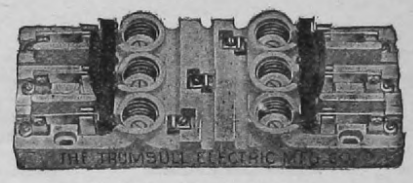
30 Amperes, 125 Volts



No. 714. Fusible Top.

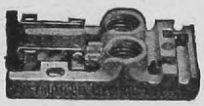


No. 715. Vertical Mains.



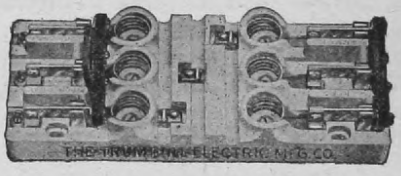
No. 727. Vertical Mains.

No. 714—Vertical Mains. 2 Wire Single Branch (Fusible Top) ..... Each $1.00
No. 715—Vertical Mains. 2 Wire Double Branch ..... Each 2.00
No. 727—Vertical Mains. 3-3 Wire Double Branch ..... Each 4.00



No. 717. Fusible Bottom.

No. 718. Horizontal Mains.



No. 728. Horizontal Mains.

No. 717—Horizontal Mains. 2 Wire Single Branch (Fusible Bottom) ..... Each $1.00
No. 718—Horizontal Mains. 2 Wire Double Branch ..... Each 2.00
No. 728—Horizontal Mains. 3-3 Wire Double Branch ..... Each 4.00

Packed—Each in a pasteboard box.

PLUG CUT-OUTS

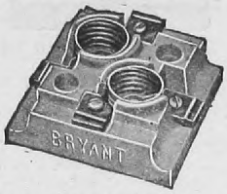
30 Amperes, 125 Volts

No. 62569.

No. 62965.

No. 61935.

No. 62569—Single Pole, Main. 10 in a Carton ..... Each $0.18
No. 62965—Double Pole, Main. 10 in a Carton ..... Each .30
No. 61935—Double Pole, Single Branch ..... Each .32



No. 8020.

No. 62587.

No. 62199.

No. 8020—Double Pole, Single or Double Cross-over Branch. 5 in a Carton ..... Each $0.36
No. 62587—Double Pole, Double Branch. 5 in a Carton ..... Each .62
No. 62199—Triple to Double Pole, Double Branch. 5 in a Carton ..... Each .64

No. 62165.

No. 8042.

No. 62135.

No. 62165—Triple Pole, Main. 5 in a Carton ..... Each $0.44
No. 8042—Triple Pole, Single Branch. 1 in a Carton ..... Each .54
No. 62135—Triple Pole, Double Branch. 1 in a Carton ..... Each .90

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

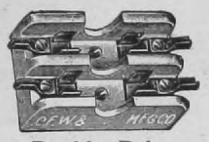
ELECTRICAL SUPPLIES

National Electrical Code Standard.

UNION ENCLOSED FUSE CUT-OUTS

250 Volts

Single Pole
Main Line.



Double Pole
Main Line.

Triple Pole
Main Line.

2 Wire Double Pole
Single Branch.

No. 2003—	0-30 Amperes.	Porcelain, Single Pole, Main Line.	50 in a Pkge	Each,	$0.40
No. 2004—	31-60 Amperes.	Porcelain, Single Pole, Main Line.	50 in a Pkge.	Each,	.65
No. 2010—	0-30 Amperes.	Porcelain, Double Pole, Main Line.	50 in a Pkge.	Each,	.55
No. 2011—	31-60 Amperes.	Porcelain, Double Pole, Main Line.	50 in a Pkge.	Each,	1.40
No. 2012—	0-30 Amperes.	Porcelain, Triple Pole, Main Line.	50 in a Pkge.	Each,	.80
No. 2013—	31-60 Amperes.	Porcelain, Triple Pole, Main Line.	50 in a Pkge.	Each,	2.00
No. 2020—	0-30 Amperes.	Porcelain, 2-Wire Double Pole, Single Branch.	50 in a Pkge	Each,	.70
No. 2021—	31-60 Amperes.	Porcelain, 2-Wire, Double Pole, Single Branch.	50 in a Pkge	Each,	1.75

3 Wire, Triple Pole
Single Branch.

2 Wire, Double Pole
Double Branch.

3 Wire, Double Pole
Double Branch.

3 Wire, Triple Pole
Double Branch.

No. 2022—	0-30 Amperes.	Porcelain, 3-Wire, Triple Pole, Single Branch.	50 in a Pkge	Each,	$1.35
No. 2023—	31-60 Amperes.	Porcelain, 3-Wire, Triple Pole, Single Branch.	50 in a Pkge	Each,	3.00
No. 2025—	0-30 Amperes.	Porcelain, 2-Wire, Double Pole, Double Branch.	25 in a Pkge	Each,	1.30
No. 2026—	31-60 Amperes.	Porcelain, 2-Wire, Double Pole, Double Branch.	25 in a Pkge	Each,	3.50
No. 2027—	0-30 Amperes.	Porcelain, 3-Wire, Double Pole, Double Branch.	25 in a Pkge	Each,	1.50
No. 2028—	31-60 Amperes.	Porcelain, 3-Wire, Double Pole, Double Branch.	25 in a Pkge	Each,	4.20
No. 2029—	0-30 Amperes.	Porcelain, 3-Wire, Triple Pole, Double Branch.	25 in a Pkge	Each,	2.25
No. 2030—	31-60 Amperes.	Porcelain, 3-Wire, Triple Pole, Double Branch.	25 in a Pkge	Each,	6.00

Single Pole, Main Line.

Double Pole, Main Line.

Triple Pole, Main Line.

No. 2005—	61-100 Amperes.	Slate, Single Pole, Main Line.	50 in a Pkge	Each,	$0.90
No. 2006—	101-200 Amperes.	Slate, Single Pole, Main Line.	25 in a Pkge	Each,	2.10
No. 2007—	201-400 Amperes.	Slate, Single Pole, Main Line.	25 in a Pkge	Each,	5.25
No. 2008—	401-600 Amperes.	Slate, Single Pole, Main Line.	10 in a Pkge	Each,	7.20
No. 2014—	61-100 Amperes.	Slate, Double Pole, Main Line.	50 in a Pkge	Each.	1.80
No. 2015—	61-100 Amperes.	Slate, Triple Pole, Main Line.	25 in a Pkge	Each,	2.70

600 Volts

No. 4003.

No. 4004.

No. 4005.

No. 4003—	0- 30 Amperes.	Slate, Single Pole, Main Line.	50 in a Pkge	Each,	$0.46
No. 4004—	31- 60 Amperes.	Slate, Single Pole, Main Line.	50 in a Pkge	Each,	.92
No. 4005—	61-100 Amperes.	Slate, Single Pole, Main Line.	50 in a Pkge	Each,	1.32
No. 4006—	101-200 Amperes.	Slate, Single Pole, Main Line.	25 in a Pkge	Each,	2.30
No. 4007—	201-400 Amperes.	Slate, Single Pole, Main Line.	25 in a Pkge	Each,	6.00
No. 4008—	401-600 Amperes.	Slate, Single Pole, Main Line.	10 in a Pkge	Each,	7.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard

PYROTITE PLUG FUSES

No. 66341. Mica Top.

Nos.	Amp.	Volts	In Carton	Std. Pkg.	Each
66327	3	125	100	500	$0.07
66329	6	125	100	500	.07
66331	10	125	100	500	.07
66333	12	125	100	500	.07
66335	15	125	100	500	.07
66337	20	125	100	500	.07
66339	25	125	100	500	.07
66341	30	125	100	500	.07

UNION PLUG FUSES

No. 910. Mica Top.

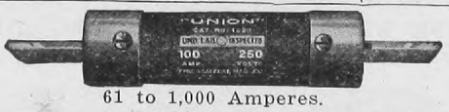
Nos.	Amp.	Volts	In Carton	Std. Pkg.	Each
903	3	125	50	500	$0.07
906	6	125	50	500	.07
910	10	125	50	500	.07
912	12	125	50	500	.07
915	15	125	50	500	.07
920	20	125	50	500	.07
925	25	125	50	500	.07
930	30	125	50	500	.07

NON-ARCING ENCLOSED FUSES

Union—250 Volts

3 to 60 Amperes.

Nos.	Amp.	Carton	Wt. per Cart.	Std. Pkg.	Each	Refilling Each
1003	3	10	6¼ oz.	100	$0.25	$.....
1004	4	10	6¼ oz.	100	.25	.....
1005	5	10	6¼ oz.	100	.25	.....
1006	6	10	6¼ oz.	100	.25	.....
1007	7	10	6¼ oz.	100	.25	.....
1008	8	10	6¼ oz.	100	.25	.....
1009	9	10	6¼ oz.	100	.25	.....
1010	10	10	6¼ oz.	100	.25	.....
1011	12	10	6¼ oz.	100	.25	.....
1012	15	10	6¼ oz.	100	.25	.....
1013	20	10	6¼ oz.	100	.25	.....
1014	25	10	6¼ oz.	100	.25	.....
1015	30	10	6¼ oz.	100	.25	.....
1016	35	10	14¾ oz.	100	.35	.....
1017	40	10	14¾ oz.	100	.35	.....
1018	45	10	14¾ oz.	100	.35	.....
1019	50	10	14¾ oz.	100	.35	.....
1020	55	10	14¾ oz.	100	.35	.....
1021	60	10	14¾ oz.	100	.35	.....



61 to 1,000 Amperes.

1022	65	10	2⅞ lbs.	50	$0.90	$0.60
1023	70	10	2⅞ lbs.	50	.90	.60
1024	75	10	2⅞ lbs.	50	.90	.60
1025	80	10	2⅞ lbs.	50	.90	.60
1026	85	10	2⅞ lbs.	50	.90	.60
1027	90	10	2⅞ lbs.	50	.90	.60
1028	95	10	2⅞ lbs.	50	.90	.60
1029	100	10	2⅞ lbs.	50	.90	.60
1030	110	1	1½ lbs.	25	2.00	.90
1031	120	1	1½ lbs.	25	2.00	.90
1032	125	1	1½ lbs.	25	2.00	.90
1033	150	1	1½ lbs.	25	2.00	.90
1034	175	1	1½ lbs.	25	2.00	.90
1035	200	1	1½ lbs.	25	2.00	.90
1036	225	1	3⅓ lbs.	25	3.60	1.50
1037	250	1	3⅓ lbs.	25	3.60	1.50
1038	275	1	3⅓ lbs.	25	3.60	1.50
1039	300	1	3⅓ lbs.	25	3.60	1.50
1040	325	1	3⅓ lbs.	25	3.60	1.50
1041	350	1	3⅓ lbs.	25	3.60	1.50
1042	375	1	3⅓ lbs.	25	3.60	1.50
1043	400	1	3⅓ lbs.	25	3.60	1.50
1044	450	1	4¼ lbs.	10	5.50	2.00
1045	500	1	4¼ lbs.	10	5.50	2.00
1046	550	1	4¼ lbs.	10	5.50	2.00
1047	600	1	4¼ lbs.	10	5.50	2.00
1048	650	1	5¼ lbs.	10	12.00	4.00
1049	700	1	5¼ lbs.	10	12.00	4.00
1050	750	1	5¼ lbs.	10	12.00	4.00
1051	800	1	5¼ lbs.	10	12.00	4.00
1052	850	1	5½ lbs.	10	15.00	5.00
1053	900	1	5½ lbs.	10	15.00	5.00
1054	950	1	5½ lbs.	10	15.00	5.00
1055	1000	1	5½ lbs.	10	15.00	5.00

NON-ARCING ENCLOSED FUSES

Union—600 Volts

3 to 60 Amperes.

Nos.	Amp.	Carton	Wt. per Cart.	Std. Pkg.	Each	Refilling Each
3003	3	10	1⅓ lbs.	100	$0.40	$.....
3004	4	10	1⅓ lbs.	100	.40	.....
3005	5	10	1⅓ lbs.	100	.40	.....
3006	6	10	1⅓ lbs.	100	.40	.....
3007	7	10	1⅓ lbs.	100	.40	.....
3008	8	10	1⅓ lbs.	100	.40	.....
3009	9	10	1⅓ lbs.	100	.40	.....
3010	10	10	1⅓ lbs.	100	.40	.....
3011	12	10	1⅓ lbs.	100	.40	.....
3012	15	10	1⅓ lbs.	100	.40	.....
3013	20	10	1⅓ lbs.	100	.40	.....
3014	25	10	1⅓ lbs.	100	.40	.....
3015	30	10	1⅓ lbs.	100	.40	.....
3016	35	10	2⅜ lbs.	100	.60	.....
3017	40	10	2⅜ lbs.	100	.60	.....
3018	45	10	2⅜ lbs.	100	.60	.....
3019	50	10	2⅜ lbs.	100	.60	.....
3020	55	10	2⅜ lbs.	100	.60	.....
3021	60	10	2⅜ lbs.	100	.60	.....

61 to 1,000 Amperes.

3022	65	2	2½ lbs.	50	$1.50	$0.80
3023	70	2	2½ lbs.	50	1.50	.80
3024	75	2	2½ lbs.	50	1.50	.80
3025	80	2	2½ lbs.	50	1.50	.80
3026	85	2	2½ lbs.	50	1.50	.80
3027	90	2	2½ lbs.	50	1.50	.80
3028	95	2	2½ lbs.	50	1.50	.80
3029	100	2	2½ lbs.	50	1.50	.80
3030	110	1	2⅛ lbs.	25	2.50	1.20
3031	120	1	2⅛ lbs.	25	2.50	1.20
3032	125	1	2⅛ lbs.	25	2.50	1.20
3033	150	1	2⅛ lbs.	25	2.50	1.20
3034	175	1	2⅛ lbs.	25	2.50	1.20
3035	200	1	2⅛ lbs.	25	2.50	1.20
3036	225	1	2⅔ lbs.	25	5.50	2.00
3037	250	1	2⅔ lbs.	25	5.50	2.00
3038	275	1	2⅔ lbs.	25	5.50	2.00
3039	300	1	2⅔ lbs.	25	5.50	2.00
3040	325	1	2⅔ lbs.	25	5.50	2.00
3041	350	1	2⅔ lbs.	25	5.50	2.00
3042	375	1	2⅔ lbs.	25	5.50	2.00
3043	400	1	2⅔ lbs.	25	5.50	2.00
3044	450	1	4⅞ lbs.	10	8.00	3.00
3045	500	1	4⅞ lbs.	10	8.00	3.00
3046	550	1	4⅞ lbs.	10	8.00	3.00
3047	600	1	4⅞ lbs.	10	8.00	3.00
3048	650	1	5½ lbs.	10	15.00	5.00
3049	700	1	5½ lbs.	10	15.00	5.00
3050	750	1	5½ lbs.	10	15.00	5.00
3051	800	1	5½ lbs.	10	15.00	5.00
3052	850	1	7¼ lbs.	10	18.00	6.00
3053	900	1	7¼ lbs.	10	18.00	6.00
3054	950	1	7¼ lbs.	10	18.00	6.00
3055	1000	1	7¼ lbs.	10	18.00	6.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard

PLUG FUSES AND RENEWAL LINKS

Fuse Complete.

Renewal Link.

125 Volts—3 to 30 Amperes.

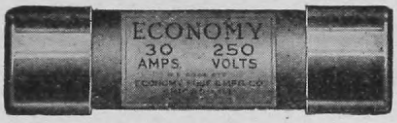
Fuse Base.

Plugs

Nos.	Amp.	Volts	Carton	Std. Pkg.	Wt.	Each	Nos.	Amp.	Volts	Carton	Std. Pkg.	Wt.	Each
PF368	3	125	20	100	14 lbs.	$0.50	**PR6S03**	3	125	20	100	2 oz.	$0.02
PF468	4	125	20	100	14 lbs.	.50	**PR6S04**	4	125	20	100	2 oz.	.02
PF568	5	125	20	100	14 lbs.	.50	**PR6S05**	5	125	20	100	2 oz.	.02
PF668	6	125	20	100	14 lbs.	.50	**PR6S06**	6	125	20	100	2 oz.	.02
PF868	8	125	20	100	14 lbs.	.50	**PR6S08**	8	125	20	100	2 oz.	.02
PF1068	10	125	20	100	14 lbs.	.50	**PR6S10**	10	125	20	100	2 oz.	.02
PF1268	12	125	20	100	14 lbs.	.50	**PR6S12**	12	125	20	100	2 oz.	.02
PF1568	15	125	20	100	14 lbs.	.50	**PR6S15**	15	125	20	100	2 oz.	.02
PF2068	20	125	20	100	14 lbs.	.50	**PR6S20**	20	125	20	100	2 oz.	.02
PF2568	25	125	20	100	14 lbs.	.50	**PR6S25**	25	125	20	100	2 oz.	.02
PF3068	30	125	20	100	14 lbs.	.50	**PR6S30**	30	125	20	100	2 oz.	.02

FERRULE TYPE FUSES

Economy. 250 Volts.



3—60 Amperes.

FERRULE TYPE RENEWAL LINKS

Economy. 250 Volts.

3—60 Amperes.

Nos.	Amp.	Carton	Wt. per Cart.	Std. Pkg.	Each	Nos.	Amp.	Carton	Wt. per Cart.	Std. Pkg.	Each
F 325	3	20	1 lb.	100	$0.50	**R203**	3	20	3/5 oz.	100	$0.03
F 425	4	20	1 lb.	100	.50	**R204**	4	20	3/5 oz.	100	.03
F 525	5	20	1 lb.	100	.50	**R205**	5	20	3/5 oz.	100	.03
F 625	6	20	1 lb.	100	.50	**R206**	6	20	3/5 oz.	100	.03
F 825	8	20	1 lb.	100	.50	**R208**	8	20	3/5 oz.	100	.03
F1025	10	20	1 lb.	100	.50	**R210**	10	20	3/5 oz.	100	.03
F1225	12	20	1 lb.	100	.50	**R212**	12	20	3/5 oz.	100	.03
F1525	15	20	1 lb.	100	.50	**R215**	15	20	3/5 oz.	100	.03
F2025	20	20	1 lb.	100	.50	**R220**	20	20	3/5 oz.	100	.03
F2525	25	20	1 lb.	100	.50	**R225**	25	25	3/5 oz.	100	.03
F3025	30	20	1 lb.	100	.50	**R230**	30	30	3/5 oz.	100	.03
F3525	35	20	2¾ lbs.	100	1.00	**R235**	35	35	2 oz.	100	.05
F4025	40	20	2¾ lbs.	100	1.00	**R240**	40	40	2 oz.	100	.05
F4525	45	20	2¾ lbs.	100	1.00	**R245**	45	45	2 oz.	100	.05
F5025	50	20	2¾ lbs.	100	1.00	**R250**	50	50	2 oz.	100	.05
F5525	55	20	2¾ lbs.	100	1.00	**R255**	55	55	2 oz.	100	.05
F6025	60	20	2¾ lbs.	100	1.00	**R260**	60	60	2 oz.	100	.05

KNIFE BLADE TYPE FUSES

Economy. 250 Volts.

KNIFE BLADE TYPE RENEWAL LINKS

Economy. 250 Volts.

			61-100 Amperes						61-100 Amperes		
F6525	65	10	3½ lbs.	50	2.00	**R265**	65	10	1¼ oz.	50	.10
F7025	70	10	3½ lbs.	50	2.00	**R270**	70	10	1¼ oz.	50	.10
F7525	75	10	3½ lbs.	50	2.00	**R275**	75	10	1¼ oz.	50	.10
F8025	80	10	3½ lbs.	50	2.00	**R280**	80	10	1¼ oz.	50	.10
F8525	85	10	3½ lbs.	50	2.00	**R285**	85	10	1¼ oz.	50	.10
F9025	90	10	3½ lbs.	50	2.00	**R290**	90	10	1¼ oz.	50	.10
F9525	95	10	3½ lbs.	50	2.00	**R295**	95	10	1¼ oz.	50	.10
F10025	100	10	3½ lbs.	50	2.00	**R2100**	100	10	1¼ oz.	50	.10
			101-200 Amperes						101-200 Amperes		
F11025	110	5	4½ lbs.	25	4.00	**R2110**	110	5	1½ oz.	25	.15
F12025	120	5	4½ lbs.	25	4.00	**R2120**	120	5	1½ oz.	25	.15
F12525	125	5	4½ lbs.	25	4.00	**R2125**	125	5	1½ oz.	25	.15
F15025	150	5	4½ lbs.	25	4.00	**R2150**	150	5	1½ oz.	25	.15
F17525	175	5	4½ lbs.	25	4.00	**R2175**	175	5	1½ oz.	25	.15
F20025	200	5	4½ lbs.	25	4.00	**R2200**	200	5	1½ oz.	25	.15
			201-400 Amperes						201-400 Amperes		
F22525	225	5	9¾ lbs.	25	7.50	**R2225**	225	5	3 oz.	25	.30
F25025	250	5	9¾ lbs.	25	7.50	**R2250**	250	5	3 oz.	25	.30
F27525	275	5	9¾ lbs.	25	7.50	**R2275**	275	5	3 oz.	25	.30
F30025	300	5	9¾ lbs	25	7.50	**R2300**	300	5	3 oz.	25	.30
F32525	325	5	9¾ lbs.	25	7.50	**R2325**	325	5	3 oz.	25	.30
F35025	350	5	9¾ lbs.	25	7.50	**R2350**	350	5	3 oz.	25	.30
F37525	375	5	9¾ lbs.	25	7.50	**R2375**	375	5	3 oz.	25	.30
F40025	400	5	9¾ lbs.	25	7.50	**R2400**	400	5	3 oz.	25	.30
			401-600 Amperes						401-600 Amperes		
F45025	450	2	6 lbs.	10	11.00	**R2450**	450	2	2¼ oz.	10	.60
F50025	500	2	6 lbs.	10	11.00	**R2500**	500	2	2¼ oz.	10	.60
F55025	550	2	6 lbs.	10	11.00	**R2550**	550	2	2¼ oz.	10	.60
F60025	600	2	6 lbs.	10	11.00	**R2600**	600	2	2¼ oz.	10	.60

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard

FERRULE TYPE FUSES

Economy, 600 Volts.

3-60 Amperes

Nos.	Amp.	Carton	Weight per Carton	Std. Pkg.	Each
F 305	3	20	3¼ lbs.	100	$1.10
F 405	4	20	3¼ lbs.	100	1.10
F 505	5	20	3¼ lbs.	100	1.10
F 605	6	20	3¼ lbs.	100	1.10
F 805	8	20	3¼ lbs.	100	1.10
F1005	10	20	3¼ lbs.	100	1.10
F1205	12	20	3¼ lbs.	100	1.10
F1505	15	20	3¼ lbs.	100	1.10
F2005	20	20	3¼ lbs.	100	1.10
F2505	25	20	3¼ lbs.	100	1.10
F3005	30	20	3¼ lbs.	100	1.10
F3505	35	20	6 lbs.	100	1.25
F4005	40	20	6 lbs.	100	1.25
F4505	45	20	6 lbs.	100	1.25
F5005	50	20	6 lbs.	100	1.25
F5505	55	20	6 lbs.	100	1.25
F6005	60	20	6 lbs.	100	1.25

FERRULE TYPE RENEWAL LINKS

Economy, 600 Volts.

3-60 Amperes

Nos.	Amp.	Carton	Weight per Carton	Std. Pkg.	Each
R603	3	20	2 oz.	100	$0.05
R604	4	20	2 oz.	100	.05
R605	5	20	2 oz.	100	.05
R606	6	20	2 oz.	100	.05
R608	8	20	2 oz.	100	.05
R610	10	20	2 oz.	100	.05
R612	12	20	2 oz.	100	.05
R615	15	20	2 oz.	100	.05
R620	20	20	2 oz.	100	.05
R625	25	20	2 oz.	100	.05
R630	30	20	2 oz.	100	.05
R635	35	20	4 oz.	100	.06
R640	40	20	4 oz.	100	.06
R645	45	20	4 oz.	100	.06
R650	50	20	4 oz.	100	.06
R655	55	20	4 oz.	100	.06
R660	60	20	4 oz.	100	.06

KNIFE BLADE TYPE FUSES

Economy, 600 Volts.

61-100 Amperes					
F6505	65	10	6 lbs.	50	$3.00
F7005	70	10	6 lbs.	50	3.00
F7505	75	10	6 lbs.	50	3.00
F8005	80	10	6 lbs.	50	3.00
F8505	85	10	6 lbs.	50	3.00
F9005	90	10	6 lbs.	50	3.00
F9505	95	10	6 lbs.	50	3.00
F10005	100	10	6 lbs.	50	3.00
101-200 Amperes					
F11005	110	5	7 lbs.	25	$5.00
F12005	120	5	7 lbs.	25	5.00
F12505	125	5	7 lbs.	25	5.00
F15005	150	5	7 lbs.	25	5.00
F17005	175	5	7 lbs.	25	5.00
F20005	200	5	7 lbs.	25	5.00
201-400 Amperes					
F22505	225	5	15 lbs.	25	$11.00
F25005	250	5	15 lbs.	25	11.00
F27505	275	5	15 lbs.	25	11.00
F30005	300	5	15 lbs.	25	11.00
F32505	325	5	15 lbs.	25	11.00
F35005	350	5	15 lbs.	25	11.00
F37505	375	5	15 lbs.	25	11.00
F40005	400	5	15 lbs.	25	11.00
401-600 Amperes					
F45005	450	2	10 lbs.	10	$16.00
F50005	500	2	10 lbs.	10	16.00
F55005	550	2	10 lbs.	10	16.00
F60005	600	2	10 lbs.	10	16.00

KNIFE BLADE TYPE RENEWAL LINKS

Economy, 600 Volts.

61-100 Amperes					
R665	65	10	2 oz.	50	$0.10
R670	70	10	2 oz.	50	.10
R675	75	10	2 oz.	50	.10
R680	80	10	2 oz.	50	.10
R685	85	10	2 oz.	50	.10
R690	90	10	2 oz.	50	.10
R695	95	10	2 oz.	50	.10
R6100	100	10	2 oz.	50	.10
101-200 Amperes					
R6110	110	5	2½ oz.	25	$0.15
R6120	120	5	2½ oz.	25	.15
R6125	125	5	2½ oz.	25	.15
R6150	150	5	2½ oz.	25	.15
R6175	175	5	2½ oz.	25	.15
R6200	200	5	2½ oz.	25	.15
201-400 Amperes					
R6225	225	5	5 oz.	25	$0.30
R6250	250	5	5 oz.	25	.30
R6275	275	5	5 oz.	25	.30
R6300	300	5	5 oz.	25	.30
R6325	325	5	5 oz.	25	.30
R6350	350	5	5 oz.	25	.30
R6375	375	5	5 oz.	25	.30
R6400	400	5	5 oz.	25	.30
401-600 Amperes					
R6450	450	2	4 oz.	10	$0.60
R6500	500	2	4 oz.	10	.60
R6550	550	2	4 oz.	10	.60
R6600	600	2	4 oz.	10	.60

Note.—1. Order must specify catalogue number, ampere capacity and voltage. 2. All Fuses are assembled and ready for service. 3. Prompt shipments of all catalogued material from stock. **4. Always order renewal links in standard package quantity only.** 5. All renewal links are plainly stamped with the carrying capacity in amperes and also voltage. 6 Different capacity Fuses in one size shell may be combined to make a Standard Package quantity. Example: 40 Cat. No. F1025 (10 Amp. 250 Volt); 20 Cat. No. F2025 (20 Amp. 250 Volt); 40 Cat. No. F3025 (30 Amp. 250 Volt), may constitute a Standard Package. 7. All Fuses are packed in cartons containing ⅛ of Standard Package. **All renewal links boxed in Standard Package only.** 8. Listed Ferrule Type Fuses can be furnished in special lengths at 10% per inch additional to list prices. 9. This price list supersedes all former editions. 10. Quotations and prices are for immediate acceptance only, and are subject to change without notice.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

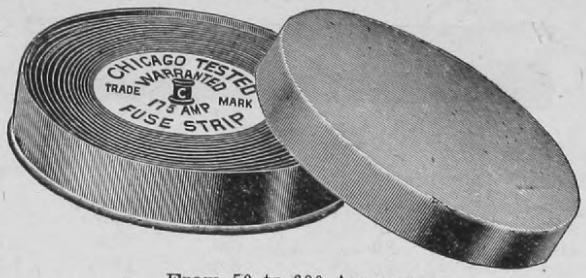
UNION TESTED FUSE WIRE

From ½ to 100 Amperes.

Amp.	Feet per lb.	Spool per Pkg.	Per Pound.
½	2616	2-4 oz.	$2.75
1	1021	2-8 oz.	1.10
3	273	2-8 oz.	1.00
5	172	1-1 lb.	1.00
6	148	1-1 lb.	.85
10	87	1-1 lb.	.80
15	57	1-1 lb.	.75
20	38	1-1 lb.	.75
25	29	1-1 lb.	.75
30	24	1-1 lb.	.75
35	20	1-1 lb.	.75
40	17	1-1 lb.	.75
45	15	1-1 lb.	.75
50	13	1-1 lb.	.75
60	10	1-5 lb.	.70
70	9	1-5 lb.	.70
75	8	1-5 lb.	.70
90	6	1-5 lb.	.70
100	5	1-5 lb.	.70

Packed—One Spool in a Sealed Can.

UNION TESTED FUSE STRIP



From 50 to 600 Amperes.

Amp.	Ounces per ft.	Per Pound	Per Foot
50	1	$0.60	$0.08
60	1⅛	.60	.09
75	1½	.60	.10
100	2⅛	.50	.18
125	2¾	.50	.20
150	3⅜	.50	.25
175	3⅞	.50	.25
200	4½	.50	.30
250	5¾	.50	.40
300	7	.50	.60
350	8¼	.50	.70
400	9⅝	.50	.80
450	11⅛	.50	.90
500	12⅜	.50	1.00
600	16	.50	1.10

Packed—5 and 10 Pounds in Tin Boxes.

Note.—Larger sizes can be furnished promptly but are not regularly carried in stock.

RUBBER COVERED WIRES

Solid Wire, Single Braid.

Solid Wire, Duplex, Single Braid, Jacketed.

Stranded Double Braid.

Rubber Covered Wire as used for general purposes must possess three essentials—the conductor, the wall of rubber insulation and the braid, tape and braid or other form of protection.

The conductor consists of a uniformly soft annealed commercially pure copper wire. It may be used in the solid form up to size 1-0 American Wire Gauge (B. & S.) or in special cases even to 4-0, or in the stranded form. All conductors are thoroughly and evenly coated with tin to protect the copper from the rubber insulation.

SOLID SINGLE — Per 1000 Feet

B. & S. Ga.	2	4	6	8	10	12	14	16	18
Single Braid	$								
Double Braid									

SOLID DUPLEX

B. & S. Ga.	6	8	10	12	14
Single Braid, Jacketed	$				

STRAND SINGLE

B. & S. Ga.	0000	000	00	0	1	2	4	6	8	10	12	14	16	18
Single Braid	$													
Double Braid														

STRAND DUPLEX

B. & S. Ga.	6	8	10	12	14
Single Braid, Jacketed—Per 1,000 Ft.	$				

LIGHT INSULATION FIXTURE WIRES

Light Insulation Fixture Wire consists of solid tinned annealed copper wire of highest conductivity, insulated with 1/64-inch vulcanized rubber, covered with single braid of cotton, saturated in black weatherproof compound and smoothly polished. Used only in arms of fixtures not exceeding 24 inches in length.

B. & S. Ga.	14	16	18	20
Solid Wire—Per 1,000 Ft.	$			

Note.—No. 18 is the only size of Light Insulation Fixture Wire approved by the National Board of Fire Underwriters and carries the stamp of the Underwriters' Laboratories.

Note.—Prices on Rubber Covered Wires quoted on application.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

LAMP CORD

Type C.

Incandescent Lamp Cord is used in short lengths for exposed wiring in offices and residences to connect the concealed wiring with drop lights, brackets and portables. It is also used for bell and annunciator wiring, and for other purposes where a short flexible connecting conductor having an ornamental insulation would be desirable.

The conductor consists of a number of small untinned annealed copper wires, each No. 30 American Wire Gage (B. & S.), having a diameter of .01 inch, twisted into a cable of the required carrying capacity. This conductor is then covered with a tight, close wind of fine cotton, after which it is insulated with seamless rubber and then covered with an ornamental braid of silk or cotton. Two of these finished conductors are then twisted about each other, or in some cases they are laid parallel and braided over all with silk or cotton, in each case forming the two branches of a circuit.

All sizes put up in coils of 250 feet each. Sizes 16 and 18 have the largest sale, are put up in packages containing 1000 feet and 3000 feet each, as desired. Coils will be packed in specially prepared paper cartons, upon request.

A combination of green and yellow is the color usually furnished for Cotton Covered Lamp Cords; Portable Cords generally furnished with Dry Black Cotton Braid. Other colors to order.

Type C

Type C. For Pendant Lamps. In this class is included all flexible cord which under usual conditions, hangs freely in the air and not likely to be moved sufficiently to come in contact with surrounding objects.

Pendant lamps provided with long cords, so that they can be carried about or hung over nails or on machinery, etc., are not included in this class, even though they are usually allowed to hang freely.

Each conductor must have an approved braided covering so put on and sealed in place that when cut it will not fray out. This type is insulated with 3/64-inch rubber on sizes 8 to 14 and 1/32 inch on 16 to 22.

B. & S. Ga.	12	14	16	18
Cotton Covered—Per 1,000 Feet	$....	....	....	....
Silk Covered—Per 1,000 Feet	....	....	....	....

Type P

Type P. For Portables. Flexible cord for portable use, except in offices, dwellings or similar places where cord is not liable to rough usage and where good appearance is an essential feature, must meet all the requirements for flexible cord for pendants, and in addition must have a tough braided cover over the whole. There must also be an extra layer of rubber between the outer cover and the flexible cord. All sizes (except No. 14 and larger) are insulated with 1/32 inch rubber; No. 14 and larger have 3/64 inch rubber.

B. & S. Ga.	12	14	16	18
Cotton Covered—Per 1,000 Feet	$....	....	....	....
Silk Covered—Per 1,000 Feet	....	....	....	....

Type P. W. P.

Type P. W. P. For Portables in Damp Places. (Same as **TYPE P** except must be furnished with a saturated braid.) For use in damp places, the insulation must be 3/64 inch thick on sizes No. 14 and larger, and 1/32 inch on sizes No. 16 and smaller, and the cord must have an outer covering saturated with a moisture-proof preservative compound thoroughly slicked down, or must have a filler of approved material instead of an extra layer of rubber, and have two outer braids saturated with a moisture-proof compound with an exterior surface thoroughly slicked down.

B. & S. Ga.	12	14	16	18
Slicked Finish—Only. Per 1,000 Feet	$....	....	....	....

Type P. S.

Type P. S. For Portables in Dwellings, Offices, Etc. In offices, dwellings or similar places where cords are not liable to rough usage and where good appearance is essential, flexible cord for portable use must meet all of the requirements for flexible or for pendant lamps, both as to construction and thickness of insulation, and in addition must have a tough-braided cover over the whole; or providing there is an extra layer of rubber between the flexible cord and the outer cover, the insulation proper on each stranded conductor of cord may be 1/64 inch in thickness instead of as required for pendant cords.

Note.—This cord has only 1/64 inch rubber on each conductor, sizes 16 and 18, approved by underwriters. The supplementary insulation is same as on other portable cords.

B. & S. Ga.	12	14	16	18
Cotton Covered—Per 1,000 Feet	$....	....	....	....
Silk Covered—Per 1,000 Feet	....	....	....	....

Type P. O.

Type P. O. Parallel Lamp Cord. Each conductor Type C, two such conductors laid parallel and covered over all with one silk or cotton braid.

B. & S. Ga.	12	14	16	18
Cotton Covered—Per 1,000 Feet	$....	....	....	....
Silk Covered—Per 1,000 Feet	....	....	....	....

BREWERY CORD

Two Stranded Conductors, N. E. C. S. Rubber Insulated, Each Braided, Weatherproofed and Twisted Together.

B. & S. Ga.	12	14	16	18
Per 1,000 Feet	$....	....	....	....

PACKING HOUSE CORD

Two Stranded Conductors, N. E. C. S. Rubber Insulated, Braided, Twisted Together with Jute Filler and finished with Two Weatherproof Braids.

B. & S. Ga.	12	14	16	18
Per 1,000 Feet	$....	....	....	....

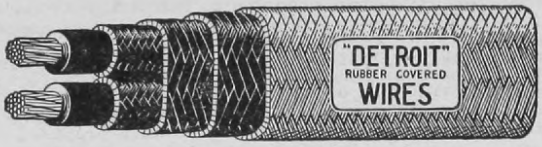
Note.—Entire Page—Prices quoted on application.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

DUPLEX MINING MACHINE CABLES



Mining Machine Cables consist of two flexible strands of tinned annealed copper of highest conductivity, each of which is insulated with code thickness of vulcanized rubber and protected with a braid of cotton saturated with weatherproof compound. The two finished cables are then placed side by side and covered with two or three strong cotton braids, thoroughly saturated in weatherproof compound or the outer covering may consist of our **tubular weave** loom which increases the life and abrasive qualities of the covered cable. Hard spun cotton cord braids will be substituted for the regular cotton braid at a slightly advanced price, when same is required for extra hard usage.

	Double Braid.									Triple Braid.								
B. & S. Ga.	0	1	2	3	4	5	6	8		B. & S. Ga.	0	1	2	3	4	5	6	8
Per 1,000 Feet ....$	..	..	..	..	..	..	..	..		Per 1,000 Feet ....$	..	..	..	..	..	..	..	..

Prices quoted on application.

CONCENTRIC MINING MACHINE CABLES

Style A. The inner conductor is made up of tinned annealed copper wires, stranded into a flexible cable and insulated with code thickness of high grade vulcanized rubber. This can be left plain, taped or braided as required, over which is stranded the outer conductor, consisting of a number of tinned annealed copper wires, equal in area to the central conductor. These wires are insulated with code thickness of high grade vulcanized rubber and protected with braid or with tape and braid of strong cotton thoroughly saturated in weatherproof compound, or the outer covering may consist of our **tubular weave loom** which increases the life and abrasive qualities of the covered cable. Hard spun cotton cord braids will be substituted for the regular cotton braid at a slightly advanced price, when same is required for extra hard usage.

Style B. Made the same as Style A without the outside belt of rubber.

	Style A.									Style B.								
B. & S. Ga.	0	1	2	3	4	5	6	8		B. & S. Ga.	0	1	2	3	4	5	6	8
Per 1,000 Feet ....$	..	..	..	..	..	..	..	..		Per 1,000 Feet ....$	..	..	..	..	..	..	..	..

Prices quoted on application.

Note.—Concentric mining cable is sometimes used as a substitute for the duplex parallel mining cables. Owing to the greater difficulties in making connections to the terminal lugs it is not as desirable. On the other hand, under certain conditions, the cylindrical form of conductor has advantages over the duplex parallel oval form.

SLOW BURNING WIRES AND CABLES

This, as its name implies, has an insulation that will not carry flame. It is especially useful in hot dry places where ordinary insulations would perish, and where wires are brought together, as on the back of a large switchboard, or in a wire tower, where the accumulation of rubber or weatherproof insulations would result in an objectionably large mass of highly inflammable material.

This wire is made in strict accordance with the requirements of the National Board of Fire Underwriters in all respects. The insulation is somewhat similar to that on the old so-called "Underwriters" wire. Each insulating braid is completely saturated with our white slow burning compound, and the outside is thoroughly slicked down and given a hard, smooth, white surface.

Prices quoted on application.

WEATHERPROOF WIRES AND CABLES

There is a large demand for electrical wires and cables having a moderate degree of insulation and are less expensive than rubber insulated conductors. For outdoor service double and triple braid Weatherproof wire meets these requirements in every particular, while for indoor purposes a superior grade of Slow Burning wire is used. These wires and cables are made in strict accordance with all the requirements of the National Board of Fire Underwriters, the sizes varying from No. 20 American Wire Gage (B. & S.) to the largest feeder cables used.

Prices quoted on application.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

FLEXSTEEL ARMORED LAMP CORD

No. 18F—Approximate feet in a coil, 150-250.....Per 1000 Feet, $ 65.00
No. 16F—Approximate feet in a coil, 150-250.....Per 1000 Feet, 80.00
No. 14F—Approximate feet in a coil, 150-250.....Per 1000 Feet, 115.00

FLEXSTEEL REINFORCED ARMORED LAMP CORD

No. 18FM—Approximate feet in a coil, 150-250.....Per 1000 Feet, $111.00
No. 16FM—Approximate feet in a coil, 150-250.....Per 1000 Feet, 125.00
No. 14FM—Approximate feet in a coil, 150-250.....Per 1000 Feet, 175.00

"FLEXSTEEL" ARMORED CONDUCTORS

Size B. & S. Gauge	Wt. in lbs. per 1000 Ft.	Approx. Ft, per Coil	List Price per 1000 Ft.	Flexsteel Fittings Adaptable. Box Connectors	45° Elbow Connectors	90° Elbow Connectors	Panel Box Connectors
Single Conductor—Type S.							
(Solid)							
No. 14-S	190	250	$ 61.00				
12-S	200	250	71.00				
10-S	220	250	90.00	Nos.	Nos.	Nos.	Nos.
8-S	270	250	106.00	2163	2208	2210	2200
6-S	500	250	145.00	2163	2208	2210	2200
(Stranded)							
No. 10-S	220	250	95.00				
8-S	270	250	115.00	2163	2208	2210	2200
6-S	500	250	160.00	2163	2208	2210	2200
4-S	570	250	205.00	2163	2208	2210	2200
2-S	690	200	266.00	2164	2209	2211	2201
1-S	960	100	315.00				
Twin Conductor—Type FS.							
(Solid)							
No. 14-FS	400	250	$104.00	2163	2208	2210	2200
12-FS	452	250	135.00	2163	2208	2210	2200
10-FS	510	200	185.00	2163	2208	2210	2200
(Stranded)							
8-FS	780	150	235.00	2164	2209	2211	2201
6-FS	940	100	370.00	2166	2209	2211	2202
4-FS	1210	100	575.00				
Three Conductor—Type FS3							
(Solid)							
No. 14-FS3	458	250	$138.00	2163	2208	2210	2200
12-FS3	505	250	170.00	2164	2209	2211	2201
10-FS3	600	200	235.00	2164	2209	2211	2201
(Stranded)							
8-FS3	862	150	325.00	2164	2209	2211	2201
6-FS3	1160	100	472.00	2166	2209	2211	2202
LEAD COVERED.							
Single Conductor—Type SL.							
(Stranded)							
No. 10-SL	460	250	$120.00				
8-SL	520	200	145.00	2163	2208	2210	2200
6-SL	790	200	196.00	2163	2208	2210	2200
4-SL	880	150	249.00	2164	2209	2211	2201
2-SL	1180	150	319.00	2164	2209	2211	2201
1-SL	1600	100	388.00	2166	2209	2211	2202
Twin Conductor—Type FSL.							
(Solid)							
No. 14-FSL	647	100-200	$164.00	2164	2209	2211	2201
12-FSL	693	100-200	211.00	2164	2209	2211	2201
10-FSL	900	100-150	255.00	2164	2209	2211	2201
(Stranded)							
8-FSL	1210	100-150	345.00	2166	2209	2211	2202
6-FSL	1900	100	625.00				
Three Conductor—Type FSL3.							
(Solid)							
No. 14-FSL3	740	100-150	$222.00	2164	2209	2211	2201
12-FSL3	906	100-150	290.00	2164	2209	2211	2201
10-FSL3	1040	100-150	325.00	2164	2209	2211	2201
(Stranded)							
8-FSL3	1410	100-150	450.00	2166	2209	2211	2202

Note.—Fittings indicated as being adaptable for various types armored conductors, will be found to be of the proper sizes in most cases. There is some slight variance in the outside diameters of armored conductors, however, and we cannot guarantee the accuracy of the fittings data shown above.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

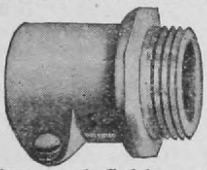
ELECTRICAL SUPPLIES

National Electrical Code Standard.

FLEXSTEEL CONDUIT

Flexsteel Conduit				Flexsteel Fittings Adaptable					
Inch	Wt. per 1000 ft	Approx. Ft. in Coil	Per 100 Ft.	Box Connectors	45° Elbow Connectors	90° Elbow Connectors	Panel Box Connectors	Couplings	Rigid Conduit Cplgs.
5/16	203 lbs.	250	$5.00					2182	
3/8	350 lbs.	250	7.50	2163	2208	2210	2200	2183	
1/2	590 lbs.	100	10.00	2166	2209	2211	2202	2184	2190
3/4	820 lbs.	50	13.00	2167			2203	2185	2191
1	1260 lbs.	50	21.00	2169			2204	2186	2192
1 1/4	1680 lbs.	50	26.00	2170			2205	2187	2193
1 1/2	2000 lbs.	25-50	35.00	2171			2206	2188	2194
2	2335 lbs.	25-50	45.00	2172			2207	2189	2195
2 1/2	3000 lbs.	25-50	52.00						

FLEXSTEEL BOX CONNECTORS

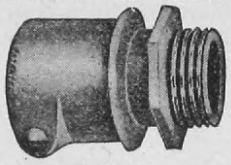


For Armored Cable and Conduit

Nos.	For Conduit	Unit Pkg.	Std. Pkg.	Wt. lbs.	Per 100
2163	3/8 in.	50	100	15	$ 7.50
2164	*	25	100	18	9.00
2166	1/2 in.	25	100	20	9.00
2167	3/4 in.	25	100	30	12.00
2169	1 in.	10	50	25	18.00
2170	1 1/4 in.	10	50	35	25.00
2171	1 1/2 in.	10	50	37	35.00
2172	2 in.	10	20	20	55.00

*No. 2164 fits 10/3FS, 12/3FSL, 4SL, 2SL, 8FS, 10FSL, 2S Conduit.

FLEXSTEEL PANEL CONNECTORS



For Armored Cable and Conduit

Nos.	For Conduit	Unit Pkg.	Std. Pkg.	Wt. lbs.	Per 100
2200	3/8 in.	20	100	17	$13.00
2201	* in.	20	100	20	18.00
2202	1/2 in.	20	100	30	18.00
2203	3/4 in.	20	100	45	25.00
2204	1 in.	5	20	12	30.00
2205	1 1/4 in.	5	20	17	40.00
2206	1 1/2 in.	5	20	22	50.00
2207	2 in.	5	20	27	70.00

*No. 2201 fits 10/3FS, 12/3FSL, 4SL, 10/3FSL, 2SL, 8FS, 10FSL, 2S Conduits.

ELBOW BOX CONNECTORS

For Armored Cable and Conduit

45°

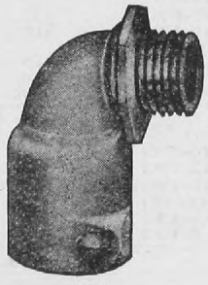
45° Elbows

Nos.	For Conduit	Unit Pkg.	Std. Pkg.	Wt. lbs.	Per 100
2208	3/8 in.	20	100	17	$12.00
2209	1/2 in.	20	100	18	15.00

90° Elbows

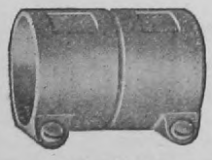
2210	3/8 in.	20	100	22	$16.00
2211	1/2 in.	20	100	22	20.00

Locknuts are included at above prices.

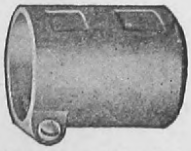


90°

CONDUIT COUPLINGS



Flexible



Rigid to Flexible

Nos.	For Conduit	Unit Pkg.	Std. Pkg.	Wt. lbs.	Per 100
2182	5/16 in.	25	50	5	$8.00
2183	3/8 in.	25	100	15	9.00
2184	1/2 in.	10	100	30	10.00
2185	3/4 in.	10	100	35	12.00
2186	1 in.	5	50	25	16.00
2187	1 1/4 in.	5	50	45	25.00
2188	1 1/2 in.	5	25	35	30.00
2189	2 in.	5	25	50	45.00

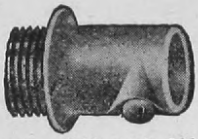
Nos.	For Conduit	Unit Pkg.	Std. Pkg.	Wt. lbs.	Per 100
2190	1/2 in.	10	100	22	$12.50
2191	3/4 in.	10	100	27	16.00
2192	1 in.	5	50	25	21.00
2193	1 1/4 in.	5	50	45	30.00
2194	1 1/2 in.	5	25	35	40.00
2195	2 in.	5	25	50	60.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

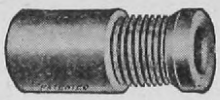
National Electrical Code Standard.

FLEXSTEEL LAMP CORD CONNECTORS



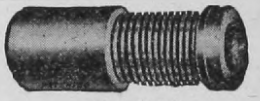
Nos. 2220 and 2226.

Nos. 2221 and 2222.



No. 2224.

No. 2220A.



No. 2225.

Nos.	Description.	Unit Pkg.	Std. Pkg.	Wt., Lbs.	Per 100
2220	⅜ in. Bushing. Size for No. 16 or 18 Armored Lamp Cord	50	200	15	$10.00
2221	⅛ in. Bushing. Size for No. 16 or 18 Armored Lamp Cord	50	200	15	10.00
2226	Connects 16 or 18 Cord to Outlet Boxes, with ½ in. Knockouts	50	200	25	7.50
2222	For 14 Armored or 16-18 Reinforced Cord. Has ⅜ in. Bushing.	25	100	18	10.00
2224	Brass Nipple and Cplg. for use with No. 2221 on Std. Rosettes	50	200	6	10.00
2220A	Hard Fibre Bushing for use with No. 2220 on Outlet Boxes	50	200	7	10.00
2225	Brass Nipple and Cplg. for use with No. 2221 on Deep Rosettes.....	50	200	10	10.00

FLEXTUBE NON-METALLIC FLEXIBLE CONDUIT

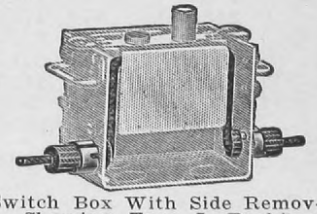
Double Compound Seamless Interwoven Flexible Conduit

Inside Diam.	7/32	¼	⅜	½	⅝	¾	1	1¼	1½	1¾	2	2¼
Feet in a Coil.....	250	250	250	200	200	150	100	100	Odd	Odd	Odd	Odd
Weight, Per 1,000 Feet, Lbs...	50	58	75	90	120	196	250	400	480	590	800	810
Per Foot	$0.05½	.06	.09	.12	.15	.18	.25	.33	.40	.47	.55	.65

"UNION" BUSHINGS FOR NON-METALLIC CONDUIT

Type L.

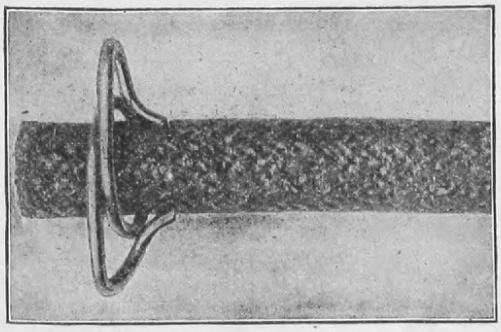
Slip easily into place without using a tool. Made from a single piece of metal—No half bushings to get lost—No screws—Yet fitting all sizes of loom adapted for use in the Standard ⅞ in. Knockout, namely ¼ and 5/16 in.

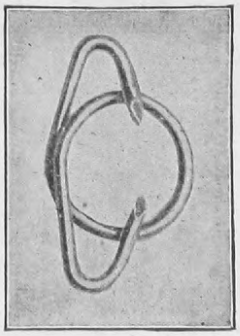


Switch Box With Side Removed, Showing Type L Bushings Inserted.

Type L—Union Bushings. 100 in a Unit Package.....Per 100, $3.00

SNOVER LOOM FASTENERS





Snover Loom Fasteners for Flexible Non-Metallic Conduit are approved by National Board of Fire Underwriters. They grip firmly and positively all sizes of flexible non-metallic conduit commonly called loom, whose nominal diameters do not exceed one-quarter inch.

Snover Loom Fasteners. Unit Pkg., 100; Std. Pkg., 1,000 .....Per 1,000, $10.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

RIGID STEEL CONDUIT

Economy Rigid Conduit is made from High Grade Mild Steel, pickled in acid, scoured inside and out and finished with two coats of first grade enamel baked.

Sherarduct Rigid Conduit is made from High Grade Mild Steel thoroughly scoured and annealed and finished under the famous Sherardizing process now employed by practically all manufacturers of materials which are subjected to severe corrosive attack.

ECONOMY AND SHERARDUCT CONDUIT

Weight and Dimensions are Nominal.

Inch	Diameter Exter.	Diameter Inter.	Thickness	Wt. per ft.	Threads per inch	Per Foot
¼	.540	.364	.088	.425	18	$0.08½
⅜	.675	.493	.091	.568	18	.08½
½	.840	.622	.109	.852	14	.08½
¾	1.050	.824	.113	1.134	14	.11½
1	1.315	1.094	.133	1.684	11½	.17
1¼	1.660	1.380	.140	2.281	11½	.23
1½	1.900	1.610	.145	2.731	11½	.27½
2	2.375	2.067	.154	3.678	11½	.37
2½	2.875	2.469	.203	5.819	8	.58½
3	3.500	3.068	.216	7.616	8	.76½
3½	4.000	3.548	.226	9.202	8	.92
4	4.500	4.026	.237	10.889	8	1.09
4½	5.000	4.506	.247	12.642	8	1.27
5	5.563	5.047	.258	14.810	8	1.48
6	6.625	6.065	.280	19.185	8	1.92

Conduits in 10-ft. lengths, threaded on both ends and with one coupling.

Economy—Conduit ..... Discount.....%

Sherarduct—Conduit ..... Discount..... ....%

ECONOMY AND SHERARDUCT CONDUIT FITTINGS

Couplings

Inch	Weight per 100	Each
¼	6.0	$0.05
⅜	9.5	.06
½	11.6	.07
¾	20.9	.10
1	34.3	.13
1¼	53.3	.17
1½	74.3	.21
2	120.8	.28
2½	172.0	.40
3	249.8	.60
3½	424.1	.80
4	474.1	1.00
4½	550.0	1.50
5	700.0	1.65
6	750.0	2.40

Elbows

Weight per 100	Radius inches	Offset inches	Each
42	4.25	7.50	$0.19
53	4.25	7.50	.19
75	4.25	7.37	.19
120	5.37	8.37	.25
200	5.75	9.50	.37
300	7.25	10.87	.45
427	8.25	12.62	.60
700	9.50	15.25	1.10
1300	10.50	17.37	1.80
1700	13.00	19.50	4.80
2300	15.00	21.25	10.60
2700	16.00	22.50	12.25
3100	18.00	24.37	18.55
5500	24.00	32.00	25.75
9000	30.00	39.75	32.00

Economy—Disct.....%. Sherardized—Disct.....%

Special Fittings, Per 100

Inch	½ in.	¾ in.	1 in.	1¼ in.	1½ in.
90° Outlet Elbows	$11.40	12.36	19.68	26.40	35.40
45° Outlet Elbows	9.08	15.70	18.60	28.80	42.00
Tees	14.64	16.80	19.68	28.80	36.00
Cast Iron Plugs.	4.80	6.00	6.60	8.40	10.80
Bushes	6.60	7.20	8.40	9.60	13.80
R. & L. Mal. Cplgs.	9.08	13.58	16.56	19.68	28.76
Reducers, Mal...	9.60	11.76	14.40	18.00	26.40
Unions, Mal....	43.20	51.00	57.60	83.76	100.80
Caps	5.76	9.08	13.20	15.00	20.40
Street Elbows ..	13.20	25.80	31.20	40.80	62.40
Inch.....	½-⅜	¾-½	1-¾	1¼-1	1½-1¼
S. Elbows Red..	21.00	23.40	28.80	37.20	60.00

Nipples for all sizes of Conduit, in lengths under 2 feet, quoted on request.

Economy—Disct.....%. Sherardized—Disct.....%

SHERARDIZED LOCKNUTS

Inch	Unit Pkg.	Std. Pkg.	Std. Pkg. Wt. lbs.	Per 100
¼	100	5000	50	$2.50
⅜	100	5000	60	2.50
½	100	5000	70	2.50
¾	100	5000	128	3.50
1	100	1000	40	6.00
1¼		500	40	10.00
1½		250	30	15.00
2		100	16	20.00
2½		100	20	30.00
3		100	30	50.00
3½		25	9	70.00
4		25	12	100.00
4½		20	15	140.00
5		20	18	160.00
6		15	28	200.00

SHERARDIZED BUSHINGS

Inch	Unit Pkg	Std. Pkg.	Std. Pkg. Wt. lbs.	Per 100
¼	100	1000	30	$6.00
⅜	100	1000	35	6.00
½	100	1000	45	6.00
¾	100	1000	60	8.00
1	100	1000	90	15.00
1¼		500	60	20.00
1½		200	30	25.00
2		100	20	40.00
2½		100	30	60.00
3		100	40	90.00
3½		25	14	200.00
4		25	20	300.00
4½		20	24	400.00
5		20	30	500.00
6		15	34	600.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

RIGID CONDUIT FITTINGS

Service Entrance Unilets

Side View, Top Part Removed

Without Covers.

Nos.	Size in.	Unit Pkg.	Std. Pkg.	Std. Pkg. Wt. lbs.	Each
10	½	1	100	125	$0.50
20	¾	1	100	144	.65
30	1	1	50	128	1.05
40	1¼	1	20	88	1.64
50	1½	1	10	44	1.77
60	2	1	5	33	3.40
70	2½	1	5	82	8.20
80	3	1	5	81	10.20
90	3½	1	5		18.10
100	4	1	5		23.10

Note.—For Covers see following page.

TYPE "SED" ENTRANCE FITTINGS

"SED" Fitting with 3 Wire Cover.

"SED" Fitting without Cover.

"SED" Cover.

Designed to meet demand for light, yet durable entrance fitting. The same parts are used for ½, ¾ and 1-inch fittings excepting the hubs, which are special for each size. The top cover and also porcelain covers are interchangeable on all sizes.

"SED" Fittings, Without Covers.

Size, inch	½	¾	1
Nos.	**1770**	**1771**	**1772**
Std. Pkg.	100	50	50
Std. Pkg., Wt., lbs.,	80	40	42
Each	$0.40	.55	.70

"SED" Covers.

Size, inch	½, ¾ & 1	½, ¾ & 1
Style Wires	2	3
Nos.	**1782**	**1783**
Std. Pkg.	100	100
Std. Pkg., Wt., lbs	10	10
Each	$0.10	.10

Finish—Black Enamel Finished Fittings shipped unless Sherardized are Specified.

Types "SEA," "SEB" and "SEC"

"SEA" Fitting with 3 Wire Cover

"SEB" Fitting with 3 Wire Cover.

"SEC" Fitting with 2 Wire Cover.

Types SEA and SEC for motor and inside installation. Type SEB is waterproof and may be used as a service entrance on horizontal conduit.

"SEA"

"SEB"

"SEC"

Covers

Type "SEA"—Without Covers.

Size, inch	½	¾
Nos.	**1700**	**1701**
Std. Pkg.	100	100
Std. Pkg., Wt., lbs.	34	38
Each	$0.15	.25

Type "SEB"—Without Covers.

Size, inch	½	¾
Nos.	**1710**	**1711**
Std. Pkg.	50	50
Std. Pkg., Wt., Lbs.	22	28
Each	$0.20	.35

Type "SEC"—With Covers.

Size, inch	½		¾		1	
Style Wires	2	3	2	3	2	3
Nos.	**1722**	**1723**	**1732**	**1733**	**1742**	**1743**
Std. Pkg.	100	100	100	100	50	50
Std. Pkg., Wt., lbs.	16	16	16	16	26	26
Each	$0.20	.20	.30	.30	.40	.40

Covers for "SEA," "SEB," and "SEC" Fittings.

Size, inch	½ & ¾	½ & ¾	1	1
Style Wires	2	3	2	3
Nos.	**1752**	**1753**	**1762**	**1763**
Std. Pkg.	100	100	50	50
Std. Pkg., Wt., lbs.	12	12	14	14
Each	$0.10	.10	.20	.20

Finish—Black Enamel Finished Fittings shipped unless Sherardized are Specified.

CORD ROSETTES

For Rectangular Steel Unilets.

Size of Unilet Body	½	¾	1
Nos.	**7655**	**7656**	**7657**
Std. Pkg.	200	100	100
Std. Pkg., Wt., lbs.	72	47	35
Each	$0.20	.25	.30

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

RECTANGULAR RECEPTACLES—FOR RECTANGULAR STEEL UNILETS

Nos. 7650 to 7652.

Nos. 7660 to 7662.

Nos. 7665 to 7667.

One-Piece Receptacles without Shade-Holder Groove

Unilet Body, in.,	½	¾	1
Nos.	**7650**	**7651**	**7652**
Std. Pkg.	200	100	50
Std. Pkg., Wt.	68	43	31
Each	$0.25	.30	.35

One-Piece Receptacles with Shade-Holder Groove

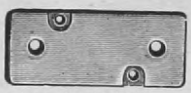
Unilet Body, in.,	½	¾	1
Nos.	**7660**	**7661**	**7662**
Std. Pkg.	200	100	50
Std. Pkg., Wt.	68	43	31
Each	$0.30	.35	.40

Hubbell Attachment Plug Receptacles

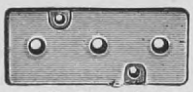
Unilet Body, in.,	½	¾	1
Nos.	**7665**	**7666**	**7667**
Std. Pkg.	100	100	50
Std. Pkg., Wt.	40	50	35
Each	$0.40	.45	.50

COVERS FOR RECTANGULAR STEEL UNILETS

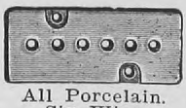
All Porcelain. One Wire.



All Porcelain. Two Wire.



All Porcelain. Three Wire.



All Porcelain. Six Wire.

Blank Metal.

Metal Nipple Cover.

Porcelain Nipple Cover.

Weatherproof Socket.

Style of Cover	Size of Cover	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.
	Std. Pkg. Asst.*	200	100	50	20	10	5	5	5	5	5
	Unit Package	10	5	5	1	1	1	1	1	1	1
Blank Metal	**Nos.**	**6000**	**6020**	**6100**	**6130**	**6200**	**6300**	**6320**	**6340**	**6360**	**6380**
	Each	$0.08	$0.11	$0.23	$0.32	$0.45	$0.56	$0.75	$0.75	$0.80	$0.80
All Porcelain — One Wire	**Nos.**	**6001**	**6021**	**6101**	**6131**	**6201**	**6301**	**6321**	**6341**	**6361**	**6381**
	Each	$0.10	$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Two Wire	**Nos.**	**6002**	**6022**	**6102**	**6132**	**6202**	**6302**	**6322**	**6342**	**6362**	**6382**
	Each	$0.10	$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Three Wire	**Nos.**	**6003**	**6023**	**6103**	**6133**	**6203**	**6303**	**6323**	**6343**	**6363**	**6383**
	Each	$0.10	$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Four Wire	**Nos.**	**6004**	**6024**	**6104**	**6134**	**6204**	**6304**	**6324**	**6344**	**6364**	**6384**
	Each	$0.10	$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Five Wire	**Nos.**		**6025**	**6105**	**6135**	**6205**	**6305**	**6325**	**6345**	**6365**	**6385**
	Each		$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Six Wire	**Nos.**		**6026**	**6106**	**6136**	**6206**	**6306**	**6326**	**6346**	**6366**	**6386**
	Each		$0.15	$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Seven Wire	**Nos.**			**6107**	**6137**	**6207**	**6307**	**6327**	**6347**	**6367**	**6387**
	Each			$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
All Porcelain — Eight Wire	**Nos.**			**6108**	**6138**	**6208**	**6308**	**6328**	**6348**	**6368**	**6388**
	Each			$0.25	$0.36	$0.48	$0.60	$0.80	$0.80	$0.90	$0.90
Metal Nipple — ⅛ Male	**Nos.**	**6005**	**6027**	**6109**	**6139**	**6209**					
	Each	$0.20	$0.25	$0.35	$0.46	$0.58					
Metal Nipple — ⅛ Female	**Nos.**	**6006**	**6028**	**6110**	**6140**	**6210**					
	Each	$0.20	$0.25	$0.35	$0.46	$0.58					
Metal Nipple — ⅜ Male	**Nos.**	**6007**	**6029**	**6111**	**6141**	**6211**					
	Each	$0.25	$0.30	$0.40	$0.51	$0.63					
Metal Nipple — ⅜ Female	**Nos.**	**6008**	**6030**	**6112**	**6142**	**6212**					
	Each	$0.25	$0.30	$0.40	$0.51	$0.63					
Porcelain Nipple — ⅛ Male	**Nos.**	**6009**	**6031**	**6113**	**6143**	**6213**					
	Each	$0.25	$0.30	$0.43	$0.58	$0.72					
Porcelain Nipple — ⅛ Female	**Nos.**	**6010**	**6032**	**6114**	**6144**	**6214**					
	Each	$0.25	$0.30	$0.43	$0.58	$0.72					
Porcelain Nipple — ⅜ Male	**Nos.**	**6011**	**6033**	**6115**	**6145**	**6215**					
	Each	$0.35	$0.41	$0.53	$0.68	$0.82					
Porcelain Nipple — ⅜ Female	**Nos.**	**6012**	**6034**	**6116**	**6146**	**6216**					
	Each	$0.35	$0.41	$0.53	$0.68	$0.82					
For W. P. Socket	**Nos.**	**6013**	**6035**	**6117**	**6147**	**6217**					
	Each	$0.16	$0.25	$0.40	$0.56	$0.73					

ALWAYS USE CATALOGUE NUMBERS WHEN ORDERING.

*Unilet Covers of the same size listed above, may be assorted to make up a Standard Package regardless of style of Cover.

Unilet Covers of the same size, listed above, are interchangeable.

The above Covers will fit any of the Rectangular Unilets.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

UNILETS

Type No. 0.

Type No. 1.

Type No. 2.

Type No. 3.

Rectangular Steel Unilets, Black Enameled or Sherardized Finish.

Type No. 0, Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9000**	**9020**	**9040**	**9060**	**9080**	**9100**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	75	55	40	25	15	12
Each	$0.24	.31	.43	.62	.80	1.66

Type No. 2, Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9002**	**9022**	**9042**	**9062**	**9082**	**9102**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	90	65	45	30	17	15
Each	$0.36	.41	.59	.94	1.22	2.43

Type No. 1, Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9001**	**9021**	**9041**	**9061**	**9081**	**9101**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	75	55	40	25	15	12
Each	$0.29	.35	.50	.80	1.04	2.14

Type No. 3, Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9003**	**9023**	**9043**	**9063**	**9083**	**9103**
Std. Pkge. ..	100	75	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	75	55	50	35	20	17½
Each	$0.48	.57	.80	1.22	1.69	2.55

Type No. 4.

Type No. 5R.

Type No. 5L.

Type No. 6.

Type No. 4 Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9004**	**9024**	**9044**	**9064**	**9084**	**9104**
Std. Pkge.	75	50	35	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	85	65	55	40	25	20
Each	$0.60	.77	1.05	1.24	1.78	2.85

Type No. 5L Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9005L**	**9025L**	**9045L**	**9065L**	**9085L**	**9105L**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	90	65	45	30	17	15
Each	$0.40	.45	.65	1.04	1.37	2.65

Type No. 5R Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9005R**	**9025R**	**9045R**	**9065R**	**9085R**	**9105R**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	90	65	45	30	17	15
Each	$0.40	.45	.65	1.04	1.37	2.65

Type No. 6 Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9006**	**9026**	**9046**	**9066**	**9086**	**9106**
Std. Pkge.	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	75	55	40	25	15	12
Each	$0.29	.36	.50	.80	1.04	2.14

Note.—Covers of all Unilets of the same size are interchangeable. Black Enameled Finish will be shipped unless Sherardized are specified.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

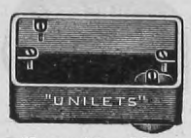
National Electrical Code Standard.

UNILETS

Type No. 8.

Type No. 1CA.

Type No. 2CA.



Type No. 6CA.

Rectangular Steel Unilets, Black Enameled or Sherardized Finish.

Type No. 8 Boxes Only—Without Covers

Size of Conduit, inches	½	¾	1	1¼	1½	2
Nos.	**9008**	**9028**	**9048**	**9068**	**9088**	**9108**
Std. Pkge. ...	200	100	50	20	10	5
Unit Pkge. ..	10	5	5	1	1	1
Std. Pkg., lbs.	90	65	45	30	17	15
Each	$0.40	.45	.65	1.04	1.37	2.65

Type No. 1CA Boxes Only—Without Covers

Size of Conduit, inches.....	½	¾	1
Nos.	**6610**	**6615**	**6620**
Standard Package	75	50	25
Shipping Weight, Std. Pkge, lbs.....	66	47	26
Each	$0.75	.85	1.00

Type No. 2CA Boxes Only—Without Covers

Size in inches	½	¾	1
Nos.	**6611**	**6616**	**6621**
Standard Package	75	50	25
Shipping Weight, Std. Pkge., lbs....	75	52	29
Each	$0.85	1.05	1.25

Type No. 6CA Boxes Only—Without Covers

Size in inches	½	¾	1
Nos.	**6612**	**6617**	**6622**
Standard Package	50	30	20
Shipping Weight, Std. Pkge., lbs...	43	30	21
Each	$0.75	.85	1.00

Note.—Boxes No. 1CA, 2CA and 6CA will take any of the Standard Rectangular Base Push Button Switches.

Type No. 5CAR.

Type No. 5CAL.

Type No. 5CAR Boxes Only—Without Covers

Size in inches	½	¾	1
Nos.	**6613**	**6618**	**6623**
Standard Package	50	30	20
Shipping Weight, Std. Pkge., lbs....	50	31	24
Each	$0.85	1.05	1.25

Type No. 5CAL Boxes Only—Without Covers

Size in inches	½	¾	1
Nos.	**6614**	**6619**	**6624**
Standard Package	50	30	20
Shipping Weight, Std. Pkge. lbs....	50	31	24
Each	$0.85	1.05	1.25

Note.—Boxes Nos. 5CAR and 5CAL will take any Standard Rectangular Base Push Button Switch.

COVERS FOR TYPE "CA" SWITCH UNILETS

No. 6707.

No. 6700.

No. 6701.

No. 6702A.

No. 6703.

No. 6704.

No. 6705.

No. 6706.

Nos.	Description	Std. Pkg.	Each
6707	—For Single Push Button Switch....	75	$0.10
6700	—For Double Push Button Switch...	75	.10
6703	—For Rectangular Plug Receptacle..	75	.80
6704	—For Hubbell Polarity P. R. No. 5552	75	.20
6701	—For Flush Rotary Switch.....	75	$0.10
6702A	—For Round Plug Receptacle.....	75	.60
6705	—For Hubbell Duplex R. No. 6257..	75	.15
6706	—Blank Metal	75	.10

Note.—Black Enamel Finish shipped unless Sherardized is specified.

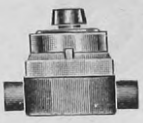
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

TYPE "D" OCTAGON SNAP SWITCH UNILETS

Type No. 1D.


Type No. 2D.

Type No. 3D.

Type No. 4D.

Type No. 5D.

Type No. 6D.

List below does not include Switches, but is Complete with Box and Swivel Cover.

Size of Conduit.	Type of Unilet.	Type No. 1D.	Type No. 2D.	Type No. 3D.	Type No. 4D.	Type No. 5D.	Type No. 6D.
For ½ inch Conduit	**Nos.**	**7401**	**7402**	**7403**	**7404**	**7405**	**7406**
For 5 and 10 Ampere Snap Switches	Standard Package	100	100	100	100	100	100
Diameter 2¾ inches	Unit Package	10	10	10	10	10	5
Depth 1 inch	Each	$0.45	.55	.75	.90	.60	.50
For ¾ inch Conduit	**Nos.**	**7431**	**7432**	**7433**	**7434**	**7435**	**7436**
For 5 and 10 Ampere Snap Switches	Standard Package	50	50	50	50	50	50
Diameter 2¾ inches	Unit Package	5	5	5	5	5	5
Depth 1¼ inches	Each	$0.55	.65	.85	1.00	.70	.60
For 1 inch Conduit	**Nos.**	**7461**	**7462**	**7463**	**7464**	**7465**	**7466**
For 5, 10 and 20 Ampere Snap Switches	Standard Package	25	25	25	25	25	25
Diameter 3 inches	Unit Package	5	5	5	5	5	5
Depth 1¾ inches	Each	$0.90	1.00	1.20	1.45	1.05	.95
For ½ inch Conduit	**Nos.**	**7521**	**7522**	**7523**	**7524**	**7525**	**7526**
For 20 Ampere Snap Switches	Standard Package	50	50	50	50	50	50
Diameter 3 inches	Unit Package	5	5	5	5	5	5
Depth 1 inch	Each	$0.80	.90	1.10	1.25	.95	.85
For ¾ inch Conduit	**Nos.**	**7541**	**7542**	**7543**	**7544**	**7545**	**7546**
For 20 Ampere Snap Switches	Standard Package	25	25	25	25	25	25
Diameter 3 inches	Unit Package	5	5	5	5	5	5
Depth 1¼ inches	Each	$0.85	.95	1.20	1.40	1.05	.90

Black Enameled or Sherardized Finish, same price. Black Enameled Finish always shipped unless otherwise specified. The adjustable Swivel on these Unilets permits many different makes of fittings being installed thereon, such as all Standard Round Sockets, Rosettes, Receptacles, Switches, etc., etc.

TYPE "E" OCTAGON STEEL UNILETS

Type No. 1E.

Type No. 2E.

Type No. 3E.

Type No. 4E.

Type No. 5E.

Type No. 6E.

List Below Without Covers

Size of Conduit.	Type of Unilet.	Type No. 1-E	Type No. 2-E	Type No. 3-E	Type No 4-E	Type No. 5-E	Type No. 6-E
For ½ Inch Conduit	**Nos.**	**7501**	**7502**	**7503**	**7504**	**7505**	**7506**
5 and 10 Amperes	Standard Package	200	200	150	150	150	200
Diameter 2¾ inches	Unit Package	10	10	10	10	10	10
Depth 1 inch	Each	$0.29	.36	.48	.60	.40	.24
For ¾ Inch Conduit	**Nos.**	**7531**	**7532**	**7533**	**7534**	**7535**	**7536**
5 and 10 Amperes	Standard Package	100	100	75	75	75	100
Diameter 2¾ inches	Unit Package	10	10	10	10	10	10
Depth 1¼ inches	Each	$0.41	.46	.62	.82	.50	.36

OCTAGON PORCELAIN RECEPTACLES

For Type "E" Octagon Unilet Bodies.

Size of Unilet Body	½ and ¾
No.	**7736**
Standard Package	200
Shipping Weight, Standard Package	76 lbs.
Each	$0.30

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

COVERS FOR OCTAGON UNILETS

For All Types and Sizes.

No. 7700.

No. 7701.

No. 7702.

No. 7703.

No. 7707.

No. 7708.

For ½ and ¾ inch Conduit—2¾ inch Box

Style of Cover	Nos.	Std. Pkg. Asst.	Unit Pkg.	Each
Blank Metal	7700	200	25	$0.08
Flat Cover with Swivel for 5 and 10 Amp. Switches	7701	200	25	.16
Flat Cover Drilled for 5 and 10 Ampere Switches	7702	200	25	.15
Arrow E. Receptacles 59108, 4003 Arrow E. and P. & S. Receptacles 61577, 61877, 61988, 427, 439 Bryant Receptacles 61988, 59108, 4003, 4035, 4057 P. & S. Receptacles 436, 437, 102703, 102704	7703	200	25	.10
Flat Cover for Federal Receptacles 303, 304	7704	200	25	.10
Metal Cover with ⅛ Male Nipple	7705	200	10	.20
Metal Cover with ⅛ Female Nipple	7706	200	10	.20
Metal Cover with ⅜ Male Nipple	7707	200	10	.25
Metal Cover with ⅜ Female Nipple	7708	200	10	$0.25
Metal Cover with ½ Male Nipple	7709	200	10	.30
Metal Cover with ½ Female Nipple	7710	200	10	.30
Metal Cover with Porcelain Bushings (Specify Number of Bushings Wanted)	7711	200	10	.10
Raised Cover for Bryant Receptacle 1508 and Arrow E. 501 and 521	7712	200	25	.10
Flat Cover for Arrow E. and P. & S. Receptacles 54, 61977, and Bryant 4063, 40488	7713	200	25	.10
Raised Cover for Conn. Elec. Mfg. Co. Receptacle 9001	7714	200	25	.10
Raised Cover for Federal Plug Receptacle 370	7715	200	25	.10

TYPE "G" UNILETS WITH GUARDS AND VAPORPROOF GLOBES

Furnished with Arrow E. or Bryant Receptacle No. 40507, Gaskets and all necessary fastening screws.

Type No. 1-G

Type No. 2-G

Type No. 3-G

Type No. 4-G

Type No. 5-G

Type No. 6-G

For Incandescent Lamps not Exceeding 2¾ inches in Diameter—Unilets Complete with Globes and Guards Attached.

Size of Conduit	Std. Pkg. Not Asst.	Unit Package	Type of Unilet	Type No. 1-G	Type No. 2-G	Type No. 3-G	Type No. 4-G	Type No. 5-G	Type No. 6-G
½ inch	75	1	Nos.	6901	6902	6903	6904	6905	6906
			Each	$4.50	4.60	4.75	4.85	4.60	4.50
¾ inch	50	1	Nos.	6921	6922	6923	6924	6925	6926
			Each	$4.55	4.70	4.85	5.05	4.70	4.55
1 inch	25	1	Nos.	6941	6942	6943	6944	6945	6946
			Each	$4.60	4.80	5.05	5.20	4.80	4.60

For Incandescent Lamps not Exceeding 3¾ inches in Diameter—Unilets Complete with Globes and Guards Attached.

Size of Conduit	Std. Pkg. Not Asst.	Unit Package	Type of Unilet	Type No. 1-G	Type No. 2-G	Type No. 3-G	Type No. 4-G	Type No. 5-G	Type No. 6-G
½ inch	75	1	Nos.	6951	6952	6953	6954	6955	6956
			Each	$5.40	5.50	5.60	5.70	5.50	5.40
¾ inch	50	1	Nos.	6961	6962	6963	6964	6965	6966
			Each	$5.45	5.60	5.75	5.90	5.60	5.45
1 inch	25	1	Nos.	6981	6982	6983	6984	6985	6986
			Each	$5.50	5.65	5.85	6.05	5.65	5.50

Solid Rubber Gaskets

Solid.

Open Rubber Gaskets

Open.

For Types 0, 1, 2, 3, 4, 5-R, 5-L, 6, 7 and 8 Rectangular Steel Unilets.

Size of Conduit	½ Inch	¾ Inch	1 Inch	1¼ Inch	1½ Inch	2 Inch
Nos.	2560	2561	2562	2563	2564	2565
Std. Pkg.	200	100	50	25	25	25
Each	$0.10	.10	.15	.20	.20	.25

For Types 0, 1, 2, 3, 4, 5-R, 5-L, 6, 7, 8, 9-R, 9-L, 10 and 11 Rectangular Steel Unilets.

Size of Conduit	½ Inch	¾ Inch	1 Inch	1¼ Inch	1½ Inch	2 Inch
Nos.	2580	2581	2582	2583	2584	2585
Std. Pkg.	200	100	50	25	25	.25
Each	$0.10	.10	.15	.20	.20	.25

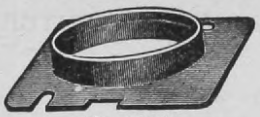
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

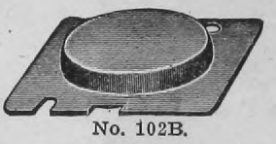
National Electrical Code Standard.

SQUARE OUTLET BOXES AND COVERS

No. 101.

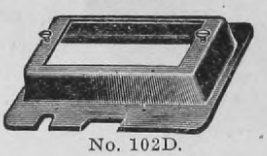


No. 102A.



No. 102B.

No. 102C.



No. 102D.

For Combination Gas and Electric Fixtures, Switch Outlet or Junction Box.

No. 101 —4 inches Square, 1⅝ inches Deep, for ½ or ¾ inch Conduit. Regularly furnished with 2 Outlets in each side, 5 in bottom, 2 fixture holes tapped 10-24 ..... Per 100, $30.00

No. 102 —4 inches Square, 1⅝ inches Deep, for ½ or ¾ inch Conduit. Regularly furnished with 2 Outlets in each side, 5 in bottom, fixture holes **not** tapped ..... Per 100, 30.00

No. 102A—Steel Cover, raised open center, crown ¾ inches high, opening 2 15/16 inches diameter.. Per 100, 14.00

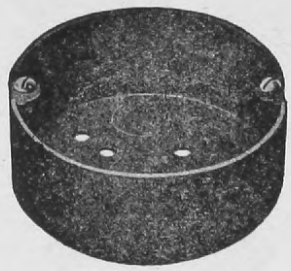
No. 102B—Steel Cover, raised closed center, crown ⅝ inches high; used where box is required as a junction box; raised crown gives more space in box for splicing ..... Per 100, 14.00

No. 102C—Steel Cover, raised center ⅝ inches high, with ⅜ inch Insulating Bushing for use where drop cord is required ..... Per 100, 20.00

No. 102D—Steel Cover, raised 1¼ inches high; takes all standard push button switches or rectangular base; flush plug receptacles ..... Per 100, 20.00

No. 102G—Steel Cover, raised 1¼ inches high, for 2 push button switches mounting screw centers 3 9/32 inches one way, 1 13/16 inches the other way ..... Per 100, 25.00

ROUND AND OCTAGON BOXES AND COVERS



No. 103. Round.

No. 103A.

No. 103B.

No. 103C.

No. 103. Octagon.

Outlet and Junction

No. 103 Round—4 inch Round, 1⅝ inches Deep, for ½ and ¾ inch Conduit. 4 Outlets in side, 5 in bottom. Drilled for Fixture Stems, 2 holes tapped 10-24 ..... Per 100, $25.00

No. 103 Octagon—4 inch Octagon. Otherwise the same as No. 103 Round ..... Per 100, 25.00

No. 103A—Steel, Open Raised Cover; opening 2 15/16 inch, crown ¾ inch high ..... Per 100, 14.00

No. 103B—Steel, Closed Raised Cover; crown ⅝ inches high ..... Per 100, 14.00

No. 103C—Steel, Closed Raised Cover, ⅝ inch high, with ⅜ inch Insulating Bushing in center for drop cord ..... Per 100, 18.00

No. 106 Round—3¼ inch Round, 1⅝ inches Deep, for ½ inch Conduit only. 4 Outlets in sides, 1 in bottom. 2 holes tapped 10-24 for fixture stems ..... Per 100, 20.00

No. 106A—Steel Cover, Raised Open Center, ⅜ inch high, 1½ inch hole ..... Per 100, 10.00

No. 106B—Steel Cover, Closed Raised Center, crown ⅜ inch high ..... Per 100, 9.00

No. 106C—Steel Cover, Raised Center, ⅜ inch high, ⅜ inch Bushing for drop cord ..... Per 100, 15.00

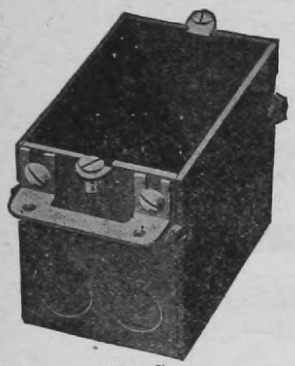
SHALLOW CEILING LOOM BOXES

No. 260—3½ inches Diameter, ½ inch Deep. Without Ears. 8 Loom Knockouts in bottom ..... Per 100, $14.00

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

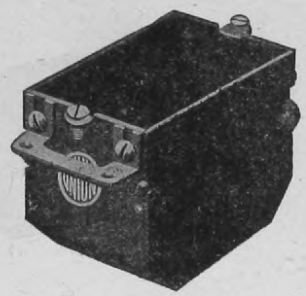
National Electrical Code Standard.



No. C.

GEM SECTIONAL SWITCH BOXES

For Use Singly or in Gangs in connection with Non-Metallic Flexible Conduit. Takes all makes of Push Button and Rectangular Base Switches and Receptacles. Equipped with Reversible and Sliding Ears having adjustment of 1/32 to 3/4-inch.



No. E.

No. C—Gem. 2½ inches Deep, 3 inches Long, 2 inches Wide. Square Corners, ⅝ inch Knockouts...Each, $0.50
No. E—Gem. 2½ inches Deep, 3 inches Long, 2 inches Wide. Beveled Corners, ⅝ inch Knockouts..Each, .50
No. A—Gem. 3 inches Deep, 3 inches Long, 2 inches Wide, Square Corners, ⅝ inch Knockouts.....Each, .50
No. C, E or A—Gem Boxes or Units only, without sides.....Each, .40

Packed—100 in a Box.

METAL MOLDING AND FITTINGS

No. 333.

No. 334.

No. 335.

No. 336.

No. 333—100 in a Pkg.....Per 100, $8.00
No. 334—Cross. 30 in a Pkg.....Each, .17
No. 335—Tee. 30 in a Pkg.....Each, $0.14
No. 336—90° Elbow. 30 in a Pkg.....Each, .11

No. 337.

No. 338.

No. 339.

No. 341.

No. 337—External Elbow. 30 in a Pkg...Each, $0.11
No. 338—Internal Elbow. 30 in a Pkg....Each, .11
No. 339—Drop Cord Box. 20 in a Pkg....Each, $0.25
No. 341—Junction Box. 20 in a Pkg.....Each, .25

Nos. 342 and 342R.

No. 376.

No. 348.

No. 431.

No. 342 —Snap Switch Base. 10 Amp. 20 in a Pkg. .....Each, $0.25
No. 342R—Snap Switch Base. 5 Amp. 20 in a Pkg. .....Each, .25
No. 376 —Corner Box. 10 in a Pkg.....Each, .25
No. 348—One Piece Rosette. 20 in a Pkg..Each, $0.09
No. 431—Two Piece Rosette. 10 in a Pkg..Each, .28

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

METAL MOLDING FITTINGS

Receptacles

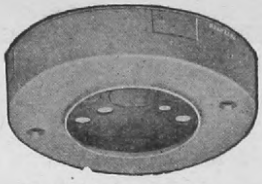
No. 356.

No. 397.

No. 395.

No. 356—Keyless. 10 in a Pkg.....Each, $0.38
No. 397—Key. 10 in a Pkg.....Each, .41
No. 395—Chain Pull. 10 in a Pkg.....Each, .64

Canopy Bases

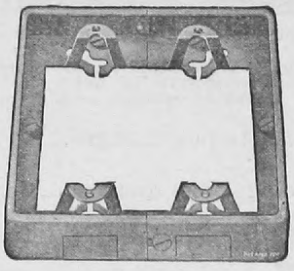


Nos. 365 and 366.

Drilled and Tapped for Standard Fixture Stud.

No. 365—4½ inch. 10 in a Pkg.....Each, $0.35
No. 366—6 inch. 10 in a Pkg.....Each, .50

Flush Switch Adapters



No. 442.

No. 442—Two Gang Split. 10 in a Pkg....Each, $0.55

Couplings

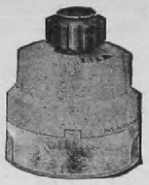
No. 402.

No. 415.

No. 416.

No. 402 —½ inch Conduit. 30 in a Pkg...Each, $0.15
No. 402A—¾ inch Conduit. 10 in a Pkg...Each, .20
No. 415 —90° R. H. Elbow. 10 in a Pkg..Each, .18
No. 416 —90° L. H. Elbow. 10 in a Pkg..Each, .18

5 Ampere Snap Switches



No. 391.

No. 392.

No. 391—Non-Indicating, Single Pole. 10 in a Pkg. .....Each, $0.36
No. 392—Indicating, Single Pole. 10 in a Pkg. .....Each, .39

Switch Boxes and Adapters

No. 438.

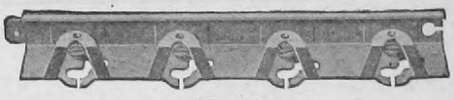
No. 441.

Fitting All Standard Flush Plates.

No. 438—Flush Box. 10 in a Pkg.....Each, $0.40
No. 441—Single Adapter. 10 in a Pkg....Each, .27

Gang Strips

No. 443.



No. 446.

No. 444.

No. 445.

No. 443—Single Strip. 10 Pairs in a Pkg..... .....Per Pair, $0.20
No. 444—Two Gang. 4 Pairs in a Pkg..Per Pair, .40
No. 445—Three Gang. 2 Pairs in a Pkg..... .....Per Pair, .60
No. 446—Four Gang. 2 Pairs in a Pkg..Per Pair, .80

Couplings and Covers

No. 404.

Nos. 367 and 368.

No. 404—Open Work Cplg. 10 in a Pkg....Each, $0.18
No. 367—2 Hole Porc. Cover. 10 in a Pkg..Each, .10
No. 368—3 Hole Porc. Cover. 10 in a Pkg..Each, .10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

METAL MOLDING FITTINGS

No. 405.

Nos. 411 and 411A.

No. 345.

No. 377.

No. 2251.

No. 405 —Conduit to Molding Tee. 10 in a Pkg. .....Each, $0.35

No. 411 —½ inch Molding to Tee. 10 in a Pkg. .....Each, .25

No. 411A—¾ inch Molding to Tee. 10 in a Pkg. .....Each, .30

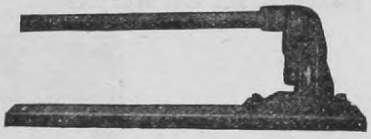
No. 345—Single Clamp, Plain, 100 in a Pkg.... .....Per 100, $7.50

No. 377—Clamp Bushing, Single, 50 in a Pkg... .....Per 100, 3.50

No. 2251—⅜ inch Male Stud, 250 in a Pkg..... .....Per 100, 5.00

No. 2252—½ inch Male Stud, 250 in a Pkg..... .....Per 100, 6.50

Metal Molding Punches

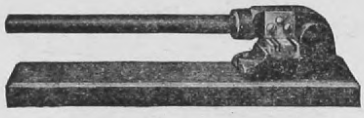


No. 418.

Lever Type Hand Punch, Hardened steel Die and Punch.

No. 418—Weight, 12 lbs. 1 in a Pkg.....Each, $6.50

Metal Molding Shears



No. 422.

Lever Type Hand Shear, Hardened Steel Knives and Die Block.

No. 422—Weight, 8 lbs. 1 in a Pkg.....Each, $5.50

Wood Molding

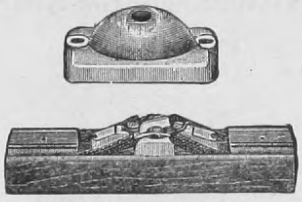
No. 3. Molding.

Soft Wood, Oak stained, ¼-inch, two wire, for No. 14 Rubber Covered Wire.

Complete with Capping.....Per 1000 Feet, $25.00

Packed—200 Feet in a Bundle.

Paiste Rosettes—Fielding Style



No. 435 on Molding with Cap Removed.

Fieldings for 2-Wire Molding or Pipe Taplets

These 2-Wire Styles are to be used on 2-Wire Wooden Molding or on all styles of ½-inch and ¾-inch Paiste Pipe Taplets.

No. 435—Plain Cap, 10 in a Carton.....Each, $0.20

Paiste Molding Taplets

No. 4090.
With Cover Removed.

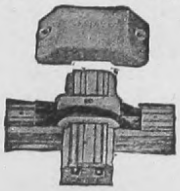
No. 4090.
With Cover in Place.

In the illustrations the use of these Taplets is clearly shown, as well as the appearance of the completed work.

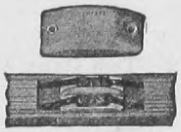
No. 4090—2 Wire, Single Branch. 10 in a Carton. .....Each, $0.30

No. 4094—2 Wire, Double Branch. 10 in a Carton .....Each, .45

Paiste Molding Cross-overs and Connectors



No. 4095.



No. 4099.

In the illustrations the use of these Cross-Overs and Connectors is clearly shown, the balance of the work being simply to secure the cap in place.

No. 4095—2 Wires crossing 2 Wires. 10 in a Carton .....Each, $0.15

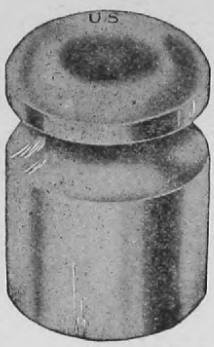
No. 4099—2 Wire Connector. 10 in a Carton.... .....Each, .25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

ROUND SOLID PORCELAIN INSULATORS



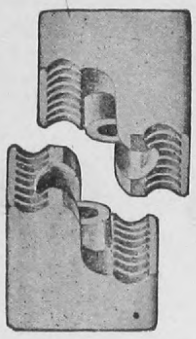
No. 1.

No. 2.

Nos. 3½ to 5½.

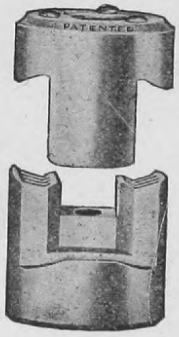
Nos.	Height	Diam.	Hole.	Groove.	Barrel lots	Weight per barrel	Per 1000
1	Solid 3 in.	2⅛ in.	7/16 in.	¾ in.	680	450 lbs.	$88.00
2	Solid 2 in.	2 in.	½ in.	½ in.	1100	460 lbs.	49.00
3½	Solid 2 in.	2 in.	7/16 in.	7/16 in.	1000	450 lbs.	49.00
4½	Solid 1⅞ in.	1½ in.	⅜ in.	7/16 in.	2000	430 lbs.	19.00
5½	Solid 1 9/16 in.	1⅛ in.	¼ in.	5/16 in.	4300	490 lbs.	15.00

REVERSIBLE SPLIT INSULATORS



No. 55½ Square Rev.

Midget Sq. Reversible



No. 1916 Buckeye Reversible

Nos.	Height	Diam.	For Wire	Grooves
55½ Square Rev.	1⅝ in.	1⅛ in.	12 to 14	2
Midget Square Rev.	1¾ in.	1⅛ in.	12 to 14	2
1916 Buckeye Rev.	1¾ in.	1¼ in.	12 to 14	2
No. 1 Screw-It	1¾ in.	1⅛ in.	12 to 14	2
No. 1 Nail-It	1¾ in.	1⅛ in.	12 to 14	2
No. 5½ Split	1¾ in.	1⅛ in.	12 to 14	2

NEW CODE SPLIT INSULATORS

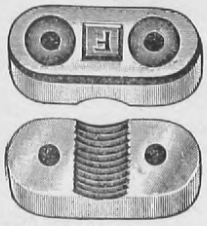
No. 1 Screw-It.

No. 5½ Split.

Std. Pkge.	Std. Pkge. Wt.	Per 1000
3700	540 lbs.	$.....
3800	530 lbs.	.....
2500	490 lbs.	.....
4000	600 lbs.	.....
4000	650 lbs.	.....
5000	500 lbs.	.....

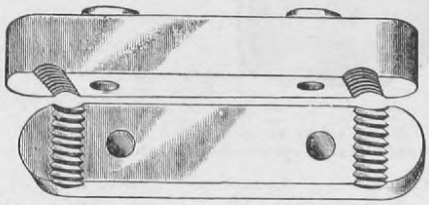
PORCELAIN CLEATS

Single Wire



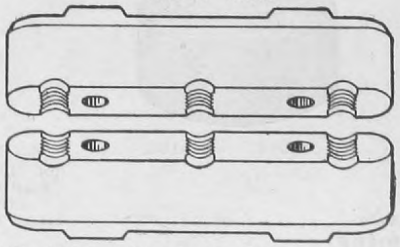
Nos. 1 to 4.

Two Wire



No. 334G—Glazed; No. 334UG—Unglazed.

Three Wire



No. 337G—Glazed; No. 337UG—Unglazed.

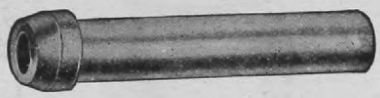
Nos.			Height	Width	Length	Groove	Std. Pkge.	Std. Pkge. Wt.	Per 1000 Pairs
1	**(328)**	1 wire	1¼ in.	¾ in.	2 in.	⅜ in.	3500	500 lbs.	$26.00
2	**(329)**	1 wire	1¾ in.	1 in.	2¼ in.	½ in.	2200	500 lbs.	40.00
3	**(330)**	1 wire	1¾ in.	1⅛ in.	2½ in.	⅝ in.	1400	500 lbs.	48.00
4	**(331)**	1 wire	2¼ in.	1 3/16 in.	2¾ in.	¾ in.	1100	500 lbs.	60.00
334G		2 wires	1⅛ in.	⅝ in.	3⅜ in.	3/16 in.	2200	425 lbs.	26.00
334UG		2 wires	1⅛ in.	⅝ in.	3⅜ in.	3/16 in.	2200	425 lbs.	20.00
337G		3 wires	1⅛ in.	⅝ in.	3⅜ in.	3/16 in.	2200	425 lbs.	26.00
337UG		3 wires	1⅛ in.	⅝ in.	3⅜ in.	3/16 in.	2200	425 lbs.	20.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

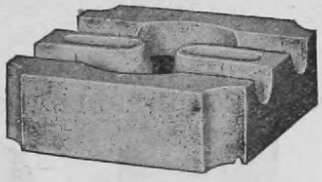
National Electrical Code Standard.

PORCELAIN TUBES

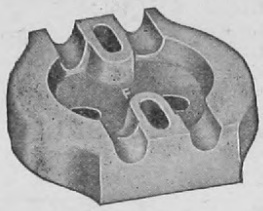


Hole, in.	Outside, in.	Length, under Head, in.	3	4	6	8	10	12	14
5/16	9/16	Per 1000..	$16.00	27.00	39.00	72.00	96.00	144.00	202.00
3/8	11/16	Per 1000..	26.00	30.00	45.00	84.00	108.00	156.00	231.00
1/2	13/16	Per 1000..	34.00	41.00	55.00	96.00	120.00	168.00	259.00

SWITCH BASES



No. 18.



No. 21.

No. 18—Cleat or Concealed Type. 5 Amperes. Std. Pkg. 1500. Std. Pkg. Wt. 450 lbs.....Per 100, $.....

No. 21—Molding Type. 5 Amperes. Std. Pkg. 1500. Std. Pkg. Wt. 450 lbs.....Per 100, ...

SOCKET BUSHINGS

No. 9165.

No. 11015.

No. 9165—1/8 inch Hard Composition..Per 100, $0.70

No. 11015—3/8 inch Hard Composition..Per 100, 2.00

INSULATED STAPLES

No. 1.

No. 3.

No. 5.

No. 6.

For Twisted Pair and Single Wires.

No. 1—For Hard Wood.....Per 1000, $.....

No. 3—For General Use.....Per 1000, ...

For Twisted 3 Wire and Ex. Hvy. Pair Wires.

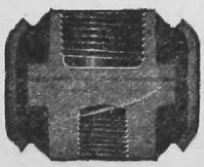
No. 5—For Hard Wood.....Per 1000, $.....

No. 6—For General Use.....Per 1000, ...

Packed.—100 Staples in a Package.

INSULATING JOINTS

Nos. 30101 to 30103.



Nos. 30501 to 30503.

Nos. 30641 to 30643.

All Malleable Iron—Tapped to Standard Iron Pipe.

For Combination Fixtures—Female Both Ends.

Nos.	Macallan	Size of Pipe Head F	Tail F	Carton	Std. Pkg.	Std. Pkg. Wt.	Each
30101	7501	3/8	1/8	10	100	32 lbs.	$0.36
30102	7502	3/8	1/4	10	100	32 lbs.	.36
30103	7503	3/8	3/8	10	100	30 lbs.	.36
		For Electric Fixtures—Female Both Ends.					
30501	7701	3/8	1/8	10	100	32 lbs.	$0.36
30502	7702	3/8	1/4	10	100	32 lbs.	.36
30503	7703	3/8	3/8	10	100	30 lbs.	.36
		Electrolier—With Old Style Hickey.					
30641	7601	3/8	1/8	10	100	50 lbs.	$0.40
30642	7602	3/8	1/4	10	100	50 lbs.	.40
30643	7603	3/8	3/8	10	100	52 lbs.	.40

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

INSULATING AND FRICTION TAPES

All Brands in ½ Pound Rolls—¾ Inch Wide—Wrapped in Tin Foil.

Bull Dog.

In this Tape the highest quality of materials are used. It is the most desirable grade to use where the conditions are severe. Manufacturers of electrical machinery especially commend Bull Dog Tape for its insulating qualities. It stands extremely high temperatures.

Bull Dog—Grey, 50 yards per pound..Per Pound, $0.54

Tiger.

This Tape has a good body and is noted for its adhesiveness and high insulating strength. A most popular grade and in very great demand. It will be found a thoroughly reliable Tape. Used for both inside and outside wiring and for telephone work.

Tiger—Black, 50 yards per pound....Per Pound, $0.41

Service.

A particularly durable tape and perfectly uniform for either inside or outside work. A thoroughly reliable grade for all general purposes. In this Tape we have an unusual combination of long yardage with good electrical strength.

Service—Black, 50 yards per pound...Per Pound, $0.35

Magnet.

This is a heavy, tacky Tape, free from pin holes. It is uniform in friction and for a low priced Tape it will be found a value not exceeded by any other competitive Tape.

Magnet—Black, 43 yards per pound..Per Pound, $0.31

Evergrip.

Particularly adapted for the automobile and bicycle trade. The rubber compound is thoroughly worked into the cloth. The friction is strong, adhesive and as nearly moisture proof as possible. It will hold fast wherever applied. Put up in very attractive packages which make excellent display.

Evergrip—Black, 43 yards per pound.....Per Pound, $0.30

SPLICING COMPOUNDS

Alexall.

This is our highest grade of Splicing Compound. Is made and meets the specifications of the U. S. Navy. It is in every way competitive to the highest priced tapes. It is very strong, elastic and long lived.

Alexall—Black, 17 yards per pound.....Per Pound, $1.00

Sterling.

Black Insulating Unvulcanized Rubber Tape, free from Sulphur. It is strong and elastic and therefore, very durable and can be easily handled. It will stick and make a tight joint under all conditions. Adapted for outside work on cables.

Sterling—Black, 14 yards per pound.....Per Pound, $0.43

Armature.

A very fine, high grade Tape, made with thin, closely woven sheeting, frictioned only on one side. Used especially for winding Armatures, Field Coils, Etc. This Tape is economical because of the number of yards per pound. Made in white only.

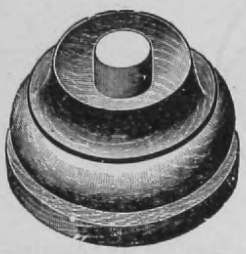
Armature—White, 96 yards per pound.....Per Pound, $0.65

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

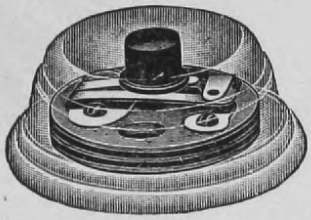
ELECTRICAL SUPPLIES

National Electrical Code Standard.

PUSH BUTTONS



No. 1397 to 1402.



No. 1345.

No. 1258.

No. 1340.

No. 1354.

Standard Wood Push Buttons

Polished Finish, Porcelain Center, German Silver Springs.

No. 1397—2⅛ inch Oak.....Each, $0.10
No. 1401—2⅛ inch Antique Oak.....Each, .10
No. 1402—2⅛ inch Mahogany.....Each, .10

Double Contact or Return Call

For return call annunciators or bell circuits, where a bell is installed at each end.

No. 1345—2⅜ inch Oak.....Each, $0.18

Paper Weight Desk Push

Polished Wood with Weighted Base.

Serves as a paper weight as well.

No. 1258—2½ inch Oak.....Each, $0.50

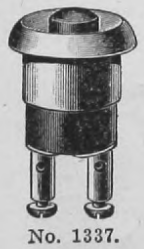
Midget Push Buttons

No. 1340—1 5/16 inch Wood, Standard Finishes, Bone Centers, G. S. Spring.....Each, $0.16

No. 1354—¾ inch Hard Rubber; can be inserted in wood or metal.....Each, .24

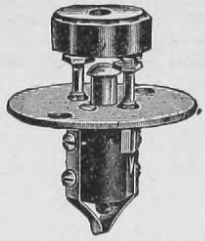
No. 1333.

No. 1338.



No. 1337.

No. 1262.



No. 1264.

Desk Push Buttons

No. 1333—Fits a ⅝ inch hole. Light or Dark Pearl Center.....Each, $0.16
No. 1338—Fits a ½ inch hole. Made with a Solid Shell attached with bolt.....Each, .20
No. 1337—Fits ½ inch hole. Brass Body with Nickeled Rim. With Binding Posts....Each, .14
No. 1339—As No. 1337. Without Binding Posts.....Each, .12

Table Push Buttons

No. 1262—Cast Metal Shell, Nickeled, with black center.....Each, $0.55

Floor Push Buttons

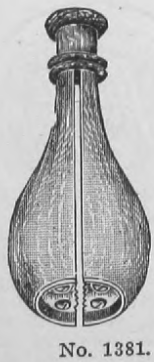
No. 1264—Regular Floor Push with Extension Attachment. Complete.....Each, $0.40

No. 1369.

Push Button Escutcheons

For attaching flexible cord to wall or ceiling for pear shape pushes.

No. 1260—Oak.....Each, $0.12



No. 1381.

Pear Shape Push Buttons

No. 1369—Oak or Mahogany.....Each, $0.18

Electric Presselle

Operated by pressing the ends together.

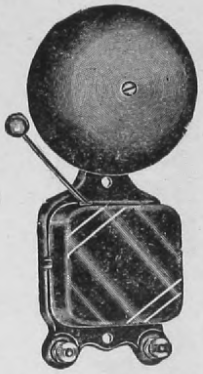
No. 1381—Finished in Oak only.....Each, $0.20

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

BELLS AND BUZZERS



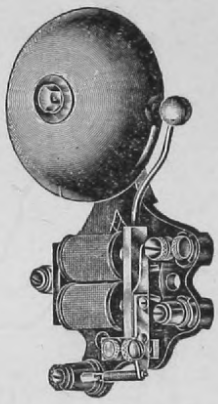
Nos. 1845 to 1847.

No. 1848.

Nonpareil Buzzers.

Durable and Satisfactory. One Cell of Battery will operate it.

No. 1848—Black Japanned .....Each, $0.48



Nos. 2082 to 2087.

Nonpareil Bells are constructed with steel base, black japanned. Contact Post is attached to the magnet head, insuring permanent adjustment and no danger of a "ground" on the base as it does not touch it. Every detail is designed for durability. One cell will operate it, 5 may be used, if desired.

No. 1845—2½ inch Gong.....Each, $0.50
No. 1846—3 inch Gong.....Each, .52
No. 1847—4 inch Gong.....Each, .66

Peerless Pivoted Armature Skeleton Bell is constructed for service where it is important that a signal is sounded when required. Every detail is arranged for strength. All parts are made interchangeable.

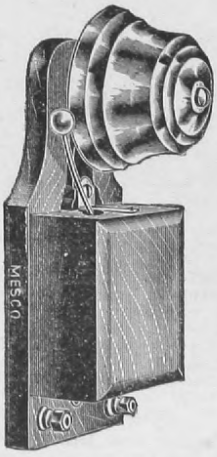
No. 2082— 4 inch Gong, 1.7 Ohms Resistance .....Each, $ 3.04
No. 2084— 6 inch Gong, 2.15 Ohms Resistance .....Each, 6.21
No. 2086— 8 inch Gong, 3.05 Ohms Resistance .....Each, 9.71
No. 2087—10 inch Gong, 3.12 Ohms Resistance .....Each, 16.60

IRON BOX BELLS WITH FANCY NICKEL PLATED GONGS

No. 1815.

No. 1816.

No. 1818.



No. 1820.

No. 1822.

No. 1815—Rectangular, 1½x2 inch. Gong, **Iron** Box .....Each, $0.74
No. 1816—Sleigh, 1½ inch Gong, **Iron** Box. Each, .74
No. 1818—Garland, 2 inch Gong, **Iron** Box..Each, $0.74
No. 1820—Mikado, 2½ in. Gong, **Iron** Box. Each, .74
No. 1822—Tea, 2⅜ inch Gong, **Iron** Box...Each, .74

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

ELECTRIC BELL SETS

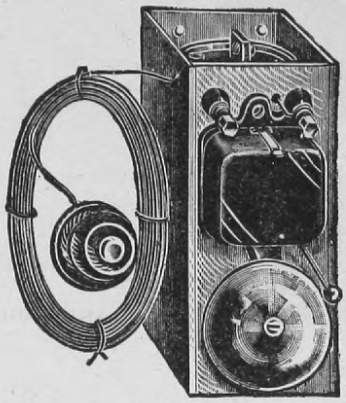
No. 1762.

Suitable for Front Doors or any purpose where a reliable Call Bell is required.

Set Consists of—One Cell Best Dry Battery; One Polished Hardwood Push Button; One Iron Box Bell, with 2½ inch Gong; Fifty feet Insulated Wire, with Staples.

No. 1762—Electric Bell Sets.....Per Set, $1.50

Packed—One Set in a Paper Box.



Style H.

Single Cell Portable Call Bell Outfit, very desirable for use in Offices and Dwellings.

Set Consists of—

One Cell Best Dry Battery.
One Polished Hardwood Push Button.
One Iron Box Bell, with 2½ inch Gong.
One Imitation Leather Covered Case for Battery.
Twenty-five feet Double Wire (equal to 50 feet single).

No Connections to Make.

Simply hang up the Box at any convenient place, carry the Push Button to the room from which you wish to have the Bell to ring and the Outfit is ready for use.

Style H—Electric Bell Sets.....Per Set, $2.00

Packed—One Set in a Box.

ANNUNCIATOR WIRE

Double Cotton Wrapped, Waxed and Paraffined, Copper Wire. **Mixed Colors,** Red and White; Blue and White; Red White and Blue, or **Solid Colors,** Red or Blue.

Quantity and Package	½ lb. Coils	1 lb. Coils	7 lb. Spools
No. 18—Annunciator Wire.....Per Pound, $.....	.....	.....	.....

BELL RINGING TRANSFORMERS

Junior

The Jefferson Bell Ringing Transformers embody all the essentials of a perfect design, electrical, magnetic and mechanical. Because of their heavy capacity and high electrical efficiency, combined with extra long preliminary leads, they are superior to anything on the market. A transformer for every requirement in the signal field. They are designed to be connected to the ordinary alternating current circuit for the purpose of stepping down current to a suitable voltage for operating all classes of bells, buzzers, door openers, annunciators and other signal work, such as may be found in residences, offices, factories, mines, school, etc. They eliminate the use of all types of batteries, and when once installed will last a lifetime.

The **Junior Bell Ringer** is designed for all classes of light signal work, such as may be found in the ordinary residence or flat building. Will also operate all standard type of door openers, has one secondary voltage; Generates 25 Watts.

Junior—2⅝"x2"x6", 2½ Pounds, 25 Watts .....Each, $2.50

The **Type "B" Bell Ringer** has three secondary voltages, 5-14-20 volts, 40 Watts capacity, designed for heavier signal work and installations that require more power than is generated by the Junior Type.

Type B—3"x3¾"x4", 4 Pounds, 40 Watts.....Each, $5.00

Type B.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

ELECTRICIANS' SOLDERING FLUX

Star Soldering Sticks

A convenient form of soldering flux of high quality and non-corrosive.

No. 2774—Star Soldering Sticks.....Each $0.24

Star Soldering Paste

High Quality Soldering Flux. A smooth, evenly flowing flux. Strong and rapid in action and Non-Corrosive.

Nos.	2775	2776	2777	2778
Ounces in Box	2	4	8	16
Per Box	$0.20	.30	.50	.80

Nokorode Soldering Paste

A Flux for soldering all metals except aluminum.
Absolutely non-corrosive.
No work too delicate, none too rough.

Ounces in Can	2	16
Per Can	$0.25	1.00

SELF-FLUXING SOLDER

Kester Crystal Core Solder

Kester's Self-Fluxing Solder is a seamless tube of solder with a core of Flux that flows as the solder is used.

Quantity	1 lb. Coils	5 lb. Spools	10 lb. Spools
Per Pound	$1.00	1.00	1.00

WIRE SOLDER

One-Eighth Inch.

Pounds on Spool	50
Per Pound	$.....

FISHING WIRE

Flat, black finish steel, used by electricians for pulling or pushing wire into conduits. A flat crucible steel tempered especially for this purpose. Edges rounded to prevent cutting the hands. Wire has great strength, toughness and flexibility.

Nos.	1000	1002
Size in.	1/8 x 1/16	1/4 x 1/16
Per 100 Feet	$2.00	4.00

Packed—These tapes are regularly furnished in 100, 150, 200, 250 and 300 foot coils, but can be furnished in any desired length.

COLORING FLUID

A high grade fluid for coloring incandescent lamps that is widely used and gives great satisfaction. Gives the lamps that snap and brilliance found in natural colored glass.

Furnished in Blue, Green, Amber, Ruby, Violet and Frosting. Dipping cup with each pint and quart bottle.

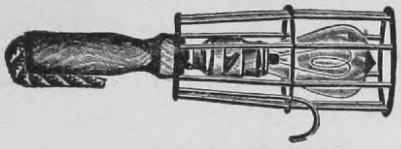
Nos.	2766	2765	2764
Size of Bottle	1/2 Pt.	1 Pt.	1 Qt.
Per Bottle	$1.30	2.00	3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard

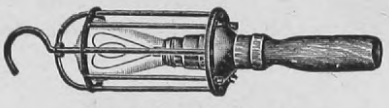
PORTABLE LAMP GUARDS



No. 1453 Monitor.

An inexpensive but substantial portable with convenient open bottom. Made of Bessemer Steel Rods and with Stamped Metal Rings. Heavy tinned finish. Takes any ⅜ inch Standard Brass Socket, but is furnished without Socket.

No. 1453—For 40 Watt Lamps, without Socket .....Each, $1.70



No. 4645. Crescent.

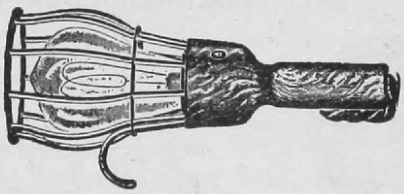
A light but very strong portable built to withstand hard usage which can be recommended to give unusual service. Made of Bessemer Steel Rods and with Stamped metal rings, Copper plated finish. Takes any ⅜ inch Standard Brass Socket, but is sold without socket.

No. 4645—For 40 Watt Lamps, without Socket .....Each, $2.50

No. 1560. Loxon.

A handsome portable with black enameled handle and with one-half of the guard made as a solid metal reflector. For all cases where a direct reflected light is needed, such as garage, auto use, etc., it is extremely serviceable. Also adapted for offices, banks, vaults, stores, basements, closets in residences and other places. Made with Standard Brass Socket.

No. 1560—For 40 Watt Lamps. Complete with Keyless Socket .....Each, $1.90

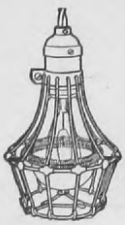


No. 1451. National.

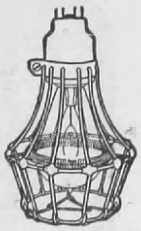
The National handle is rigidly joined to guard, making a solid one-piece portable of great strength that cannot work loose or cause trouble. Made of steel heavily tinned and has porcelain keyless socket fitted with spring contact firmly embedded in handle. The convenient open end allows quick and easy lamp change. It is strong, light and easily handled.

No. 1451—Complete with Porcelain Keyless Socket for 40 Watt Lamps.....Each, $2.50

HOLD FAST LAMP GUARDS



Nos. 117B-814B



Nos. 117WP-814WP.

Tinned Wire, Screw Clamp with spring wire lamp holder.

For Standard Brass Sockets.

Nos.	117B	317B	714B	814B
For Watt Lamps	15-25	40-60	100	150
Per 100	$24.00	27.75	66.75	69.00

For Weatherproof Sockets.

Nos.	117WP	317WP	714WP	814WP
For Watt Lamps,	15-25	40-60	100	150
Per 100	$24.00	27.75	66.75	69.00

NEVER BREAK LAMP GUARDS

Nos. 107 and 109.

Tinned Wire, Lift Clamp with spring wire lamp holder.

For Standard Sockets.

Nos.	107	109
For Watt Lamps	15-25	40-60
Per Dozen	$2.00	2.50

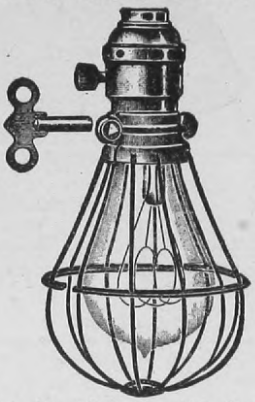
Packed—Never Break Guards, 2 dozen in a Carton.
Hold Fast Guards, 1 dozen in a Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

LOXON LAMP GUARDS



LOXON LAMP GUARD THE KEY TO SAFETY

Extra Keys
Each $0.10

The Loxon Lamp Guard locks the lamp into a socket with a key thus preventing theft as well as breakage and reduces fire danger from hot or broken lamps to a minimum. Heavy tinned wire. **One Key** with every dozen.

For Standard Sockets.

Nos.	1425	1426	2444
For Watt Lamps..	15, 25	40, 60	100
Per Dozen	$6.00	6.30	9.60

Packed—One Dozen in a Carton.

ALL WIRE LAMP GUARDS

Fitted with Screw fastening. Tinned wire construction adaptable to various sizes of lamps.

For Standard Sockets.

Nos.	5691	5692
For Watt Lamps.....	15, 25, 40, 60	75 Type C
Per 100	$29.50	32.25

Packed—Fifteen in a Carton.

ENCLOSED BOTTOM LAMP GUARDS

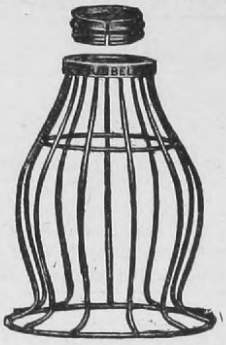
Tinned wire guards, tinned top. Fitted with Shade holder ring.

For Standard Sockets.

Nos.	5573	5578
For Watt Lamps.....	15, 25, 40, 60	75 Type C
Per 100	$34.00	38.75

Packed—Fifteen in a Carton.

FLARING BOTTOM LAMP GUARDS



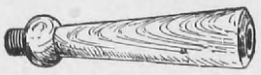
Tinned wire guards, fitted with shade holder ring.

For Standard Sockets.

Nos.	5485	5487
For Watt Lamps.....	15, 25, 40, 60	75 Type C
Per 100	$31.50	34.25

Packed—Fifteen in a Carton.

SOCKET HANDLES



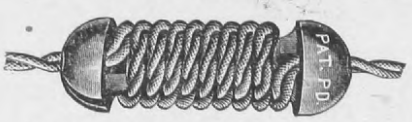
No. 2751. Crescent.

A strong ⅜ inch socket handle with threaded brass nipple firmly embedded in end for socket. A very rigid handle.

No. **2751**—Polished Wood .....Each, $0.13

UNIVERSAL SPOOL CORD ADJUSTERS

No. 1417.



No. 1417. Showing Cord Attached.

A black enameled spool Cord Adjuster which can be quickly attached to cord without tools or removing socket. Does away with knots and loops and unsightly tangle of cord.

No. **1417**—Standard, 3⅜ inches long.....Each, $0.07
No. **1418**—Factory, 5⅛ inches long.....Each, .09
No. **1419**—For Show Window Cord.....Each, .10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

National Electrical Code Standard.

HALF REFLECTORS

No. 6151.

No. 5429.

List No.	Standard Package	Description	Watts	Carton	Package Weight Pounds	Each
6151	50	Steel, Green Outside, White Inside	10–15	1	20	$0.4
6152	50	Brass, Old Brass Outside, Frosted Aluminum Inside	10–15	1	20	.85
5429	50	Steel, Green Outside, White Inside	25–40–60	1	20	.5(
5532	50	Brass, Old Brass Outside, Frosted Aluminum Inside	25–40–60	1	20	.9(

PARABOLA REFLECTORS

No. 5461.

No. 6548.

No. 6550.

		With Holder at Side				
5564	50	6½" Steel, Green Outside, Frosted Inside	25–40–60	1	40	$0.65
5571	50	6½" Brass, Brush Brass Outside, Frosted Inside	25–40–60	1	40	1.5(
5461	50	6½" Aluminum, Green Outside, Frosted Inside	25–40–60	1	30	1.2(
		With Holder at Top				
6094	30	6½" Steel, Green Outside, Frosted Inside	25–40–60	1	35	.65
6548	30	6½" Brass, Brush Brass Outside, Frosted Inside	25–40–60	1	40	1.50
6549	30	6½" Aluminum, Green Outside, Frosted Inside	25–40–60	1	30	1.20
		With Holder at 30° Angle				
6550	30	6½" Steel, Green Outside, Frosted Inside	25–40–60	1	35	.65
6551	30	6½" Brass, Brush Brass Outside, Frosted Inside	25–40–60	1	40	1.50
6552	30	6½" Aluminum, Green Outside, Frosted Inside	25–40–60	1	30	1.20

PAINT ENAMELED REFLECTORS

Green Outside, White Inside

No. 5432.

No. 5441.

		Flat				
5431	100	8" Flat	15–25	10	40	$37.50
5432	100	10" Flat	25–40	10	56	49.00
5433	100	12" Flat	40–60	10	80	70.00
		Deep Cone				
5440	100	8" Cone	15–25	10	58	46.00
5441	100	10" Cone	25–40	10	80	52.00
5442	100	12" Cone	40–60	10	115	100.00

Note.—Enameled Steel Reflectors for Industrial Illumination—Distributing, Extensive, Intensive and Focusing will be quoted and descriptive literature will be sent upon application.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

ELECTRICAL SUPPLIES

Nos. 501, 505, 511. Showing position of Uno Screw Holder being attached to socket.

National Electrical Code Standard.

"UNO" SHADE-HOLDERS

Brushed Brass Finish.

"Uno" Shade Holders attach directly to the threaded bead which is a standard feature of all Bryant-Perkins brass shell medium base sockets and receptacles. Being made in one piece, "Uno" Shade Holders are cheapest both in first cost, as well as in cost of attaching to socket; because of the wedge thread in the holder, the fit between socket shell and holder is more rigid than any other holder on the market.

List No.	Std. Pkg.	Size	Description.	Means of Holding Shade.	Pkg. Wt. Lbs.	Carton	Per 100.
501	500	2¼ in.	Ventilated	3 Screws	35	50	$6.25
502	250	2¼ in.	Ventilated	Spring Grip	20	50	6.60
505	250	3¼ in.	Ventilated	3 Screws	37	25	12.50
506	100	3¼ in.	Ventilated	Spring Grip	18	25	19.00
511	100	4 in.	Ventilated	3 Screws	20	10	16.65

Uno Spring Holder. Nos. 502-506.

HUBBELL SHADE HOLDERS

No. 5339.

No. 5594.

No. 5528.

Three Screw Type—Ventilated

Nos.	Std. Pkge.	Size	Finish	Carton	Per 100
5339	500	2¼	Brushed Brass	50	$ 6.25
5340	250	3¼	Brushed Brass	25	14.85
5595	100	4	Brushed Brass	25	20.55

Three Screw Type—Solid

5594	500	2¼	Brushed Brass	50	$ 7.70
5596	250	3¼	Brushed Brass	25	15.90
5597	100	4	Brushed Brass	25	23.45

Locking Spring Type

Brushed Brass Finish.

No. 5528—2¼ inch..Per 100, $8.70

Packed—Fifty in a Carton.

MOGUL SHADE-HOLDERS

No. 6276.

Showing Mogul Socket.

ACME SHADE-HOLDERS

Nos. 592-593.

No. 592—2¼ inch, Gilt Finish.....Per Gross, $ 6.50

No. 593—3¼ inch, Gilt Finish.....Per Gross, 12.00

Packed—No. 592, 25 Gross; No. 593, 10 Gross in a Case.

Mogul Socket Type Shade-Holders

No. 6276—4 inch, Brushed Brass Finish. 20 in a Carton.....Per 100, **$35.00**

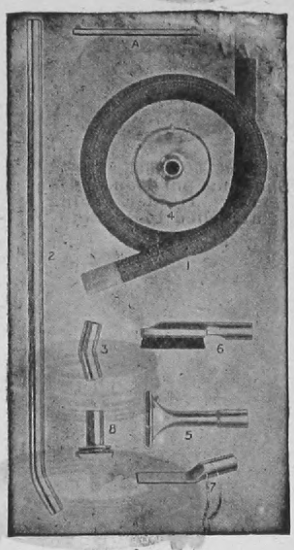
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

ELECTRIC VACUUM CLEANERS

Frantz Premier Electric Cleaner

Extra Attachments

No. 1—8-foot Rubber Hose, nicely covered ..... Each, $3.00
No. 2—Steel Extension Tube, highly polished ..... Each, 1.50
No. 3—Aluminum Extension Tube Bushing ..... Each, .60
No. 4—Aluminum Suction Disc, for connecting Hose to bottom of Cleaner, ... Each, .60
No. 5—Aluminum Cleaning Nozzle for draperies, upholstery, etc.....Each, 1.25
No. 6—Combined Brush and Suction Tool for walls, woodwork, books, clothes, etc. ..... Each, 1.00
No. 7—Steel Blowing Tool, highly polished for radiators, etc.....Each, .60
No. 8—Aluminum Blower Connection; fits outlet for connecting hose..Each, .75
In Sets, including one each of the above Attachments .....Per Set, 8.50



Attachments.

Most popular electric cleaner; a quarter million housewives have chosen the Frantz Premier. A light cleaner. Nine pounds of sterling quality. It will lighten household duties. A modern servant in any home.

In her home, the business man's wife is coming to demand electrical servants—and rightly too—just as her husband employes electric power in his office, factory or store. She finds the Frantz Premier the lightest, most efficient and most economical electric cleaner that she can buy.

An extra wide nozzle, adjustable to any thickness of carpet or rug nap, affords quick cleaning ability. The automatic, air-driven, rubber-tipped brush loosens clotted dirt to be removed and aids in picking up lint, thread and hair.

Model D—Frantz Premier Cleaner, complete with 22 feet of Insulated Wire Cord.....Each, $35.00

EUREKA ELECTRIC CLEANERS

Extra Attachments.

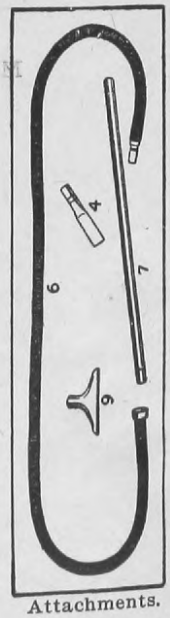
No. 4—Blowing Tool for radiators, books, etc.....Each, $0.50
No. 6—Web Covered Hose, 9 feet long.....Each, 3.50
No. 7—Aluminum Extension Tubing, 30 in. long.....Each, .80
No. 9—Aluminum Nozzle, 7 inches wide.....Each, .90
In Sets, One each No. 4, 6, 7 and 9.....Per Set 4.75

The Eureka was awarded the Grand Prize at the Panama-Pacific International Exposition—the highest award for Electric Vacuum Cleaners.

The rollers on the nozzle enable the machine to operate with great ease and rapidity. The floor brush furnished with every machine will positively remove all threads, lint, etc.

The fan revolves ten thousand times per minute, giving the machine a strong suction. The fan is made of steel, the oiling device is automatic, thus making the Eureka dependable and durable.

The Eureka is equipped for cleaning any piece of household goods whatever.

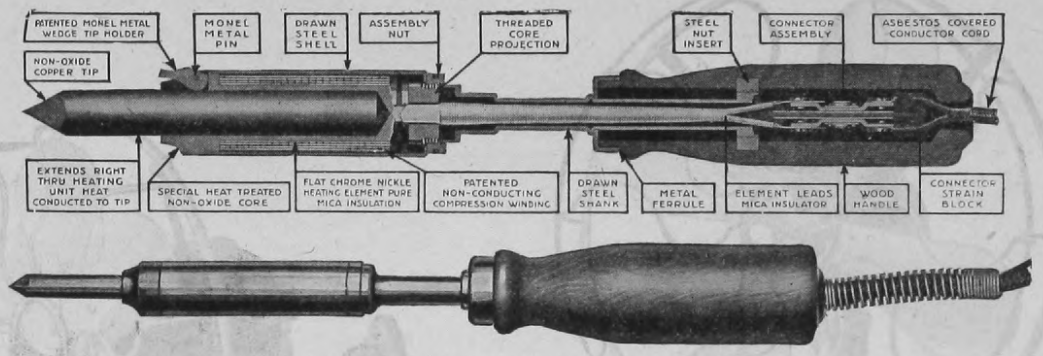


Attachments.

Eureka—Complete with 25 feet of Insulated Wire Cord..... Each, $29.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"AMERICAN BEAUTY" ELECTRIC SOLDERING IRON



A glance at the illustration will show that the details of construction have been given the most careful attention and in this iron is embodied all of those features which long experience has proven to be of value.

The element core and the shank of the copper tip are heat treated and will not readily corrode or oxidize. The heating element of nickel chromium ribbon, insulated with pure mica, is kept in intimate contact with the core by means of a patented compression winding. This prevents overheating of the element.

The exterior of the iron is perfectly smooth, there are no projecting screw heads. The finish is polished nickel with Circassian Walnut finish wood handle. Iron is supplied complete with six-foot cord and lamp socket attachment plug.

Copper tips are of standard size drawn copper rod, ⅜, ⅝ and ⅞ inches respectively in diameter. As the tip wears away it is possible to withdraw it from the core and most of the tip may thus be utilized.

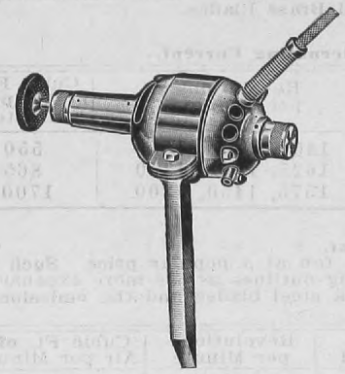
It is to be noted that tips are straight rod and do not have an enlarged head. Experience having proven that the extra copper or the increased diameter of an enlarged tip head does not increase the capacity of an electric soldering iron. The capacity of an electric soldering iron depends entirely upon the watt consumption and thus upon the heat units supplied, together with a construction that makes such heat units effective at the point of the tip.

This soldering iron is of very simple construction and is made on the unit system so that every part is easily removable, replaceable and interchangeable. It can easily and quickly be taken apart by anyone. Every possible requirement is covered by the following three sizes:

Nos.	Watts	Diam. of Tip	Outside Diam. over all	Length over all	Weight	Each
3138	100	⅜ in.	13/16 in.	12 1/16 in.	18 oz.	$ 7.75
3158	200	⅝ in.	1 3/16 in.	12 3/32 in.	26 oz.	11.00
3178	300	⅞ in.	1½ in.	13 21/32 in.	42 oz.	12.25

Made in the following voltage ranges: 95-104; 105-114; 115-125; 190-209; 210-229; 230-250. Can also be supplied for 32 volts at list price plus 50 cents.

ELECTRIC GRINDERS



A high efficiency grinder that will readily solve your grinding problems—the result of many years of careful experimenting and research work by the ablest electrical and mechanical engineering brains in the country.

A special feature of the H. B. Grinder is the dust-proof bearing caps. No grit or dirt comes in contact with the high speed, nickel babbitt bearings. It is perfectly balanced throughout, assuring absolute accuracy at all times, and eliminating any possibility of vibration. The Universal Joint is perfectly fitted and is true in operation.

Equipped with the celebrated H. B. Universal Air Cooled Motor, which has abundance of reserve power, eliminating all necessity of crowding grinder to do the work. It is one of the lightest and most convenient electric grinders ever placed on the market, weighing but 5½ pounds.

Comes complete with emery wheel that is tried, trued and tested before leaving factory, and a C. H. feed through switch placed near the grinder, so that the current may be instantly cut off without leaving the work.

Operates from an electric light socket, from 104 to 120 Volts, Direct or Alternating.

Each $25.00

ELECTRIC GLUE POTS

These glue pots are ideal for use in heating glue and keeping it at the proper temperature. They practically eliminate the hazard of fire, are economical to operate, and do away with all of the annoyances attendant upon use of steam or flame-heated glue pots.

They maintain a practically constant temperature, require very little attention, are always ready for use, and thus produce the best results.

American Beauty electric glue pots are made with an outside casing of cast iron, the glue container being of copper, spun in one piece and the cord is protected by flexible metal armor.

The whole device is very ruggedly constructed and will last for many years. They are portable and can be easily moved about. Thousands of them are in use giving the most satisfactory results.

They are arranged with three heat regulation; maximum wattage for high heat, one-quarter of maximum for low heat, one-half of maximum for intermediate heat. High heat quickly brings the glue to the proper working temperature, after that low heat keeps the glue at that temperature. The heating element is of the disc type and is easily and quickly removable.

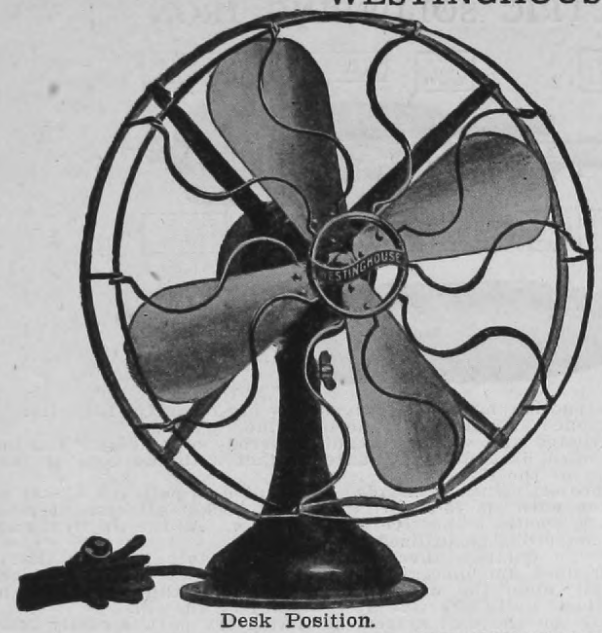
Nos.	Capacity	Heat	Shipping Weight	Max. Watts	Each
181	1 quart	3	18 lbs.	440	$20.00
182	2 quarts	3	25 lbs.	570	23.00
145	4 quarts	3	50 lbs.	880	35.00

Made in the following voltage ranges. 95-104, 105-114, 115-125, 190-209, 210-229, 230-250.

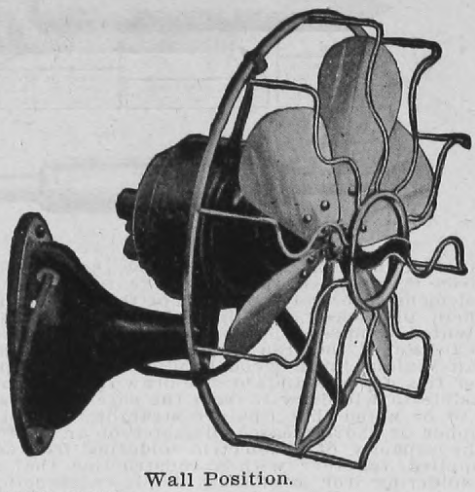
Furnished with six-foot cord and No. 812 three heat porcelain switch for series multiple connection.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WESTINGHOUSE ELECTRIC FANS



Desk Position.



Wall Position.

WESTINGHOUSE ELECTRIC FANS

Attractive in appearance, light in weight, quiet in operation, most efficient in the amount of air moved, very economical in the consumption of current. Can be mounted as desk or bracket fans, body can be tilted or rotated to any position desired without the use of tools or extra parts. Has three distinct speeds controlled by switch in base, motor can be started and operated continuously on any of the speeds. Frame is of Drawn Steel, finished in Black; Guard is of heavy Brass, dipped and lacquered, and supported by four pressed steel arms securely fastened to fan body. Blades are of heavy Brass, firmly riveted to a spider and highly polished. Grease cups with felt wicks held in contact with the shaft by spiral springs lubricate the bearings and require attention only once a season.

Desk and Bracket Fans—Designed especially for office use, also extensively used in small rooms. A swivel-and-hinge joint gives the widest possible range of vertical and horizontal adjustments. Can be tilted forward 15 degrees, backward 90 degrees and rotated 340 degrees; a stop-pin prevents complete rotation and danger of breaking the leads. The 8-inch fan is a very popular size for use in the home or individual desk use, though small in size and very light in weight, it gives a strong breeze.

Standard Finish—The 8-inch Fans are Dull Black Finish on all parts; 10, 12 and 16-inch, Dull Black, Smooth and Lustrous. 10-inch Fans have Nickel Plated Blades, 12 and 16-inch Polished Brass Blades.

Non-Oscillating

Three Speeds: High, Medium and Low. For Alternating Current.

Nos.	Diam.	Blades	Cycles	Volts	Watts at High Speed	Revolutions per Minute	Cubic Ft. of Air per Minute	Each
241842	10″	4	60	100-120	32	1450, 1250, 1000	550	$17.00
162628	12″	4	60	100-120	42	1625, 1500, 1350	865	21.00
162631	16″	4	60	100-120	83	1575, 1450, 1300	1700	25.00

Whirlwind Non-Oscillating

One Speed. For Alternating Current.

Whirlwind Non-Oscillating Electric Fans meet the demand for a small fan at a popular price. Such a fan finds a large field of usefulness in small homes and offices. It has the same pleasing outlines as the more expensive and larger fans, its low price being due to the absence of speed control switch, black steel blades and the omission of other refinements not required for durability.

Nos.	Diam.	Blades	Cycles	Volts	Watts at High Speed	Revolutions per Minute	Cubic Ft. of Air per Minute	Each
253468	8″	4	60	100-120	29	1625	350	$10.00

Oscillating

Three Speeds: High, Medium and Low. For Alternating Current.

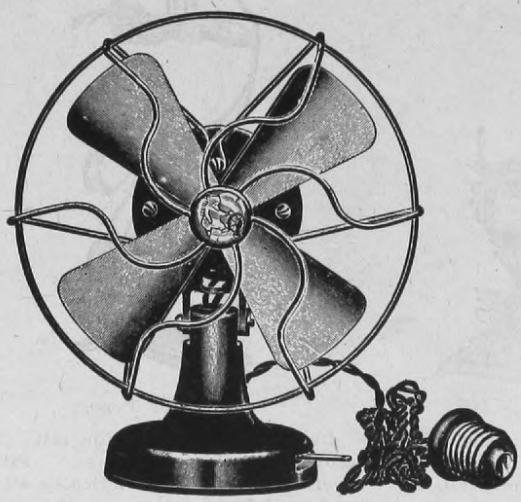
These Fans are identical in construction with the desk and bracket type, with the exception of the oscillating mechanism and the swivel-and-hinge joint, and posses the same handsome appearance, light weight, high efficiency and quiet operation. Designed for use in large rooms and wherever distributed breeze is desired in place of a steady breeze in one direction, especially desirable for use in hotel lobbies and dining rooms. **Oscillation** is produced by means of a mechanism geared to the motor shaft, and **may** be shut off at will. The mechanism is entirely enclosed and will not drop oil. Eight complete oscillations a minute are made on high speed, in fans as shipped the angle of oscillation is 90 degrees, but this can be changed to 45 degrees by a simple adjustment. A hinge joint permits the fan to be tilted 20 degrees backward or forward in the vertical plane. The fan is also arranged for bracket mounting by removing a set screw, turning the motor back 90 degrees and replacing set screw, no adapter is required.

Nos.	Diam.	Blades	Cycles	Volts	Watts at High Speed	Revolutions per Minute	Cubic Ft. of Air per Minute	Each
241853	10″	4	60	100-120	34	1450, 1250, 1100	550	$22.00
164848	12″	4	60	100-120	44	1625, 1500, 1350	865	27.00
164864	12″	6	60	100-120	44	1050, 975, 900	850	27.75
164851	16″	4	60	100-120	85	1575, 1450, 1300	1700	30.50
177109	16″	6	60	100-120	85	1050, 975, 900	1725	31.50

Packed—One in a Box, with Attachment Plug and Cord.
The 8-inch Fans have 7½ feet of cord, 10-inch 10 feet, 12-inch and 16-inch 8 feet.
Note.—**Can also furnish above fans for 50, 40, 25, 30 Cycles, Alternating and for Direct Current.**

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRIC FANS



Polar Cub.

Cyclone.

POLAR CUB ELECTRIC FANS

Two Speeds—For Either Alternating or Direct Current.

The Polar Cub Electric Fan for home or office use is built for Desk or Wall use, a hook on the base providing the Wall attachment. It has **Two Speeds,** the Frame is die cast, the Guard is spot welded, the Fan is adjustable to any angle. It is porcelain insulated and very economical. Substantial Round Base handsomely finished in Black Enamel. Fan Frame and Fan Blades are all Wrought Metal; Brass Plated.

Polar Cub—6 in. Fan, complete with 8 ft. cord and Plug..... Each, $5.85

Packed—One in a Box.

CYCLONE UNIVERSAL ELECTRIC FANS

Five Speeds—For Either Alternating or Direct Current.

Cyclone Universal Electric Fans are extremely popular in homes and offices, largely on account of exceeding attractiveness due to their style and finish. The Base is Extra Heavy adaptable for Desk or Wall use. It is Highly Polished Nickel Finish. They are ideal fans for the dressing room, bath room, library, den or small office. They operate smoothly, emitting only a mere drone, the unavoidable result of a large body of air being moved at high velocity. Being light they are easily carried from one room to another as required. Using little current their maintainance is not burdensome and by keeping the grease cups filled a perfect lubricating system is maintained. They last indefinitely. Guaranteed absolutely against all mechanical and electrical defects. Equipped with a rheostat speed control, giving five different speeds.

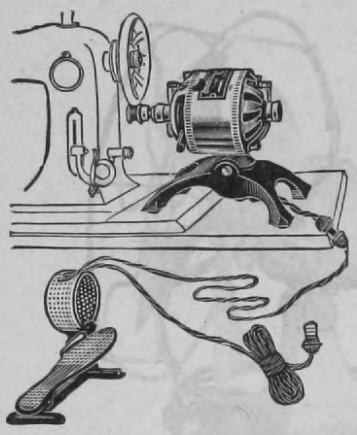
Cyclone—8 in. Fan complete with 8 ft. cord and plug.....Each, $12.50

Packed—One in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ELECTRICAL SPECIALTIES

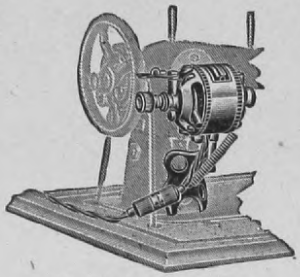
SEW-E-Z SEWING MACHINE MOTORS



Jack Rabbit Type.

For all Styles and Models of Sewing Machines. Operated by simply placing the self-starter on the floor and attaching the plug to an ordinary light socket.

J-R—Sew E-Z Motor..Each, $15.00



Bracket Type.

Practically the same as the Jack Rabbit but with a special bracket, allowing its turning under the head, out of the way when not in use.

Bracket—Sew E-Z Motor.Ea., $15.00

Tailor Type.

Designed especially for tailor shops, glove and shirt factories. Fits and operates perfectly practically all types and models of tailor's machines.

Tailor—Sew E-Z Motor.Each, $22.00

Note—Specify Make of Machine.

SEW-E-Z MOTOR ATTACHMENTS

Fan.

Grinder.

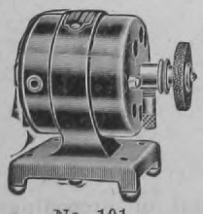
Polisher.

Sew-E-Z Motors when not operating the sewing machine can be used with either of the above attachments with great satisfaction.

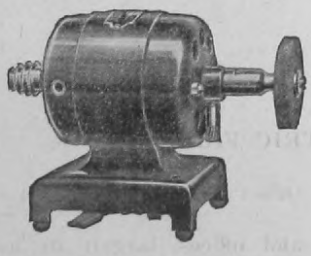
Fan—Attachment consists of an 8-in., 4 Bladed Nickel Plated Fan with Guard.....Each, $2.50

Grinder—Attachment consists of an Emery Wheel and Polishing Wheel sold together. Complete.....Each, 1.25

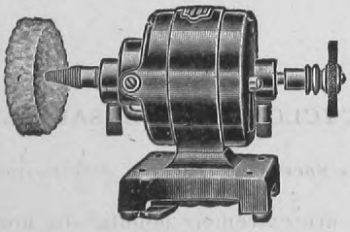
SMALL POWER MOTORS



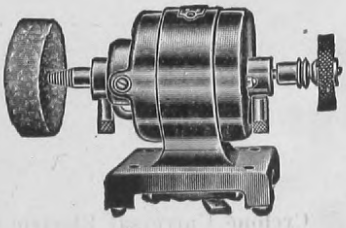
No. 101.
1-20 Horse Power.



No. 102. 1-16 Horse Power.



No. 103. 1-12 Horse Power.



No. 104. 1-8 Horse Power.

For Manufacturers, Repair Shops, Hotels, Restaurants, Hospitals and Sanitariums.
For a great variety of tasks they are extremely convenient and very inexpensive.
They are adaptable for connection to any ordinary electric light socket.

No. 101—1/20 H. P. This type of motor has a shaft extension on one side only, and is equipped with Emery Wheel 1½x¼x¼ inch, Emery Wheel Arbor and Pulley .....Each, $11.00

No. 102—1/16 H. P. Has shaft extension on both sides and when furnished complete has Emery Wheel 2x¼x⅜ inch, Emery Wheel Arbor, also Three Step Pulley .....Each, 18.50

No. 103—1/12 H. P. With shaft extension on both sides, Emery Wheel 2½x½x⅜ inch, Emery Wheel Arbor with Pulley, Buffing Arbor and 4-inch 40-Ply Buffer..... Each, 23.50

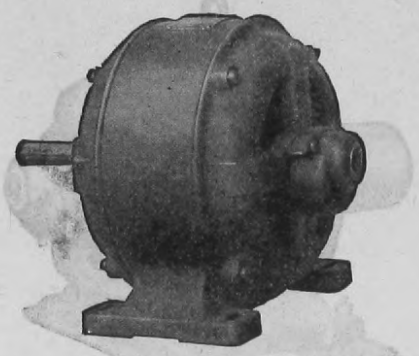
No. 104—⅛ H. P. With 4-inch 60-Ply Buffer, otherwise as No. 103..... Each, 26.50

Note—All above styles operate on either direct or alternating current, 110 to 120 Volts. Nos. 102, 103 and 104 have variable speed lever. No. 101 has no variable speed lever.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WESTINGHOUSE MOTORS

TYPE CSA



Alternating Current.

¼ to 3 Horsepower—60 Cycles.

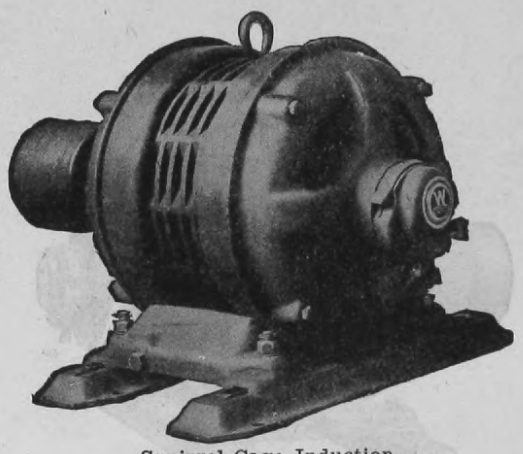
Westinghouse Small Type CSA Squirrel-Cage Alternating Current Polyphase Motors are suitable for constant speed service and are applicable for driving small machines in nearly every industry. These motors have been developed after long experience in motor design and a careful study of the factors bearing upon the application of small motors in various industries. They meet the exacting requirements of this service and will prove thoroughly satisfactory to both the makers and the users of the machine they drive.

Type CSA Motors supplement the Standard line of Type CS Motors, thus forming a complete line of polyphase Squirrel-Cage Motors.

Horse-Power	R.P.M. at Full Load	Poles	Std. Voltage	Paper Pulleys Std. Diam. x Face
¼	1725	4	110, 220, 440, 550	3 x1¾
¼	1140	6	110, 220, 440, 550	3 x1¾
¼	850	8	110, 220, 440, 550	3½x2½
½	3450	2	110, 220, 440, 550	3 x1¾
½	1725	4	110, 220, 440, 550	3½x2½
½	1140	6	110, 220, 440, 550	3½x2½
½	850	8	110, 220, 440, 550	3½x2½
¾	1725	4	110, 220, 440, 550	3½x2½
¾	1140	6	110, 220, 440, 550	3½x2½
¾	850	8	110, 220, 440, 550	3½x3
1	3450	2	110, 220, 440, 550	3½x2½
1	1725	4	110, 220, 440, 550	3½x2½
1	1140	6	110, 220, 440, 550	3½x3
1	850	8	110, 220, 440, 550	4 x3¾
1½	1725	4	110, 220, 440, 550	3½x3
1½	1140	6	110, 220, 440, 550	4 x3¾
2	3450	2	110, 220, 440, 550	3½x3
2	1725	4	110, 220, 440, 550	4 x3¾
3	3450	2	110, 220, 440, 550	4 x3¾

Note.—All Voltages listed are for either 2 or 3 phase, except 550 Volts, which is for 3-phase only. We will not under any circumstances, guarantee motors if operated with pulleys smaller than those listed.

TYPE CS



Squirrel-Cage Induction.

2 to 20 Horsepower.

Westinghouse Large Type CS Squirrel-Cage Alternating Current Polyphase Motors are suitable for constant speed service, and are therefore applicable for driving machinery in nearly every industry. Largely constructed of rolled steel, they combine great strength while reducing the weight of inactive material and the overall dimensions to a minimum. The rotors are practically indestructible. The bearings have very liberal areas and are non-leaking and protected from dust.

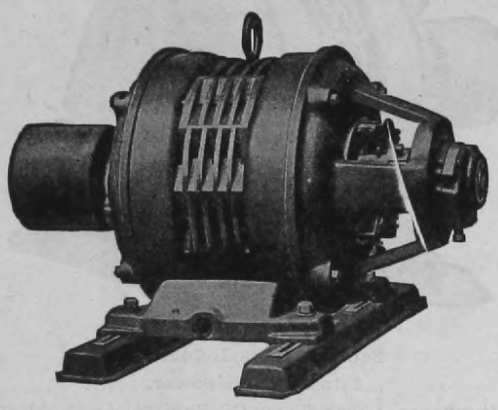
Horse-Power	R.P.M. at Full Load	Poles	Std. Voltages	Paper Pulleys Std. Diam. x Face
*2	1720	4	220, 440, 550	
2	1120	6	220, 440, 550	4x4
2	850	8	220, 440, 550	4x4
3	1730	4	220, 440, 550	4x4
3	1130	6	220, 440, 550	4x4
3	850	8	220, 440, 550	5x4½
5	3500	2	220, 440, 550	4x3
5	1735	4	220, 440, 550	4x4½
5	1140	6	220, 440, 550	5x4½
5	850	8	220, 440, 550	6x5
5	675	10	220, 440, 550	7x6
5	565	12	220, 440, 550	8x7
7½	3520	2	220, 440, 550	4x4
7½	1740	4	220, 440, 550	5x4½
7½	1140	6	220, 440, 550	6x5
7½	855	8	220, 440, 550	7x6
7½	680	10	220, 440, 550	8x7
7½	570	12	220, 440, 550	9x8
10	3520	2	220, 440, 550	4x4
10	1740	4	220, 440, 550	6x5
10	1150	6	220, 440, 550	7x6
10		8	220, 440, 550	8x7
10		10	220, 440, 550	9x8
10		12	220, 440, 550	10x9
15	3540	2	220, 440, 550	4x4½
15	1740	4	220, 440, 550	7x6
15	1755	4	2200	7x6
15	1155	6	220, 440, 550	8x7
15	1160	6	2200	8x7
15		8	220, 440, 550	9x8
15		10	220, 440, 550	10x9
15		12	220, 440, 550	11x10
20	3540	2	220, 440, 550	6x5
20	1740	4	220, 440, 550	9x8
20	1760	4	2200	9x8
20	1160	6	220, 440, 550	9x8
20	1165	6	2200	9x8
20		8	220, 440, 550	10x9
20		8	2200	10x9
20		10	220, 440, 550	11x10
20		12	220, 440, 550	12x12

Note.—*Vertical and Back Geared only.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WESTINGHOUSE MOTORS

TYPE "AR"



Single-Phase

½ to 10 Horsepower—110 and 220 Volts—60 Cycles.

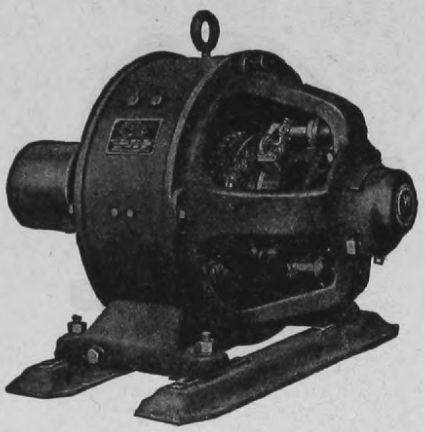
The many advantages of electric power for small machines have led to a general use of small motors and electric lights from the same power circuit. Accordingly the motor which can be operated successfully from the same circuit with lights is a great advantage to every one who has a small machine to turn or needs a light at night.

The **Westinghouse** Single-Phase Motor, Type AR, has reliable operating characteristics and performance, both electrically and mechanically, equal to that of the polyphase motor. These motors are especially adapted to service which demands a strong starting effort, while at the same time they require less current from the supply circuit than any other type. It operates as an induction motor with short circuited secondary, but like all single phase motors special means for starting must be provided. The commutator and brushes, used only when starting.

Horse-Power	R. P. M. at Full Load	Poles	Std. Voltage	Paper Pulleys Std. Diam. x Face
½	1725	4	110, 220	3½x2½
½	1140	6	110, 220	3½x2½
¾	1725	4	110, 220	3½x2½
¾	1150	6	110, 220	3½x2½
1	1725	4	110, 220	3½x2½
1	1150	6	110, 220	3½x3
1½	1725	4	110, 220	3½x3
2	1740	4	110, 220	4 x3
2	1150	6	110, 220	4 x4
3	1740	4	110, 220	4 x4
3	1150	6	110, 220	5 x4½
5	1750	4	110, 220	5 x4½
5	1150	6	110, 220	7 x6
7½	1750	4	110, 220	7 x6
7½	1150	6	110, 220	7 x6
10	1750	4	110, 220	7 x6
10	1160	6	110, 220	7 x6

Note.—Pulleys require special offset hub usually. Pulleys of wider face require special shaft. We will not under any circumstances, guarantee motors if operated with pulleys of dimensions smaller than those listed.

TYPE "SK"



Direct-Current Commutating-Pole

1½ to 20 Horsepower—115, 230 and 550 Volts.

Westinghouse Direct-Current Commutating-Pole Motors represent the most advanced design in direct-current machines for general constant and adjustable-speed power purposes; they are especially suitable for driving machine tools and elevators where the load is frequently started, stopped and reversed.

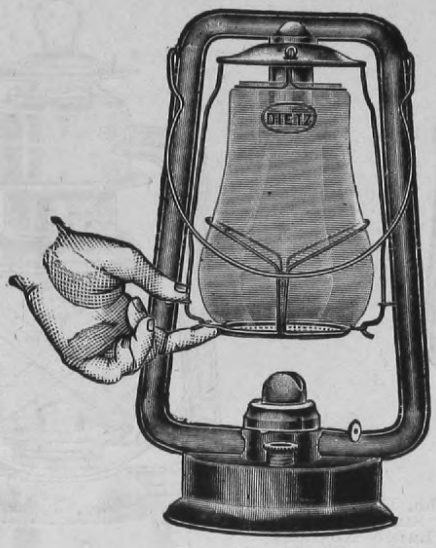
The distinguishing features of these motors are their great mechanical strength, excellent commutation and dust-proof bearings which are automatically lubricated. The commutation is practically sparkless on all loads, overloads and speeds and in either direction of rotation without change in the brush position.

The Efficiency is high at all loads. The overload capacity is ample for all services in which these motors are used and extremely high momentary peak loads can be handled without injury to the motor.

115 Volts		230 Volts		550 Volts	
Horse-P.	R. P. M.	Horse-P.	R. P. M.	Horse-P.	R. P. M.
1½	900	1½	900	....	....
2	1200	2	1200	2	1350
3	1800	3	1800	3	1800
2	850	2	850	2	900
3	1150	3	1150	3	1200
5	1800	5	1800	5	1800
3½	850	3½	850	3½	900
5	1100	5	1100	5	1200
.....	....	7½	1700	7½	1750
5	850	5	850	5	850
7½	1150	7½	1150	7½	1150
.....	....	10	1700	10	1700
7½	975	7½	975	7½	975
10	1300	10	1300	10	1300
7½	850	7½	850	7½	850
10	1150	10	1150	10	1150
.....	....	15	1700	15	1700
15	1250	15	1250	15	1250
.....	....	20	1700	20	1700
15	1100	15	1100	15	1100
20	1100	20	1100	20	1100

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TUBULAR LANTERNS



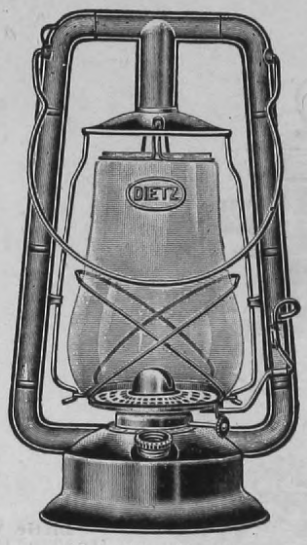
Nos. 10 and 10R.

Hy-lo Hot Blast, Improved with Simple Lift. First Quality Tin Plate, Strong and Well Made, No. 1 Burner, ⅝ inch Wick, No. 0 Tubular Globe. Fount holds 1⅓ pint of oil, burns 18 hours.

No. 10 —Retinned, Plain Globe..Per Dozen, $.....

No. 10R—Retinned, **Ruby** Globe..Per Dozen, ...

Packed—One Dozen in a Case.



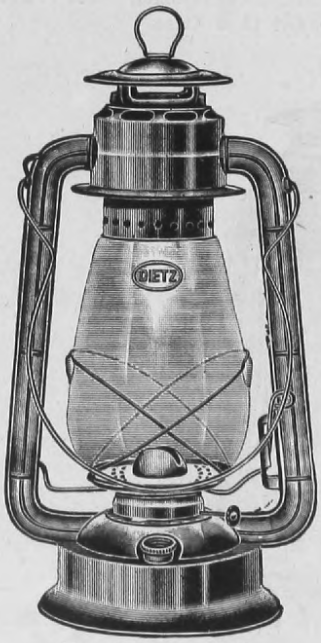
Nos. 17 and 17R.

Monarch Hot Blast, Extra Quality Tin Plate. Domed Well, Security Standing Bail, Positive Locking Lift, Large No-leak Filler Screw. No. 1 Hot Blast Locked-in-Steel Burner, ⅝ inch Wick, No. 0 Tubular Globe. Fount holds 1⅓ pints of oil, burns 18 hours.

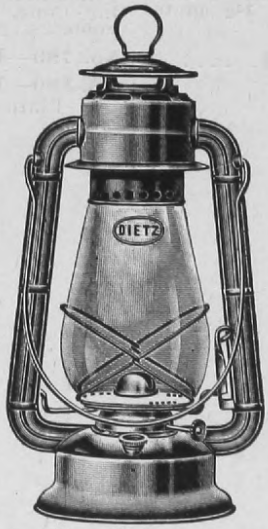
No. 17 —Retinned, Plain Globe..Per Dozen, $.....

No. 17R—Retinned, **Ruby** Globe..Per Dozen, ...

Packed—One Dozen in a Case.



Nos. 275 and 275R.



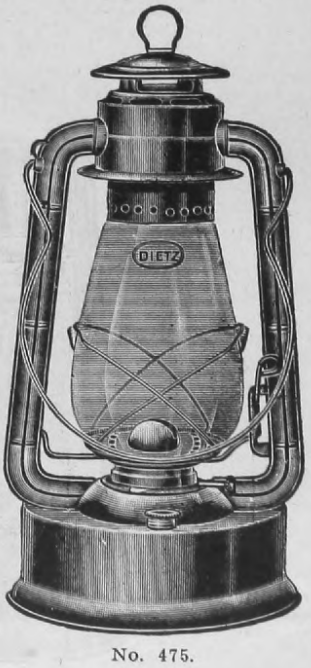
Nos. 23 and 27.

Junior Cold Blast, Extra Quality Tin Plate, Domed Well, Security Standing Bail, Seamless Inside Cylinder, Inside Lever Lift, Large No-leak Filler Screw. Most perfect small lantern made. No. 1 Cold Blast Locked-in Burner, ⅝ inch wick, No. 00 Cold Blast Jr. Globe. Fount holds 1 pint of oil, burns 13 hours.

No. 23—Retinned, Plain Globe.....
.....Per Dozen, $.....

No. 27—Brass, Frosted Finish, Plain Globe .....Per Dozen, ...

Packed—Half Dozen in a Case.



No. 475.

Blizzard No. 2 Cold Blast, Extra Quality Tin Plate, Domed Well, Security Standing Bail, Reinforced Tubes, Inside Lever Lift, Large No-leak Filler Screw, No. 2 Cold Blast Locked-in Steel Burner with Rising Cone. 1 inch Wick, No. 2 Cold Blast Globe. Fount holds 1⅛ pints of oil, burns 20 hours.

No. 275 —Retinned, Plain Globe..Per Dozen, $.....

No. 275R—Retinned, **Ruby** Globe..Per Dozen, ...

Packed—One Dozen in a Case.

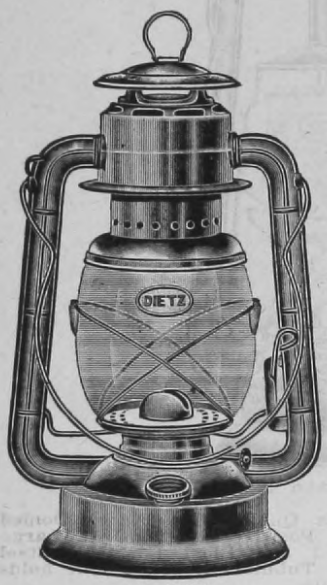
Blizzard No. 2 Cold Blast, Mammoth Fount, Extra Quality Tin Plate, Domed Well, Security Standing Bail, Reinforced Tubes, Inside Lever Lift, Large No-leak Filler Screw, No. 2 Cold Blast Locked-in-Steel Burner with Rising Cone, 1 inch Wick, No. 2 Cold Blast Globe. Fount holds 2¾ pints of oil, burns 40 hours.

No. 475—Retinned, Plain Globe..Per Dozen, $.....

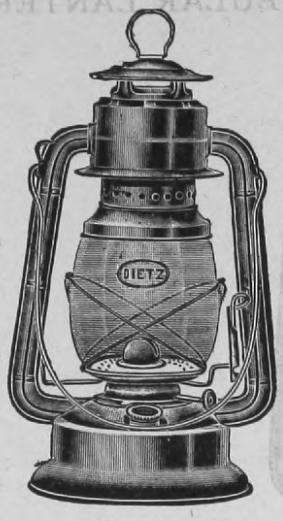
Packed—One Dozen in a Case.

Digitized by UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

TUBULAR LANTERNS



No. 775.

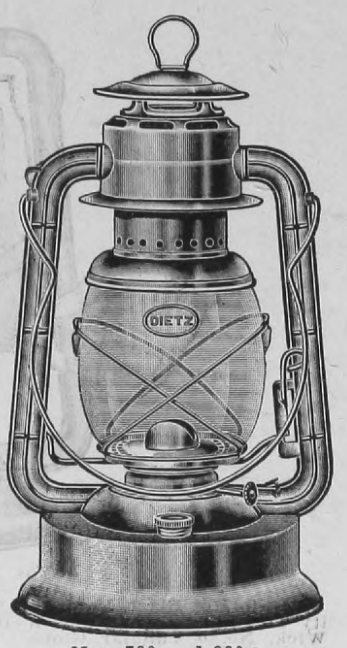


No. 723.

Little Wizard Cold Blast, **Short Globe,** Extra Quality Tin Plate, Domed Well, Security Standing Bail, Reinforced Tubes, Inside Lever Lift, Large No-Leak Filler Screw, No. 1 Cold Blast Locked-in-Steel Burner with Rising Cone, ⅝ inch Wick, No. 723 Cold Blast Globe. Fount holds 1½ pints of oil, burns 18 hours.

No. 723—Retinned, Plain Globe.....
.....Per Dozen, $.....

Packed—One Dozen in a Case.



Nos. 780 and 880.

Wizard No. 2 Cold Blast, **Short Globe,** Extra Quality Tin Plate, Domed Well, Security Standing Bail, Reinforced Tubes, Inside Lever Lift, Large No-Leak Filler Screw, No. 2 Cold Blast Locked-in Burner with Rising Cone. 1 inch Wick, No. 775 Cold Blast Globe. Fount holds 1½ pints of oil, burns 20 hours.

No. 775—Retinned, Plain Globe..Per Dozen, $.....

Packed—One Dozen in a Case.

Wizard No. 2 Cold Blast, Short Globe, **Mammoth Fount,** Extra Quality Tin Plate, Domed Well, Security Standing Bail, Reinforced Tubes, Inside Lever Lift, Large No-Leak Filler Screw, No. 2 Cold Blast Locked-in Burner with Rising Cone, 1 inch Wick, No. 775 Cold Blast Globe. Fount holds 2¾ pints of oil, burns 40 hours.

No. 780—Retinned, Plain Globe..Per Dozen, $.....

No. 880—Retinned, **Brass** Fount and Canopy, Plain Globe .....Per Dozen, ...

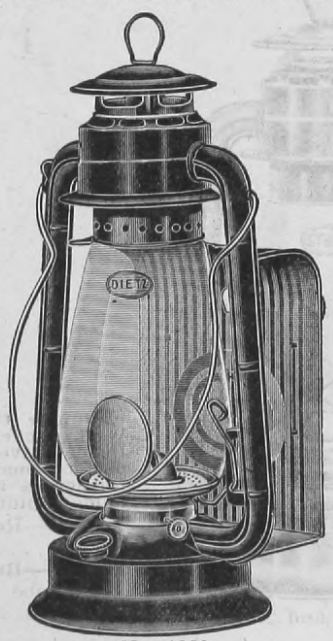
Packed—One Dozen in a Case.

No. 50.

Buckeye Hot Blast with **Corrugated Reflector** and Bullseye Globe. Extra Quality Tin Plate, Domed Well, Security Standing Bail, Locking Lift, Large No-Leak Filler Screw, No. 1 Locked-in-Steel Burner, ⅝ inch Wick, No. 0 Tubular Bullseye Globe. Fount holds 1½ pints of oil, burns 20 hours. A Clip-Spring holds it on the Dash.

No. 50—Black Enameled.....Per Dozen, $.....

Packed—Half Dozen in a Case.



No. 1280.

Blizzard No. 2 Cold Blast, with Corrugated Reflector and Bullseye Globe. Extra Quality Tin Pate, Domed Well, Security Standing Bail, Inside Lever Lift, Large No-Leak Filler Screw, No. 2 Cold Blast Locked-in-Steel Burner with Rising Cone. 1 inch Wick, No. 2 Cold Blast Bullseye Globe. Fount holds 1½ pints of oil, burns 20 hours. A Clip-Spring holds it on the Dash.

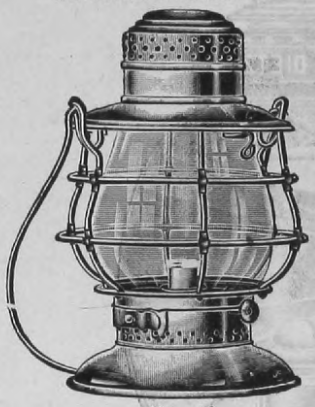
No. 1280—Black Enameled.....Per Dozen, $.....

Packed—Half Dozen in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CADET LANTERNS

R. R. LANTERNS



No. 39.

Small Brass Lanterns, Wicked ready for use; can be lighted without removing the Globe. Height 7¼ inches.

Cadet—Small Brass Lanterns with Plain White Globes.. .....Per Dozen, $.....

Packed—In Open Stock.

AIR-O-LITE LANTERNS

No. QL327.

Standard Rail Road Lanterns

Heavy Stamped Base, Hinged Top, Single Guard, Outside Wick Raiser, No. 2 Burner, 1 inch Wick, No. 39 Globe.

No. 39—Bright Tin, with Plain Globe.... .....Per Dozen, $.....

No. 39R—Bright Tin, with Ruby Globe.... .....Per Dozen, ...

Packed—One Dozen in a Case.

Quick Light "Gasoline Lanterns"

Burn their own Gas, which is made from Gasoline as it is consumed by the lanterns in use. The light furnished is white and bright. Mica Chimney, Two Mantles, Fount holds 3 pints, burns about 15 hours. Lights with a common match.

No. QL327—Nickel Plated Brass.....Per Dozen, $10.80

Packed—One in a Carton, One Dozen in a Case.

VEHICLE LANTERNS

DRIVING LAMPS

Eureka. Dash Clamp Holder.

Eureka Driving Lamps, For Kerosene.

Small but reliable, Complies with Night Driving Laws. 3 inch Door Lens, 2½ inch Ruby Lens, ⅝ inch Wick. Fount holds oil supply for 10 hours burning. Equipped with Dash Clamp Holder.

Eureka—Enameled Black with Nickel Plated Door Rim.....Per Dozen, $.....

Note—Specify for Right or Left Hand.

Packed—One in a Carton, One Dozen in a Case.

FLAT BRACKET

No. 25.

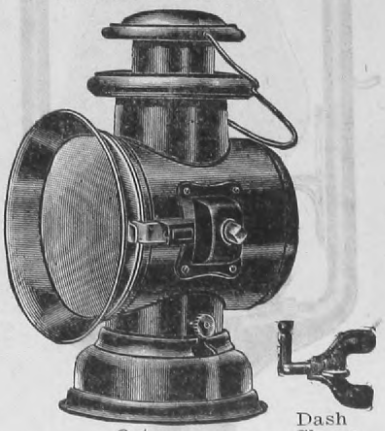
Junior Wagon or Vehicle Lantern. Conforms to the law requiring all vehicles to carry a lamp which throws a bright light in front and a red light in the rear. Extra Quality Tin Plate, Domed Well, Inside Lever Lift, Large No-Leak Filler Screw. No. 1 Cold Blast Locked-in-Brass Burner, ⅝ inch Wick, No. 00 Cold Blast Globe, 2¼ inch Ruby Lens set in a Polished Corrugated Reflector. Height 12 inches. Furnished complete with bracket attachment. Fount holds 1 pint of oil, burns 20 hours.

No. 25—Enameled Black, Bull's Eye Globe .....Per Dozen, $.....

Note.—Specify for Right or Left Hand.

Packed—Half Dozen in a Case.

DRIVING LAMPS



Octo. Dash Clamp. Holder

Octo Driving Lamps, For Kerosene.

Cold Rolled Steel, Cold Blast Construction, Complies with Night Driving Laws and will not jar or blow out. 4⅝ inch Door Lens, 2¼ inch Ruby Lens, ⅜ inch Wick. Fount holds oil supply for 10 hours burning. Equipped with both Right and Left Hand Holder Sockets and Dash Clamp Holder.

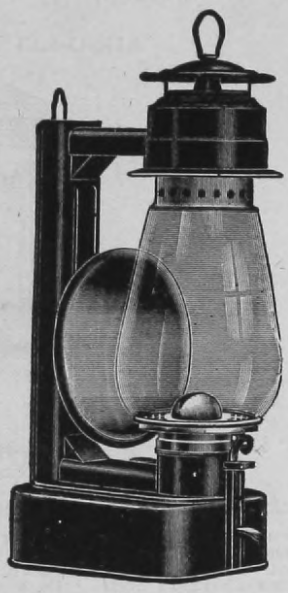
Octo—Enameled Black with Nickel Plated Door Rim.....Per Dozen, $.....

Note.—Specify for Right or Left Hand.

Packed—One in a Carton, Half Dozen in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SIDE LAMPS AND HEADLIGHTS

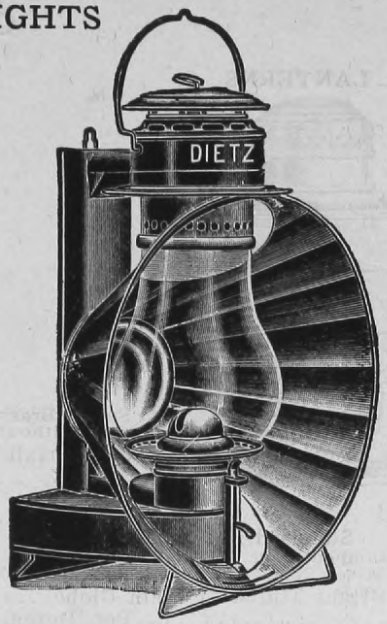


No. 75.

Wall or Side Lamps, Cold Blast, Extra Quality Tin Plate, with 6 inch Silvered Glass Reflector, No. 2 Cold Blast Locked-in-Steel Burner, 1 inch Wick, No. 2 Cold Blast Globe. Fount holds 1 quart of oil, burns 35 hours.

No. 75—Enameled Green, Plain Globe.....
.....Per Dozen, $.....

Packed—Half Dozen in a Case.

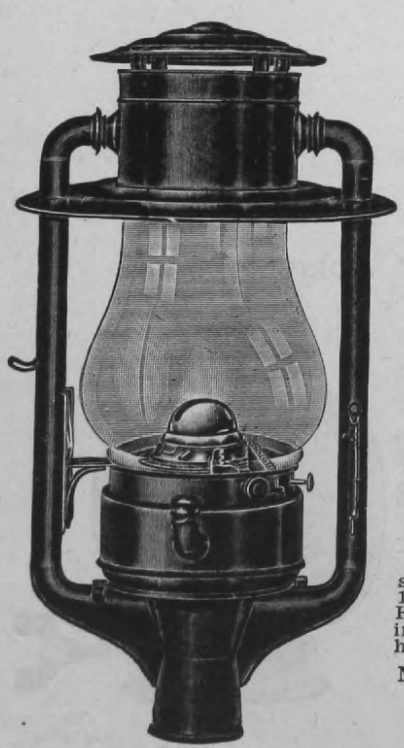


No. 100.

Beacon Cold Blast Headlights, Extra Quality Tin Plate, 2¼ inch Lens, 7 inch Nickel Plated Brass Reflector with 16 inch Concentric Corrugated Hood. No. 2 Cold Blast Burner, 1 inch Wick, No. 2 Cold Blast Globe. Fount holds 1¾ quarts of oil, burns 35 hours.

No. 100—Enameled Green, Plain Globe.....
.....Per Dozen, $.....

Packed—Half Dozen in a Case.



No. 9.

Pioneer Tubular Globe Street Lamps

Cold Blast. Fitted with Automatic Extinguisher which may be set to burn 4, 8, 12, 16, 20 or 24 hours and go out of its own accord. No. 9 Cold Blast Burner, 1½ inch "D" Wick, and No. 9 Globe. Height, 25 inches. Fount holds sufficient oil to burn 25 hours.

No. 9—Enameled Green, with Tin Fount...
.....Each, $.....

Packed—One in a Case.

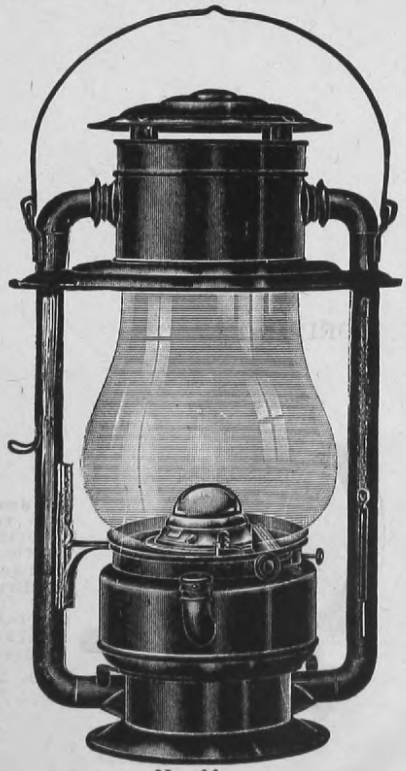
No. 7.

Imperial Tubular Square Hanging Lamps

Cold Blast, no inside chimney required, absolutely wind-proof. No. 7 Cold Blast Burner and 1½ inch "D" Wick. 8 inch silvered glass reflector. Height 22½ inches. Width 11¼ inches. Depth 10½ inches. Fount holds sufficient oil to burn 17 to 20 hours.

No. 7—Enameled Green, with Tin Fount .....Each, $.....

Packed—One in a Case.



No. 90.

Pioneer Tubular Globe Hanging Lamps

Cold Blast, same as No. 9, except with bail to hang, instead of socket for post. Fitted with Automatic Extinguisher, which may be set to burn 4 8, 12, 16, 20 or 24 hours and go out of its own accord. No. 9 Cold Blast Burner, 1½ inch "D" Wick and No. 9 Globe. Height 21 inches. Fount holds sufficient oil to burn 25 hours.

No. 90—Enameled Green, with Tin Fount..
.....Each, $.....

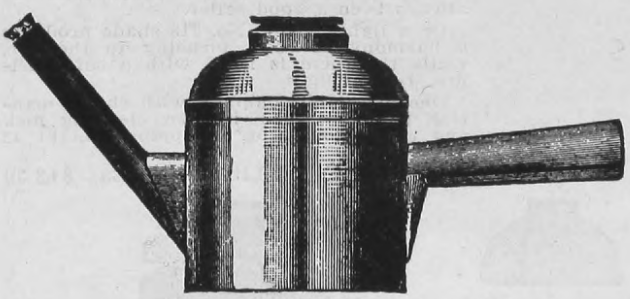
Packed—One in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OIL AND GASOLINE TORCHES

Chicago.

Chicago Pattern Galvanized Torches, with Brass Tube for Kerosene. 3½x5 inches high. Total Height, 6 inches. Capacity 1 pint .....Per Dozen,$.....



No. 27.

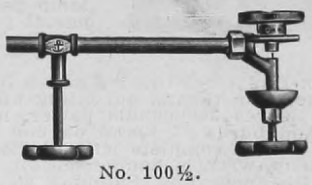
Polished Steel Inspectors Torches, Brass Cap and Tube, durable and non-explosive.

No. 27—Capacity 1½ pints, Height 4½ inches, Diameter 4⅛ inches..Per Dozen, $.....

No. 3.

No. 3—Heavy Tin, Boiler Lamps or Torches. Capacity 1 Pint.....Per Dozen, $.....

No. 100.



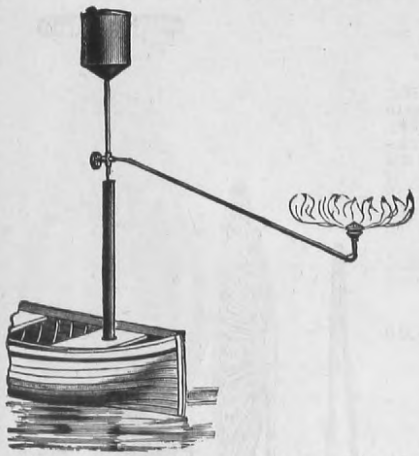
No. 100½.

Sun Gasoline Torch, simple in construction, produces a large steady white flame. Tank holds sufficient gasoline to burn 10 hours. Black Japanned Finish.

No. 100 —Single Wall Torches.....
.....Per Dozen, $.....

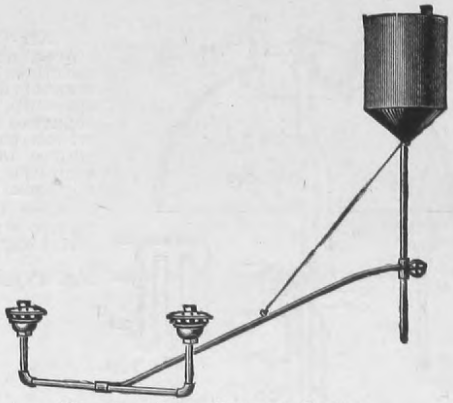
No. 100½—**Extra** Burners for above.....
.....Per Dozen, ...

BAKER FISHING TORCHES



No. 1. One Burner Lamp, showing Lamp in Use.

Extra Burner.



No. 2. Two Burner Lamp.

These Lamps are designed to be used in Spearing or "Gig Fishing." Those who have had Experience in this Mode of Fishing Know that Success depends largely upon the Quality of the Light. Many Fishermen employ the "Wood Jack" or "Pine Torch" and they All Know the Disadvantages connected with their Use. Sparks, Smoke, an Unsteady Light and the Constant Dropping of Coal into the Water, the Preparation of Fuel and the frequent Stoppages necessary to Replenish the Fire are some of the Annoyances they have to Contend with. Kerosene "Balls" and Kerosene Lamps generally are not more Satisfactory, being more Expensive while producing but little more Light. There has long been a Demand for something better. We know that our Gas Burning Lamps meet this Demand in Every Respect.

No. 1—One Burner Fishing Torch or Lamp, with Five Quart Tank .....Each, $.....

No. 2—Two Burner Fishing Torch or Lamp, with Six Quart Tank .....Each, ...

Extra Burners for Nos. 1 and 2.....Each, ...

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

GASOLINE LAMPS

QUICK-LITE

No Alcohol Torch Needed

Light Readily With Common Matches.

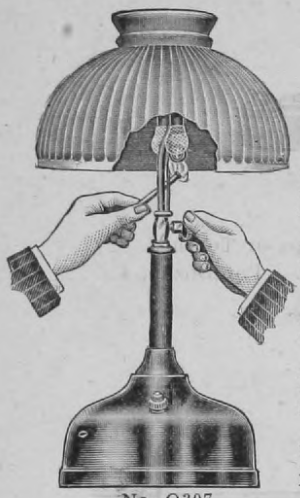
The Quick-Lite Air-O-Lite Lamps are without doubt the most popular gasoline lamp on the market. They are not only equal to the regular Air-O-Lites in construction and in service to the user, but they are the most convenient gasoline lamp made.

The Quick-Lites light with common matches. No alcohol or torch is needed. Every dealer who has ever used or sold a gasoline lamp will quickly recognize this big advantage the Quick-Lite has over other styles.

Coleman Lamps are a popular and profitable specialty. They make their own gas from gasoline, use two mantles and give 300 candle power of bright, white light at a cost of 1 cent per night.

They are safe in any position. No danger if upset. Tested to 200 lbs.; operate at 15 lbs. pressure. They are a clean lamp, no greasy wick, no dirty chimney. Made of brass heavily nickel plated and fully guaranteed.

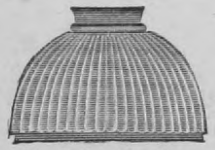
Every merchant needs the Air-O-Lite for his own use. It is handy on the desk and around the store. Using one helps sell them. Each lamp packed complete, one in carton. Sent by freight, express or parcel post.



No. Q307

Quick-Lite Air-O-Lite is a match lighting gasoline lamp that is outselling all other styles. Gives 300 candle power, holds 3 pints and burns 18 hours on one filling. One in carton complete with shade, mantles, pump, wrench, hanger, cleaning pick and extra generator. Shipping weight 10 lbs.

No. Q307—Quick-Lite Lamp, Ea. $10.80



No. 307. Shade.

No. 307—Opal Ribbed Shade which has been the standard for Gasoline Lamps for years .....Each, $1.20

No. PQ307

No. Q318

No. Q318 Air-O-Lite is our regular Model A, fitted with the Quick-Lite burner and No. 318 decorated shade. This is a popular combination, as it gives a match lighter lamp of 3 pint capacity with a shade that has always been a good seller.

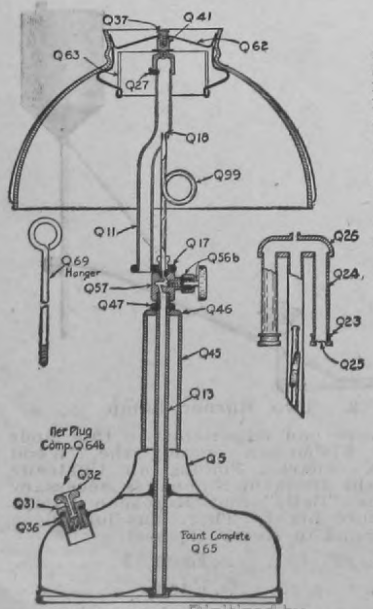
On a lighted lamp No. 318 shade produces a harmony of color pleasing to the eye, while the room is filled with a soft, mellow, restful light.

One in carton complete with shade, mantles, pump, wrench, hanger, cleaning pick and extra generator. Shipping weight 12 lbs.

No. Q318—Quick-Lite Lamp, Ea., $12.30

No. 318. Shade.

No. 318—Opal Shade decorated in Brown and Tan Tints with delicate vine and small pink roses .....Each, $2.50



Quick-Lite Construction.

Air-O-Lite Chandelier is designed for lighting stores, churches, school houses, homes, etc. A single seamless fount supplies this fixture. It is in every respect equal to the Air-O-Lite table lamp in workmanship, finish and appearance. It is composed of two separate Air-O-Lite burners, either one or both of which can be lighted as desired. Fount made of 18 gauge brass heavily nickeled, holds 6 pints of fuel, supplies both burners 16 to 18 hours. Lights with common matches and casts no undershadow.

One in a carton complete with shade, mantles, pump, wrench, cleaning pick and 2 extra generators. Shipping weight, 16 lbs.

No. PQ307—Quick-Lite Chandelier...Each, $20.00

WALL LAMPS

Virginia.

Heavy Steel Wire Frame, Solid Drawn Metal Bowl, Painted Red or Blue. Complete with Reflector, Burner and Chimney.

Virginia Safety Wall Lamps, Per Dozen, $.....

Packed—One Dozen in a Case; Half Red, Half Blue.

Virginia.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

ADJUSTABLE ELECTRIC LAMPS

WALLACE

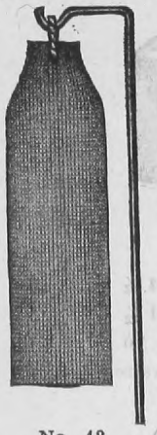
The Wallace Patented Adjustable Electric Lamp can be collapsed and carried in a grip. Concealed in the base of the lamp is an Automatic Spiral Clamp Spring by means of which the lamp can be hung on the wall, or clamped instantly to bedstead, dressing table, desk or chair. Iron Grip Rubber Suction Cup for sticking to mirror or window or any other non-porous surface. Ten feet of extension cord and patent plug to connect with any electric fixture accompany each lamp. It can be stood up anywhere, can be hung or stuck up in any place. It can be tilted up, down or sideways, concentrating the light just where it is wanted for reading, writing, shaving or working.

Wallace Lamps—Light Dull Brass Finish, without Bulb.....Each, $3.00

Packed—One in a Box, with Cord and Plug.

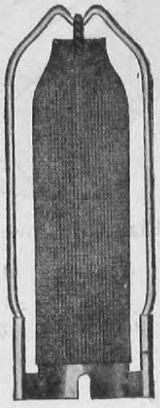
GAS MANTLES

LOOP MANTLES



No. 42

CAP MANTLES



No. 40

INVERTED MANTLES

No. 41.

No. 43.

No. 34.

No. 42—Blue Bell Loop Mantles, 3½ inch Single Weave, Asbestos Loop with Hook Support...Per Dozen, $.....

No. 40—Blue Bell Cap Mantles, Single Weave, Asbestos Loop, mounted on Standard Cap with Double Wire.....Per Dozen, ...

No. 41—Blue Bell Inverted Mantles, Single Weave, mounted on Standard Magnesia Ring....Per Dozen, ...

Packed—One in a Carton; 12, 25 or 50 Cartons in a Box.

No. 43—"Wireoid" Rag Mantles, Single Weave Artifiber for Gasoline Systems. Length, 3½ inches. In Paraffin Paper Envelope.....Per Dozen, ...

No. 34—"Wireoid" Rag Mantles, Single Weave Artifiber for Air-o-lite and Nulite Gasoline Lamps. Length, 2⅜ inches. In Paraffin Paper Envelope.....Per Dozen, ...

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LANTERN BURNERS

Nos. 1 and 2.

LAMP BURNERS

Nos. 1 and 2.

Tubular Lantern Burners

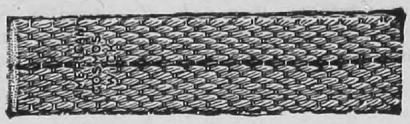
No. 1—Takes ⅝ inch Wick, fits No. 0 Tubular Lanterns.....Per Dozen, $.....
No. 2—Takes 1 inch Wick, fits No. 2 Tubular Lanterns.....Per Dozen, ...
No. 01—Cold Blast, takes ⅝ inch Wick, fits No. 1 Cold Blast Lanterns .....Per Dozen, ...
No. 02—Cold Blast, takes 1 inch Wick, fits No. 2 Cold Blast Lanterns .....Per Dozen, ...
No. 9—Hinged Cone, takes 1½ inch Wick, fits No. 9 Street Lamps .....Per Dozen, ...

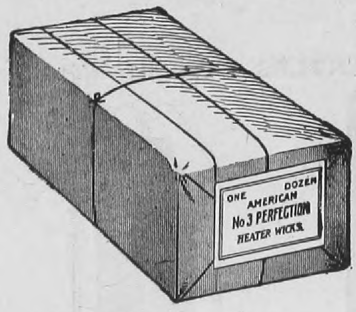
Lamp Burners

No. 1—Hinged Cone, takes ⅝ inch Wick.....Per Dozen, $.....
No. 2—Hinged Cone, takes 1 inch Wick.....Per Dozen, ...

Packed—One Dozen in a Box.

FLAT AND ROUND WICKS





Flat Lamp and Lantern Wicks

Nos.	0	1	2	3
Size	E	A	B	D
Inches	⅜	⅝	1	1½
Per Gross	$0.60	.75	1.10	1.75

Packed—One Gross in a Package.

Flat Oil Stove Wicks

Nos.	3½	4	4½	5
Inches	3½	4	4½	5
Per Gross	$4.25	4.75	5.50	6.00

Packed—One-Twelfth Gross in a Package.

Round or Circular Oil Heater and Lamp Wicks

No. 44—Circumference 6½ inches, fits Nos. 44, 45 and 46 Oil Heaters.....Per Gross, $13.00
No. 54—Circumference 8½ inches, fits Buhl Oil Heaters Nos. 11, 21, 22 and 27, also Perfection, Noxall and other Oil Heaters.....Per Gross, 18.00
No. 10—Circumference 10 inches.....Per Gross, 18.50
No. 15—Circumference 15 inches.....Per Gross, 19.75
No. 2R—Rochester, Circumference 4¾ inches, fits No. 2 Rochester Lamps .....Per Gross, 5.25
No. 3R—Rochester, Circumference 8½ inches, fits No. 3 Rochester Lamps .....Per Gross, 18.00

Packed—One-Twelfth Gross in a Package—Nos. 54 and 3R will interchange.

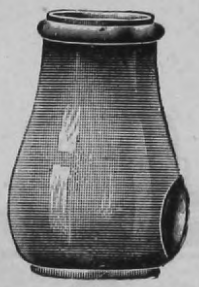
No. 20—Buhl Blue Flame Wicks, with Ring Carriers, for Buhl and Bon Ami Blue Flame Oil Cook Stoves. Each in separate Box.....Per Dozen, $.....
No. 1913—Perfection Blue Flame Wicks, with Ring Carriers, for Perfection Blue Flame Oil Cook Stoves. Each in a separate Box .....Per dozen, ...
No. 33—Wicks with Ring Carriers, for New Buhl Oil Heaters Nos. 24, 30, 34 and 64.....Per Dozen, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

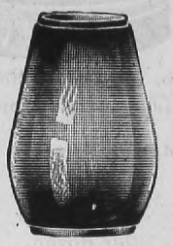
LANTERN AND STREET LAMP GLOBES

Nos. 0 to 0G Tubular.
Fits Sizes 0 and 2 Tubular Lanterns.

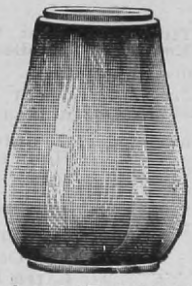
Nos. 775 and 775R.
Fits Wizard, Little Giant and Nustyle Short Globe Lanterns.



No. 0B Bull's Eye Tubular.
Fits Sizes 0 and 2 Tubular Lanterns.



No. 23 Cold Blast.
Fits Nos. 23 and 27 Junior Cold Blast Lanterns.

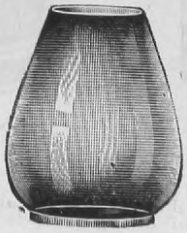


Nos. 2 and 2R Cold Blast.
Fits Sizes 1 and 2 Cold Blast Lanterns.

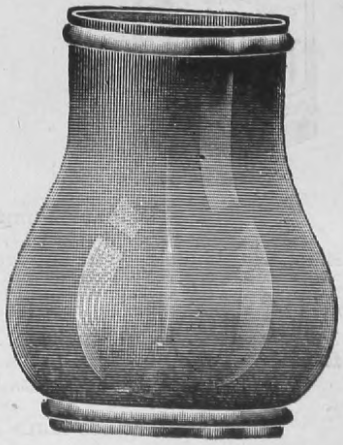
No. 2B Bull's Eye Cold Blast.
Fits Sizes 1 and 2 Cold Blast Lanterns.

Price Per Dozen	In 5 Doz. Boxes	In 2 Doz. Boxes	In 1 Doz. Boxes
No. 0 —Plain Tubular Globes	$.....	.....	.....
No. 0R—Ruby Tubular Globes	.....	.....	.....
No. 0G—Green Tubular Globes	.....	.....	.....
No. 0B—Plain Bull's Eye Tubular Globes	.....	.....	.....
No. 723—Plain Little Wizard Short Tubular Globes	.....	.....	.....
No. 775—Plain Wizard Short Tubular Globes	.....	.....	.....
No. 775R—Ruby Wizard Short Tubular Globes	.....	.....	.....
No. 23 —Plain Junior Cold Blast Tubular Globes	.....	.....	.....
No. 2 —Plain Blizzard No. 2 Cold Blast Globes	.....	.....	.....
No. 2R—Ruby Blizzard No. 2 Cold Blast Globes	.....	.....	.....
No. 2B—Blizzard No. 2 Cold Blast Bull's Eye Globes	.....	.....	.....

No. 723.
Fits Little Wizard Lanterns.



Nos. 39 to 39G.
Fits No. 39 Railroad Lanterns.



No. 9.
Fits No. 9 Tubular Street Lamps.

Price Per Dozen	In 5 Doz. Boxes	In 2 Doz. Boxes	In 1 Doz. Boxes
No. 39 —Plain	$.....	.....	.....
No. 39R—Ruby	.....	.....	.....
No. 39G—Green	.....	.....	.....

No. 9—Plain Tubular Street Lamp Globes. ⅔ Dozen in a Barrel.....Per Dozen, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OIL AND GASOLINE CANS

Nos. 2 to 5.

No. 01.

Galvanized Body, Tin Tops, Bent Spouts, Ball Vents, Enameled Handles.

No. 01—One Gallon Oil Cans.....
.....Per Dozen, $.....

Packed—One Dozen in a Crate.

No. 15. Style of No. 110.

Galvanized, Anti Leak, 1½ inch Screw Top, Enameled Handles.

With Large Screw Spouts.

Nos.	2	3	5
Gallons	2	3	5
Per Dozen $.....	.....	.....	.....

Galvanized, Anti Leak, 1½ inch Screw Top, Enameled Handles.

With ⅜ inch Tinned Iron Faucets.

No.	15
Gallons	5
Per Dozen	$.....
Extra Faucets .....Per dozen,	.....

Packed—Two Gallon, Half Dozen; Three and Five Gallon, Quarter Dozen in a Crate.

"Special" Oil and Gasoline Cans

Galvanized, with 1½ inch Screw Top, Enameled Handles. Hand made and extra heavy.
Fitted with ½ inch Brass Lever Faucet.

No. 110 —10 Gallons, for **Oil**.....Per Dozen, $.....
No. 110R—10 Gallons, for **Gasoline**, Painted **Red**.....Per Dozen, ...

Packed—One Sixth Dozen in a Crate.

Delphos.

No. 250.

Nos. 11 to 55.

No. 155.

Delphos Pump Oil Cans

Galvanized Iron Body, Corrugated Sides, Covered Top, Enameled Handles. Will not overfill a receptacle, thus doing away with a great deal of uncleanliness and waste of oil. Equipped with a Force Pump and Syphon Combined. Very neat in appearance. Strong, and will not leak.

No. 25—Holds 5 gallons.....Per Dozen, $.....
Extra Pumps for No. 25.....Each, ...

Packed—Half Dozen in a Crate,

Hercules Auto Filling Cans

Hercules Automobile Filling Cans, **for Gasoline.** Galvanized Body, Painted **Red,** Stamped Fluted Breast, Large opening on top and large spout, Handle on back.

No. 250—Holds 5 gallons.....Per Dozen, $37.00

Packed—Half Dozen in a Crate.

For Gasoline

Legal Gasoline Cans—Anti Leak, Galvanized and Painted **Red,** 1½ inch Screw Tops, Enameled Handles.

With Large Screw Spouts.

Nos.	11	22	33	55
Gallons	1	2	3	5
Per Dozen..	$.....	.....	.....	.....

With ⅜ inch Tinned Iron Faucets.

No.	155
Gallons	5
Per Dozen	$.....

Packed—Nos. 11 and 22 One Dozen, Nos. 33 to 155 Half Dozen in a Crate.

UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

OIL AND GASOLINE CANS

Nos. 600 and 600R.

Protection.

10 and 5 Gallon Jacket.

Auto and Delivery Pouring or Filling Cans

Can be conveniently used to pour gasoline into the funnel in filling auto tanks, etc., also by the grocer or hardware man for delivering oil or gasoline without spilling. Cover is so arranged that by turning it one can pour as small or large a stream as desired into the funnel. Top may be closed entirely by turning cover. **Galvanized** Body, Enameled Handle.

No. 600 —Five Gallon, for **Oil** ..... Per Dozen, $.....

No. 600R—Five Gallon, for **Gasoline**, Painted **Red** and Stenciled Gasoline ..... Per Dozen, ...

Packed—Half Dozen in Crate.

"Protection" Safety Non-Explosive Cans

One Piece Drawn Steel Body, Protected opening Device, Automatic Closing. Approved by the Underwriters' Laboratories of the National Board of Fire Underwriters.

Capacity, gallons	1	3	5
Each	$2.00	4.00	5.00

Wooden Jacket Shipping Cans

Cone Top with Double Handles—Capacity, gallons	5	10
Each	$0.85	1.50

OIL TANKS

Nos. 130 and 131.

Standard Jr. Pump Oil Tanks, made of Heavy Galvanized Iron, with wood bottom under metal bottom. Has large hand hold in drip pan with removable cover for cleaning out. Pump can be taken out for pumping from barrel into tank. Tested and warranted, nicely painted and decorated.

No. 130—Capacity 30 gallons ..... Each, $.....

No. 131—Capacity 60 gallons ..... Each, ...

GASOLINE TANKS

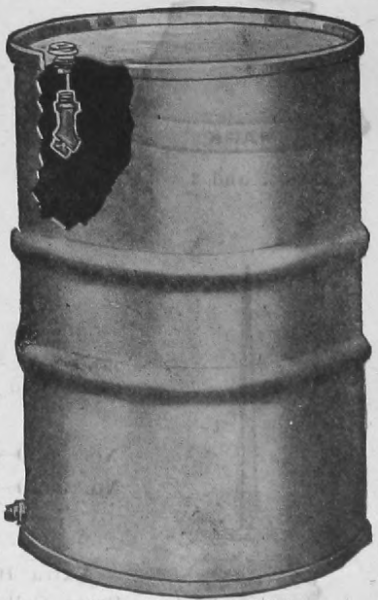
Nos. 180 and 181.

Red Gasoline Tanks, especially adapted for storing gasoline, which requires a tight tank. Made of Heavy Galvanized Iron, with wood bottom under metal bottom. Has 3½ inch heavy filler cap and **brass lock faucet,** strongly attached. Tested and warranted, nicely painted and decorated.

No. 180—30 gallons, with ½ inch Faucet ..... Each, $.....

No. 181—60 gallons, with ⅝ inch Faucet ..... Each, ...

STEEL BARRELS



Nos. 3038 and 5538.

Painted Steel Shipping Barrels with 18 gauge Steel Body and Heads. Equipped with Heavy Mallable Iron Faucet. Cut shows Faucet inverted for shipping.

No. 3038—Capacity 30 gallons ..... Each, $3.30

No. 5538—Capacity 55 gallons ..... Each, 5.10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OILERS

CHACE'S

Nos. 0 to 6.

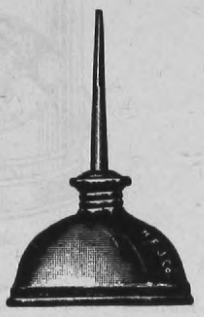
CHACE'S STEEL OILERS

Chace's Steel Oilers, Double Seamed Tin Spring Bottoms.

Nos.	0	1	2	3	4	5	6
Capacity, oz.	1¼	2	4	6½	8¾	11	14
Diameter, in.	2 3/16	2⅝	3 5/16	3¾	4⅛	4½	4¾
Spout, in.	2⅛	2⅛	4¼	4¼	5	5	5
Per Dozen	$1.25	1.50	2.00	2.25	2.75	3.50	4.50

Packed—Half Dozen in a Box.

SEWING MACHINE



No. 00.

SEWING MACHINE OILERS

Sewing Machine Oilers, with Double Seamed Tin Spring Bottoms.

No. 00—1 oz. capacity, 2 1/16 in. diameter, 2⅛ in. spout.....Per Dozen, $1.00

Packed—One Dozen in a Box.

MALLEABLE

Nos. 2 and 3.

MALLEABLE IRON OILERS

Malleable Iron Oilers, with Brass Spring Bottoms.

Nos.	2	3
Diameter of Bottom, inches	3⅝	3⅞
Per Dozen	$4.00	4.40

Packed—One Dozen in a Box.

HARVESTER

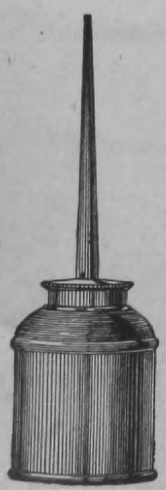
Nos. 77P and 77C.

EAGLE "HARVESTER" OILERS

These Oilers have extra wide mouths, no funnel required to fill. Extreme height 7⅛ inches.

Nos.	Finish	Spouts	Capacity	Diam.	Per Dozen
77P	Plain Tin	Straight	12 oz.	3 in.	$.....
077P	Plain Tin	Bent	12 oz.	3 in.	.....
77C	Copperized	Straight	12 oz.	3 in.	.....

Packed—One Dozen in a Box.



No. 620.

MOWING MACHINE OILERS

Seamless Drawn Body.

Heavy Steel, **Copperized** Finish, with Spring Steel Bottom cut Brass Collar and Bushing and Extra wide Mouth; no funnel required to fill.

Diameter, 3 inches; Capacity, 1 Pint.

No. 620—With **Straight** Spouts.....Per Dozen, $.....

No. 0620—With **Bent** Spouts.....Per Dozen, ...

Packed—One Dozen in a Box.

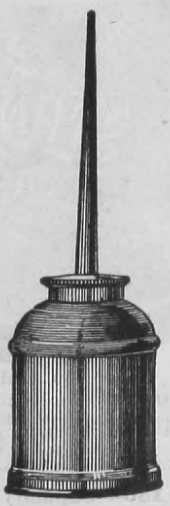
Extra Heavy Steel, **Copperized** Finish with Spring Steel Bottom, cut Brass Collar and Bushing and Extra Wide Mouth; no funnel required to fill.

Diameter, 3 inches; Capacity, 1 Pint.

No. 600—With **Straight** Spouts.....Per Dozen, $.....

No. 0600—With **Bent** Spouts.....Per Dozen, ...

Packed—One Dozen in a Box.

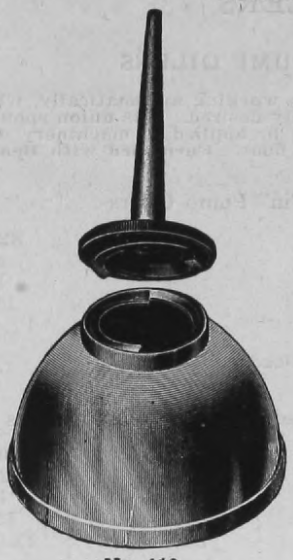


No. 600.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OILERS

No. 3004.



No. 013.

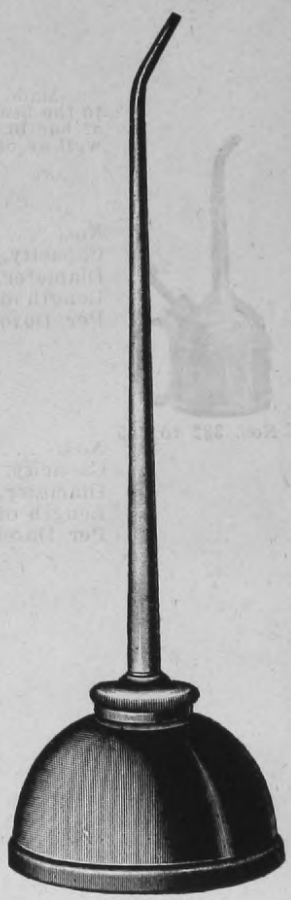
No. 12.

EAGLE POLISHED STEEL OILERS

Made of one piece of Solid Steel, welded together, has no seams, no soldering is employed, cannot leak.

Nos.	3004	3006	3009	5004	5006	5009
Capacity, pints	½	½	½	1	1	1
Diameter, inches	3¾	3¾	3¾	4⅝	4⅝	4⅝
L'gth of Spout, in.	4	6	9	4	6	9
Kind of Spout	Straight	Bent	Bent	Straight	Bent	Bent
Per Dozen	$6.00	6.50	7.00	8.00	8.50	9.00

Packed—One Dozen in a Box.



No. 14B.

NOERA BREECH LOCK WIDE MOUTH OILERS

Best Cold Rolled Steel, Polished, Plated and Lacquered, Clock Spring Steel Bottom. No cement, solder or brazing is used in the construction of this oiler.

Nos.	013	013A	014AA	014B	015A	016
Capacity, pints	⅓	⅓	½	½	1	1
Diameter, in.	3⅜	3⅜	3¾	3¾	4¼	4¼
Length of Spout, in.	3	5	5	9	5	9
Kind of Spout	Straight	Straight	Straight	Bent	Straight	Bent
Per Dozen	$5.50	6.00	8.00	8.50	9.75	10.50

Packed—One Dozen in a Box.

NOERA WIDE MOUTH COPPER PLATED STEEL OILERS

Solid Steel, copper plated inside and out, will not rust; Clock Spring Steel Bottoms. Collar attached to body of can and cap to spout without soldering or brazing, threads are machine cut.

Nos.	12	13	13A	14	14A	14AA	14B	15	15A	16
Capacity, Pints	¼	⅓	⅓	⅓	½	½	½	1	1	1
Diameter, inches	2¾	3⅜	3⅜	3⅜	3¾	3¾	3¾	4¼	4¼	4¼
Length of Spout, in.	3	3	5	9	3	5	9	3	5	9
Kind of Spout	St.	St.	St.	Bt.	St.	St.	Bt.	St.	St.	Bt.
Per Dozen	$4.50	5.50	6.00	6.50	7.50	8.00	8.50	9.25	9.75	10.50

Packed—One Dozen in a Box.

AUTOMOBILE PUMP OILERS

Nos. 802 and 804.

Made of No. 20 gauge Cold Rolled Steel, heavily Copper Plated and Lacquered. Designed for automobiles, stationary engines, power boats, etc. Equipped with special pump by which delivery of oil can be regulated and strained to prevent clogging of valves and spouts.

No. 802—Capacity ½ pint, Diameter 3¾ inches, 9 inch **Bent** Spout ..... Per Dozen, $24.00
No. 804—Capacity 1 pint, Diameter 4¼ inches, 9 inch **Bent** Spout ..... Per Dozen, 25.75

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OILERS

HOWLAND PUMP OILERS

Made with a pump containing two valves working automatically, which forces the oil to the bearings quickly and in just the quantity desired. Has union spout connection made of bar brass containing cut threads. Oil can be applied to machinery while in motion as well as oiling an overhead bearing from the floor. **Furnished** with **Bent** Spouts.

Nos. 322 to 325

"Solid" Spout "Tin" Pump Oilers

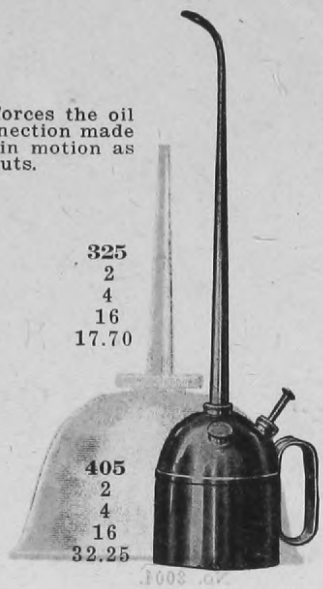
Nos.	322	323	324	325
Capacity, pints	1	1½	2	2
Diameter, inches	3	4	4	4
Length of Spout, inches	7	12	12	16
Per Dozen	$12.00	15.55	17.45	17.70

Packed—Half Dozen in a Box.

"Detachable" Spout "Copperized Steel" Pump Oilers

Nos.	402	403	404	405
Capacity, pints	1	1½	2	2
Diameter, inches	3	4	4	4
Length of Spout, inches	10	12	12	16
Per Dozen	$25.25	29.50	32.00	32.25

Packed—Half Dozen in a Box.

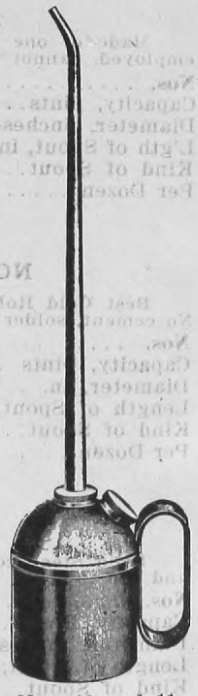


Nos. 402 to 405.

ENGINEERS' OR RAILROAD OILERS

Nos. 220 and 222.

No. 111.



Nos. 10 and 11.

Round Spring Bottom Engineers' Drip Oilers, with Handle

No. 220—Capacity 1 pt., Diam. 3 in., Height 5½ in., 7 inch Bent Spout.....Per Dozen, $3.75
No. 222—Capacity 1 qt., Diam. 3¾ in., Height 6 in., 7 inch, Bent Spout.....Der Dozen, 4.50

Packed—Half Dozen in a Box.

Improved Standard Copper Plated Steel Railroad Oilers

Made of two heavy steel seamless drawn parts, especially adapted for locomotives and stationary engines.

No. 111—Capacity 2 qts., Diam. 5 in., Height 8 in., 14 inch Bent Spout.....Per Dozen, $20.00

Packed—Half Dozen in a Box.

Wide Mouth Copper Plated Steel Railroad Oilers

These Oilers have seamless drawn bodies, are indestructible, and are used by all the leading railroads. A union connection where spout joins body of oiler, enables it to be placed in any position for delivering the oil.

No. 10—Capacity 1 pint, Diameter 3⅜ inches, Height 5 inches, 12 inch Bent Spout.....Per Dozen, $14.00
No. 11—Capacity 1 quart, Diameter 4⅛ inches, Height 6 inches, 18 inch Bent Spout.....Per Dozen, 18.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LAMP FILLERS

No. 2.

No. 2—I. C. Tin, Capacity 2 quarts, Diameter 7 inches.....Per Dozen, $.....

OIL CAN FILLERS

Nos. 733 to 235.

Oil Can Fillers

"Zinc" Oil Can Fillers			
Nos.	733	734	735
Capacity	1 pt.	1½ pts.	1 qt.
Per Dozen ..... $	.....	.....	.....

Packed—Half Dozen in a Box.

"Brass" Oil Can Fillers			
Nos.	233	234	235
Capacity	1 pt.	1½ pts.	1 qt.
Per Dozen ..... $	.....	.....	.....

Packed—Half Dozen in a Box.

ENGINEERS' FILLERS

Nos. 19 to 210.

Copper Plated Steel made of very heavy stock, nicely finished. Have screw top and are heavily copper plated inside and outside.

Nos.	19	19A	210
Capacity	1 pt.	1½ pts.	1 qt.
Diameter, inches	4⅛	4¾	5
Height, inches	3½	4	5
Per Dozen	$14.00	17.00	20.00

Packed—Half Dozen in a Box.

TALLOW POTS

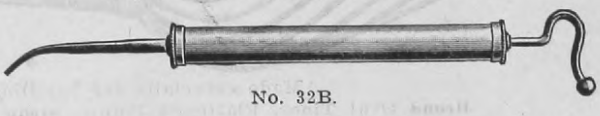
No. 213.

Copper Plated Steel, made of very heavy stock. Has an extra large spout and two inch filling opening, with tapered metal plug attached to the handle by a chain. Heavily copper plated inside and outside and nicely finished.

No. 213—Capacity 2 Quarts, Diameter 6 inches, Height 6 inches.....Per Dozen, $25.00

Packed—Half Dozen in a Box.

OIL AND GREASE GUNS



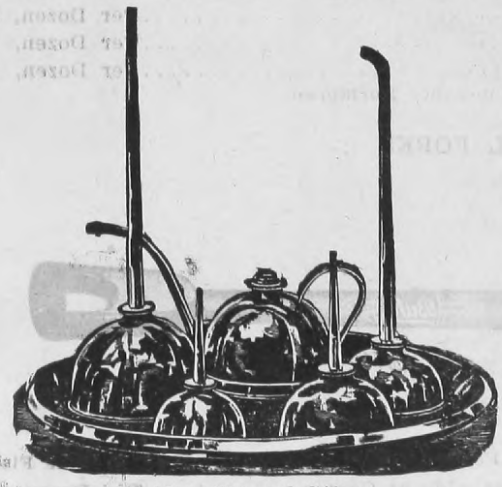
No. 32B.

With Improved Crook Neck Handle and Long Spout; 1¼ inches diameter, 8 inches long, 14 inches long over all. Used very largely by the Automobile trade and a very useful tool for any engineer, as its uses are many. Will suck oil from a drip pan or from a can. Will handle thin or heavy oil equally well. Has a double plunger. One set pulls up the oil, the other forces it out. Will last a lifetime. Can be used anywhere to oil machinery, insuring a very quick way of oiling it.

No. 32B—Oil and Grease Gun....Per Dozen, $.....

Packed—Each in a separate carton.

ENGINEERS' STEEL OILER SETS



Nos. C30 and C40.

Heavily Copper Plated and Handsomely Finished.

Including Round Trays

No. C30—With 5 Pieces and Tray.....Per Set, $5.00
No. C40—With 6 Pieces and Tray.....Per Set, 7.00

Jumbo.

Heavy High Grade Combination Oil and Grease Gun. The Barrel is 9x2¾ inches and holds 15 ounces of Grease. Cork Plunger with Steel Reinforcement. Combination Spout with large or small delivery. An extra cap is furnished so it can be carried in the tool box while full of grease or oil.

Jumbo—Oil and Grease Guns, Highly Polished.. ..... Each, $2.50

Packed—Each in a Separate Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"BUHL" STEEL GOODS

BARN OR ENSILAGE FORKS

Strap Ferrules, **Malleable "D"** Handles, **Blue** Finish. End Tines Turned Up.
Very useful for handling fine Manure, Ensilage, Vegetables, Saw Dust, etc.

No. E 8—Eight 16 inch Half Polished Oval Tines, 10¾ inches wide at Center.....Per Dozen, **$22.00**
No. E10—Ten 16 inch Half Polished Oval Tines, 13½ inches wide at Center.....Per Dozen, **26.00**

Packed—Half Dozen in a Bundle. Tines not Burlapped.

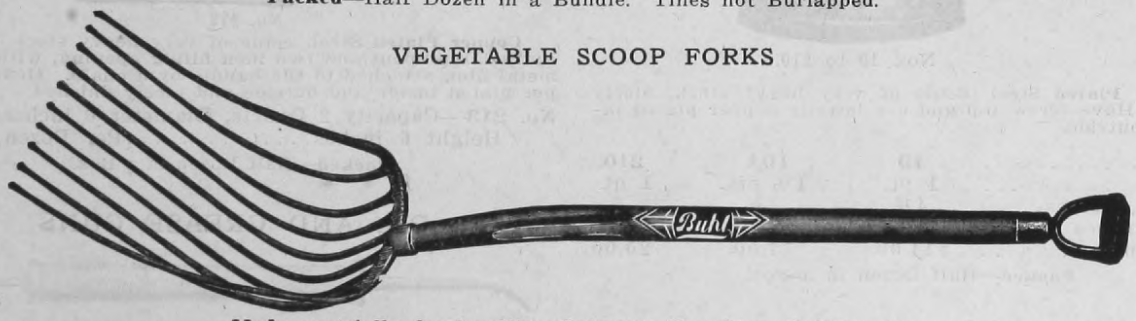
BEET FORKS

Scoop Shape, **Strap** Ferrules, **Malleable "D"** Handles, **Tumbled** Finish.

No. SBF7—Seven Round Tines with Solid Ball Points.....Per Dozen, **$20.00**
No. SBF8—Eight Round Tines with Solid Ball Points.....Per Dozen, **22.00**

Packed—Half Dozen in a Bundle. Tines not Burlapped.

VEGETABLE SCOOP FORKS

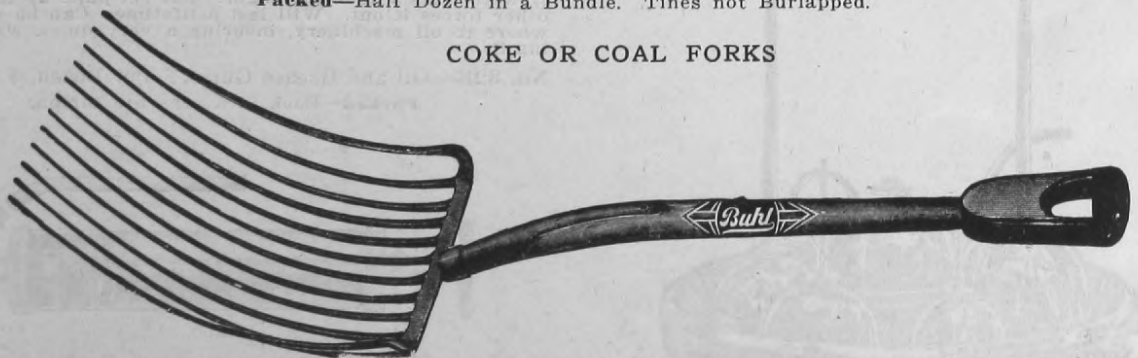


Made especially for handling Potatoes, Ear Corn, Onions, etc.
Broad Oval Tines, Flattened Points, **Strap** Ferrules, **Malleable "D"** Handles, **Black** Finish.

No. V 8—Eight 15 inch Tines, 12 inches wide at Center.....Per Dozen, **$20.00**
No. V10—Ten 15½ inch Tines, 14 inches wide at Center.....Per Dozen, **24.00**
No. V12—Twelve 16½ inch Tines, 18 inches wide at Center.....Per Dozen, **28.00**

Packed—Half Dozen in a Bundle. Tines not Burlapped.

COKE OR COAL FORKS



Forged from one piece of Solid Steel, Diamond Shape Tines, **Strap** Ferrules, 30 inch **Wood "D"** Handles, **Blue Finish.**

No. K 10—Ten 17 inch Tines, 1¼ inches apart, 14 inches wide at Center.....Per Dozen, **$24.00**
No. K 12—Twelve 16 inch Tines, 1¼ inches apart, 18 inches wide at Center.....Per Dozen, **28.00**
No. K 14—Fourteen 17 inch Tines, 1¼ inches apart, 20¼ inches wide at Center.....Per Dozen, **33.00**
No. K114—Fourteen 17 inch Tines, 1 inch apart, 18 inches wide at center.....Per Dozen, **33.00**

Packed—Half Dozen in a Bundle. Tines not Burlapped.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STONE OR BALLAST FORKS

Square Tines, **Strap** Ferrules, **Steel** Ferrule Caps, 30 inch **Wood "D"** Handles, **Black** Finish.

No. B112—Twelve 13½ inch Tines, ⅞ inch apart, 13 inches wide at Center.....Per Dozen, $29.00

No. B214—Fourteen 13½ inch Tines, ⅝ inch apart, 12 inches wide at Center.....Per Dozen, 33.00

Packed—Half Dozen in a Bundle. Tines not Burlapped.

GARDEN RAKES

Nos. MB12 and MB14.

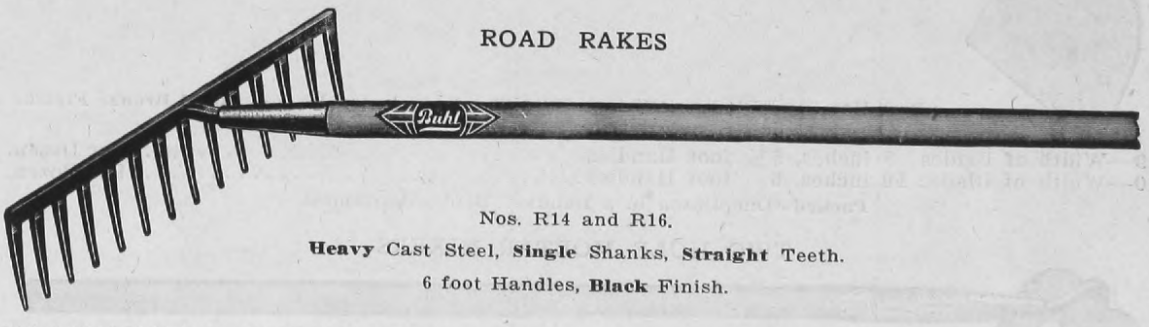
Malleable Iron, Braced Shanks, **Straight** Teeth.

Selected Handles, **Blue** Finish.

Nos.	MB12	MB14
Teeth	12	14
Per Dozen	$6.50	7.00

Packed—One Dozen in a Bundle. Heads not Burlapped.

ROAD RAKES



Nos. R14 and R16.

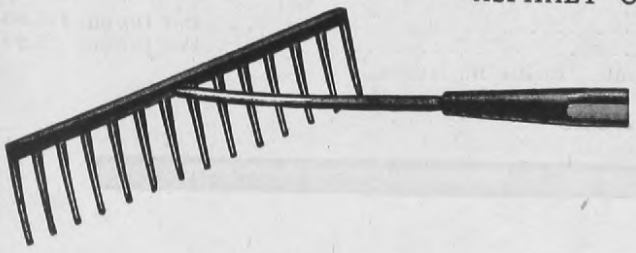
Heavy Cast Steel, **Single** Shanks, **Straight** Teeth.

6 foot Handles, **Black** Finish.

Nos.	R14	R16
Teeth	14	16
Per Dozen	$23.25	$24.75

Packed—Half Dozen in a Bundle. Heads not Burlapped.

ASPHALT OR TAR RAKES



Straight Shank Pattern.

Cast Steel, 18 inch Straight Square Shanks, **Strap** Ferrules, 5 foot Ash Handles, **Blue** Finish.

No.	A14
Teeth	14
Per Dozen	$26.50

Packed—Half Dozen in a Bundle. Heads not Burlapped.

Drop Shank Pattern.

Cast Steel, 18 inch Square Drop Shanks, **Strap** Ferrules, 5 foot Ash Handles, **Blue** Finish.

No.	A14D
Teeth	14
Per Dozen	$28.50

Packed—Half Dozen in a Bundle. Heads not Burlapped.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BEET OR NURSERY HOES

"Square Top."

Solid Shanks, Polished Steel Blades, 4⅛ foot Handles. **Gold Bronze** Finish.

Nos.	BT6	BT6½	BT7	BT7½	BT8
Blades, inches..	6	6½	7	7½	8
Per Dozen	$13.00	13.20	13.30	13.50	13.75

Packed—One Dozen in a Bundle. Blades Burlapped.

Solid Sockets, Polished Steel Blades, 4⅛ foot Handles **Gold Bronze** Finish.

Nos.	SBT6	SBT6½	SBT7	SBT7½	SBT8
Blades, inches..	6	6½	7	7½	8
Per Dozen	$14.50	14.70	14.80	15.00	15.25

Packed—One Dozen in a Bundle. Blades Burlapped.

GARDEN SCUFFLE HOES

Best Steel Blades, Riveted to **Braced** Malleable Shanks, 6 foot Selected Handles, **Gold Bronze** Finish.

No. GSH—Size of Blades, 2½x8 inches.....Per Dozen, $12.00

Packed—One Dozen in a Bundle. Blades not Burlapped.

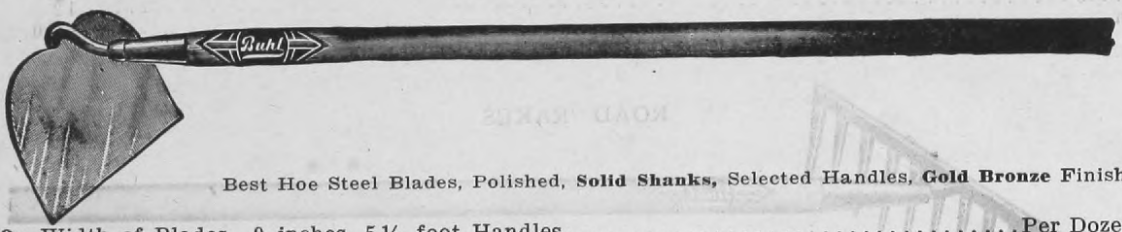
RAILROAD SCUFFLE HOES

Best Steel Blades, Riveted to **Heavy** Braced Malleable Shanks, 5 foot Selected Handles, **Gold Bronze** Finish.

No. RSH—Size of Blades, 4x8½ inches.....Per Dozen, $12.00

Packed—One Dozen in a Bundle. Blades not Burlapped.

MORTAR HOES

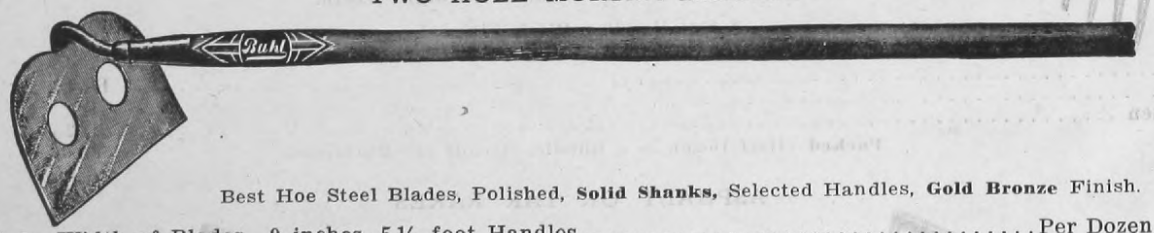


Best Hoe Steel Blades, Polished, **Solid Shanks,** Selected Handles, **Gold Bronze** Finish.

No. MR 9—Width of Blades 9 inches, 5½ foot Handles.....Per Dozen, $23.50
No. MR10—Width of Blades 10 inches, 6 foot Handles.....Per Dozen, 25.40

Packed—One Dozen in a Bundle. Blades Burlapped.

TWO HOLE MORTAR MIXERS

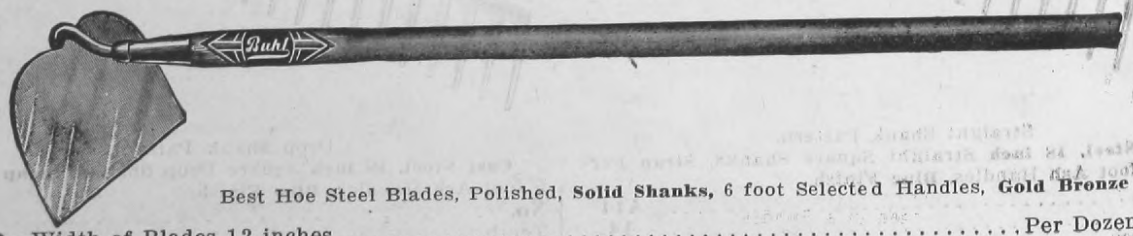


Best Hoe Steel Blades, Polished, **Solid Shanks,** Selected Handles, **Gold Bronze** Finish.

No. MM 9—Width of Blades 9 inches, 5½ foot Handles.....Per Dozen, $26.00
No. MM10—Width of Blades 10 inches, 6 foot Handles.....Per Dozen, 27.90

Packed—One Dozen in a Bundle. Blades Burlapped.

STREET HOES



Best Hoe Steel Blades, Polished, **Solid Shanks,** 6 foot Selected Handles, **Gold Bronze** Finish.

No. SH12—Width of Blades 12 inches.....Per Dozen, $28.90

Packed—One Dozen in a Bundle. Blades Burlapped.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LONG HANDLES

HAY FORK

No. 1 Straight Hay Fork Handles, Selected, Chucked and Bored.

Nos.	74	74½	75	75½	76
Length, feet	4	4½	5	5½	6
Per Dozen	$2.40	2.60	3.20	3.80	4.70

Packed—One Dozen in a Bundle.

XX Straight Hay Fork Handles, Second Growth White Timber, Selected, Chucked and Bored.

Nos.	074	074½	075	075½	076
Length, feet	4	4½	5	5½	6
Per Dozen	$4.90	5.30	6.50	7.90	9.90

Packed—One Dozen in a Bundle.

No. 1 Bent Hay Fork Handles, Selected, Chucked and Bored.

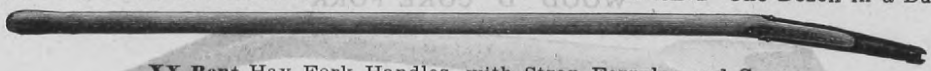
Nos.	84	84½	85	85½	86
Length, feet	4	4½	5	5½	6
Per Dozen	$3.10	3.40	4.00	4.70	5.70

Packed—One Dozen in a Bundle.

XX Bent Hay Fork Handles, Second Growth White Timber, Selected, Chucked and Bored.

Nos.	083½	084	084½	085	085½	086
Length, feet.	3½	4	4½	5	5½	6
Per Dozen	$4.80	5.60	6.00	7.40	8.90	10.90

Packed—One Dozen in a Bundle.

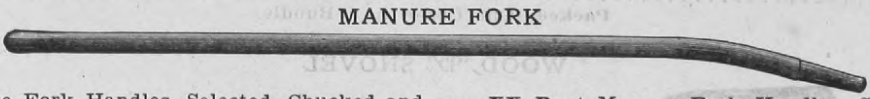


XX Bent Hay Fork Handles, with Strap Ferrules and Caps.

Nos.	S084	S084½
Length, Feet	4	4½
Per Dozen	$8.90	9.40

Packed—One Dozen in a Bundle.

MANURE FORK



No. 1 Bent Manure Fork Handles, Selected, Chucked and Bored.

Nos.	184	184½
Length, feet	4	4½
Per Dozen	$3.10	3.40

Packed—One Dozen in a Bundle.

XX Bent Manure Fork Handles, Second Growth White Timber, Selected, Chucked and Bored.

Nos.	0184	0184½
Length, feet	4	4½
Per Dozen	$5.60	6.00

Packed—One Dozen in a Bundle.

No. S0184—XX Bent Manure Fork Handles, with **Strap** Ferrules and Caps, 4 foot Handle.....Per Dozen, $8.90

Packed—One Dozen in a Bundle.

RAKE

No. 91½—Garden Rake Handles, **No. 1** Quality, Selected, Chucked and Bored, 6 feet long.....Per Dozen, $4.10

Drain Cleaner

No. 68X—Drain Cleaner Handles, **X** Quality, Selected, 1¼ inches x 6 feet.....Per Dozen, $6.70

Hoe and Manure Hook—Selected, Chucked and Bored

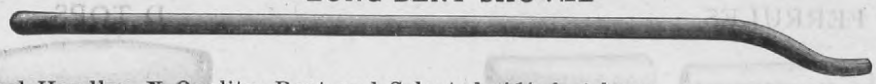
No. 91—Field Hoe Handles, **No. 1** Quality, 4⅓ feet long.....Per Dozen, $2.30

No. 76—Mortar Hoe and Manure Hook Handles, **No. 1** Quality, 6 feet long.....Per Dozen, 4.70

No. 076—Mortar Hoe and Manure Hook Handles, **XX** Quality, Second Growth White Timber....Per Dozen, 9.90

Packed—One Dozen in a Bundle.

LONG BENT SHOVEL



No. 87—Long Shovel Handles, **X** Quality, Bent and Selected, 4½ feet long.....Per Dozen, $5.70

Packed—One Dozen in a Bundle.

Telegraph Shovel

No. 087—Telegraph Shovel Handles, **X** Quality, Bent and Selected, 1½ inches x 8 feet.....Per Dozen, $18.00

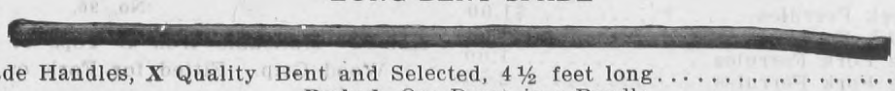
Packed—One Dozen in a Bundle.

Telegraph Spoon

No. 78X—Telegraph Spoon Handles, **X** Quality, Selected, 2⅛ inches x 8 feet.....Per Dozen, $20.00

Packed—One Dozen in a Bundle.

LONG BENT SPADE



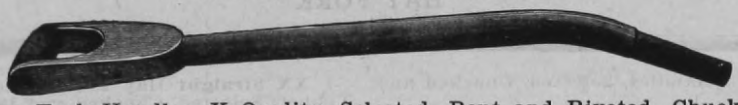
No. 89—Long Spade Handles, **X** Quality Bent and Selected, 4½ feet long.....Per Dozen, $5.40

Packed—One Dozen in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

D HANDLES

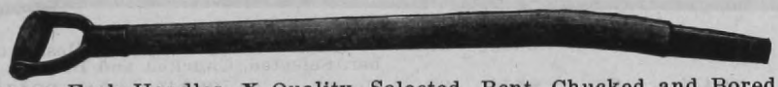
WOOD "D" MANURE FORK



No. 86¼—Wood D Manure Fork Handles, X Quality, Selected, Bent and Riveted, Chucked and Bored.... Per Dozen, $6.90

Packed—One Dozen in a Bundle.

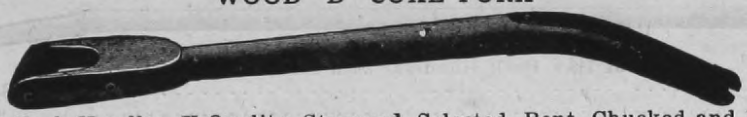
MAL "D" MANURE FORK



No. 86½—Iron D Manure Fork Handles, X Quality, Selected, Bent, Chucked and Bored.....Per Dozen, $ 6.60

Packed—One Dozen in a Bundle.

WOOD "D" COKE FORK



No. 86¾—Iron D Coke Fork Handles, X Quality, **Strapped**, Selected, Bent, Chucked and Bored..Per Dozen, 11.60

No. 086¾—Iron D Coke Fork Handles, X Quality, **Not** Strapped, Selected, Bent, Chucked and Bored..... Per Dozen, 7.10

Packed—One Dozen in a Bundle.

WOOD "D" SHOVEL

No. 88—Wood D Shovel Handles, X Quality, Selected, Bent and Riveted.....Per Dozen, $7.40

Packed—One Dozen in a Bundle.

WOOD "D" SPADE

No. 90—Wood D Spade Handles, X Quality, Selected, Bent and Riveted .....Per Dozen, $7.10

Packed—One Dozen in a Bundle.

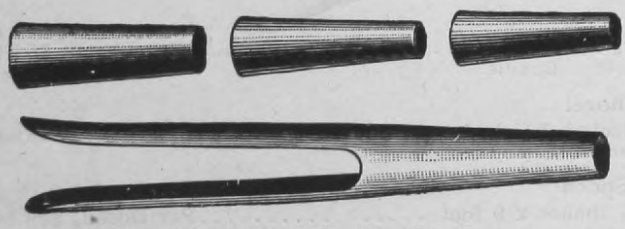
WOOD "D" SCOOP

No. 90½—Wood D Scoop Handles, X Quality, Selected, Bent and Riveted.....Per Dozen, $7.40

No. 090½—Wood D Scoop Handles, XX Quality, Selected, Bent and Riveted.....Per Dozen, 8.90

Packed—Half Dozen in a Bundle.

FERRULES



Polished Wrought Ferrules.

Nos.		Per Dozen
93	Plain Hay Fork Ferrules	$1.00
093	Strap Hay Fork Ferrules	2.50
94	Plain Manure Fork Ferrules	1.00
094	Strap Manure Fork Ferrules	2.50
95	Hoe and Rake Ferrules	.85

D TOPS

No. 96.

No. 96—Malleable Iron D Tops or Heads, with Wood Grip. Fitted for Fork or Shovel Handles ..... Per Dozen, $2.25

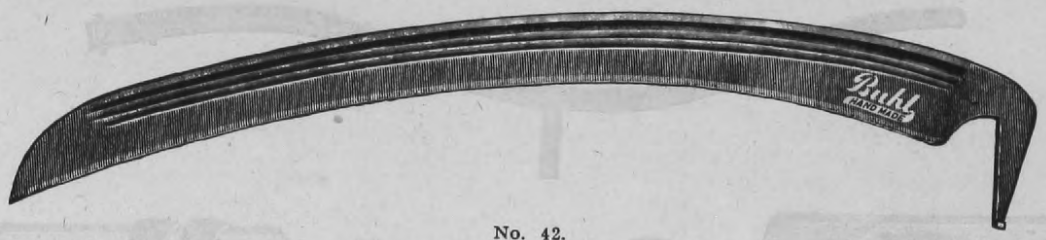
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GRASS SCYTHES

No. 57.

No. 57—"Buhl Hand Made," Refined Crucible Steel, All **Black**, Oil Finish, Ground Sharp, Assorted 24 to 28, 26 to 30, 28 to 32, 30 to 34, 32 to 36, or 34 to 38 inches ..... Per Dozen, **$12.00**

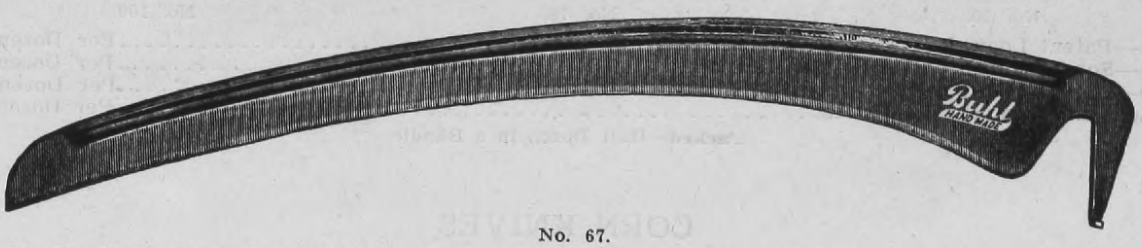
Packed—One Dozen in a Box.



No. 42.

No. 42—"Buhl Hand Made," Damascus Steel, Double Ribbed, **Black** Forge Finish, Ground Sharp, Assorted 28 to 32, 30 to 34, 32 to 36, or 34 to 38 inches..... Per Dozen, **$12.50**

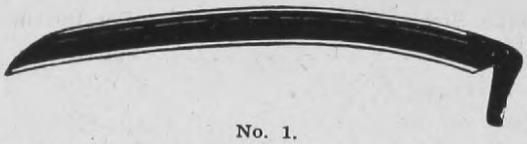
Packed—One Dozen in a Box.



No. 67.

No. 67—"Buhl Hand Made," Broad Heel or **Dutchman** Pattern, Refined Crucible Steel, all **Black**, Oil Finish, Ground Sharp, Assorted 24 to 28, 26 to 30, 28 to 32, 30 to 34, 32 to 36, or 34 to 38 inches..... Per Dozen, **$12.00**

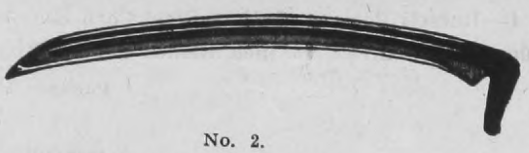
Packed—One Dozen in a Box.



No. 1.

No. 1—Clipper Pattern, Black Finish, Riveted Heel, Ground Sharp, Assorted 24 to 38 inches. ..... Per Dozen, **$10.50**

Packed—One Dozen in a Box.

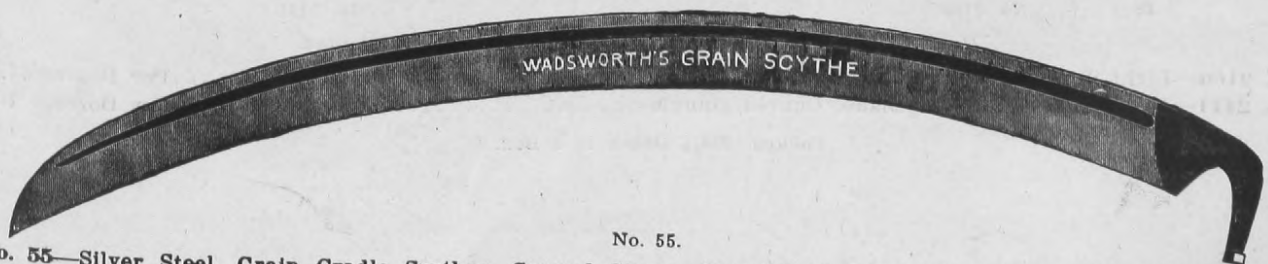


No. 2.

No. 2—Broad Heel or **Dutchman** Pattern, Black Finish, Riveted Heel, Ground Sharp, Assorted 24 to 38 inches.....Per Dozen, **$11.50**

Packed—One Dozen in a Box.

GRAIN SCYTHES



No. 55.

No. 55—Silver Steel, Grain Cradle Scythes, Ground Sharp, Assorted 45 and 46 inches.....Per Dozen, **$15.50**

Packed—Half Dozen, Assorted, in a Straw Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

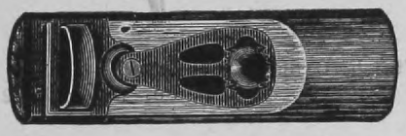
BUSH SCYTHES

No. 56.

No. 56—Cast Steel Bush Scythes, Painted Red, Assorted 22 to 26 inches.....Per Dozen, $12.50

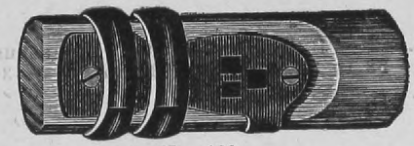
Packed—Half Dozen, Assorted, in a Straw Bundle.

SCYTHE SNATHS



No. 50.

No. 70.



No. 100.

No. 50—Patent Loop, Iron Ferrule, Screw Nib, Swing Socket.....Per Dozen, $11.25
No. 70—Solid Flat Heel Plates, Ring Fastening, Iron Ferrules, Screw Nib.....Per Dozen, 10.50
No. 100—Double Ring, Bush Snath, Iron Ferrule, Solid Plate, Screw Nib.....Per Dozen, 12.25
Extra Loop Bolts for No. 50 Snaths.....Per Dozen, 1.25

Packed—Half Dozen in a Bundle.

CORN KNIVES

No. 4.

No. 06.

No. 4—Russell Pattern, Cutlery Steel Corn Knives, 17¾ inch Blade, Straight Handle.....Per Dozen, $9.50
No. 06—Corn Knives, 15 inch Blade, Curved Handles,.....Per Dozen, 4.00

Packed—Half Dozen in a Package.

BEET TOPPING KNIVES

No. 2100.

No. 2111.

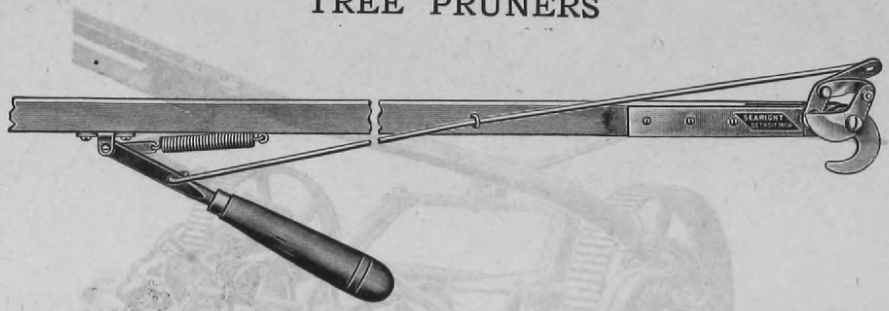
Hand forged from Silver Steel, Oil Tempered, fully warranted.

No. 2100—Light Straight Swelled Blade, Straight Handle.....Per Dozen, $7.50
No. 2111—Light Curved Swelled Blade, Curved Handle .....Per Dozen, 7.50

Packed—Half Dozen in a Box.

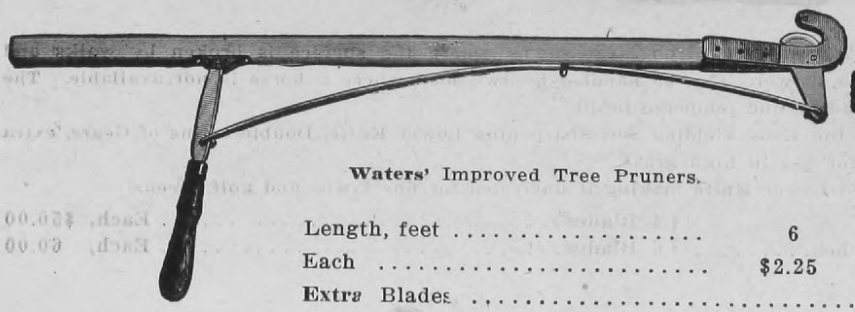
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TREE PRUNERS

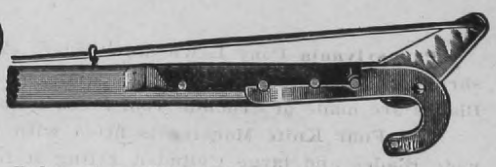


Steel, Drop Forged. Has a Compound Lever Head and made with a hook and side lever. Calculated for heavy work and will cut a limb up to 1¼ inches. The Rod, connecting the knife lever to the handle lever, crosses the pole which gives more strength and prevents the pole from warping and bending.

Length, feet	8	10	12
No. 1—Searight Compound Lever Tree Pruner.....Each,	$3.00	3.25	3.25



Waters' Improved Tree Pruners.



Pole cut away to show Steel Brace Plate.

Length, feet	6	8	10	12
Each	$2.25	2.50	2.50	2.75

Extra Blades ..... Each, $0.30

LAWN ROLLERS

Style "WB"—"Roller Bearing—Muscle Sparing"

Dunham One Section "Water Weight" Lawn Rollers

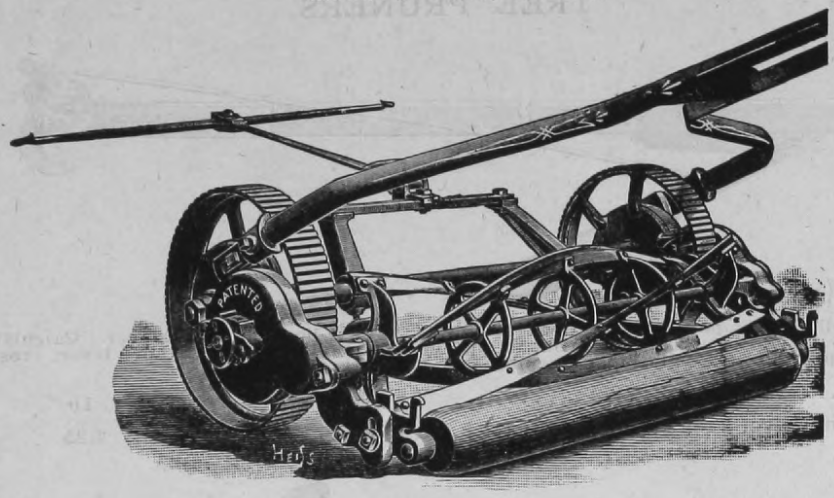
Roller Bearing and easy to operate. Rollers are electric welded, making the water section one solid drum. No rivets are used, therefore it cannot leak. Provided with **"No Tip"** Lock which holds the handle upright when not in use.

Without Handle Weights.

Nos.	Diameter Inches	Length Inches	Weight, pounds			Price Each
			Empty	Filled with Water	Filled with Sand	
WB3	14	20	60	175	260	$11.00
WB5	18	24	85	300	450	13.00
WB7	24	24	110	500	750	17.00
WB9	24	32	130	600	975	19.00

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LAWN MOWERS

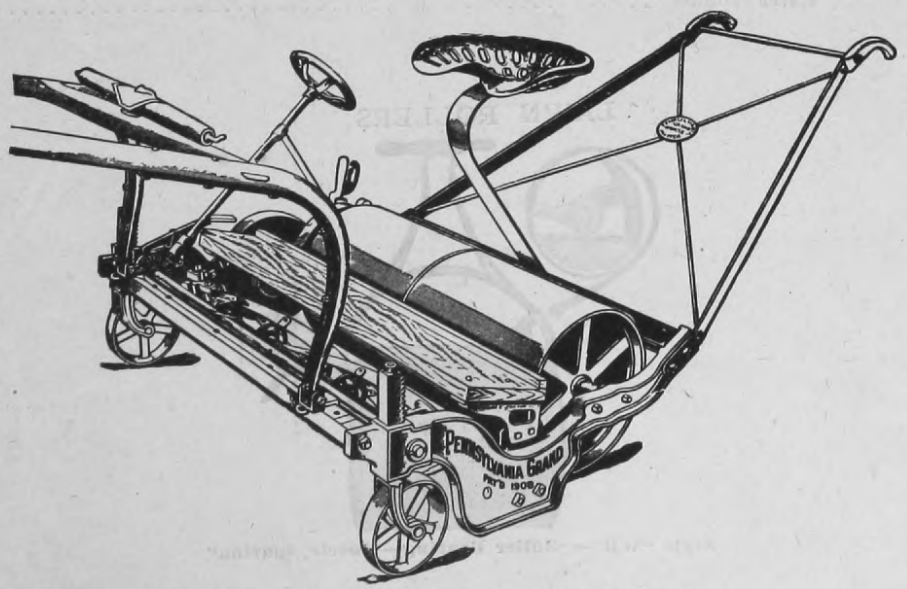


Pennsylvania Pony Lawn Mowers are especially useful on large lawns where the surface is broken by walks and shrubbery, or is too hilly for a regular horse mower. Can be handled by two men where a horse is not available. The Blades are made of Crucible Tool Steel, hardened and tempered in oil.

The Four Knife Machine is fitted with the Enos Yielding Self-Sharpening Lower Knife, Double trains of Gears, extra wide Blades and large Cylinder, fitting it for use in high grass.

The Six Knife Machine has the upturned Lower Knife making it unrivaled for fine lawns and golf greens.

Pony Lawn Mowers, Width of Cut 25 inches..... { 4 Blades..... Each, $50.00 / 6 Blades..... Each, 60.00



With Handles, Seat, Shafts and Footboard.

Pennsylvania Grand Horse Lawn Mowers, fitted with 4 or 6 Crucible Tool Steel Knives, hardened and tempered in oil. The wheel at the right of the driver's seat regulates the height of cut from ⅜ to 2⅞ inches and the operator can adjust same without leaving his seat. All wear on knives is taken up by set screws on top of the Cylinder Journal Boxes. The Cylinder Journals run in phosphor bronze boxes and all wear can be taken up by a set screw. The Journal Box is floating or self-aligning. The Stationary Knife is self-sharpening. Diameter of Cylinder 7½ inches. Diameter of Drums 15 inches.

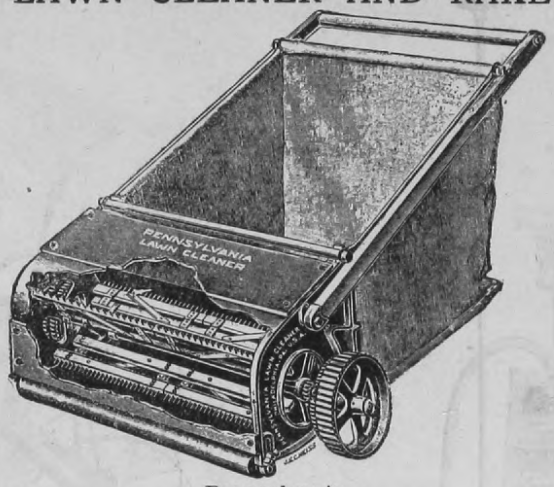
"Pennsylvania Grand"

With Handles and Draft Irons Only.			With Handles, Seat, Shafts and Footboard.		
Width of Cut, inches.....	30	38	Width of Cut, inches.....	30	38
Four Knives .....Each,	$100.00	130.00	**Four Knives** .....Each,	$120.00	150.00
Six Knives .....Each,	112.50	142.50	**Six** Knives .....Each,	132.50	162.50

Note.—The above Mowers are not kept in stock, but can be furnished promptly direct from factory.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LAWN CLEANER AND RAKE



Pennsylvania.

This Machine is easy to operate and with it one man can do more and better work than four men with hand rakes. Will remove the cut grass, litter, leaves and all sorts of trash, leaving the grass standing upright.

Pennsylvania Lawn Cleaner and Rake, 24 inches wide.....Each, $20.00

Packed—One in a Crate.

PITCHER SPOUT PUMPS

No. 350.

Closed Top Pitcher Spout Pumps, with **Iron** Cylinders. These Pumps have Revolving Tops which allows the levers to be placed on any side. Valves may be tripped to avoid freezing by raising the lever to its extreme height. **Fitted for Iron Pipe.**

No. 350—Size	1	2	3	4	5
Cylinder, inches	2½	3	3½	4	4½
For Pipe, inches	1	1¼	1¼	1½	2
Stroke, inches	4	4	4	4½	5
Each	$4.25	4.75	5.25	6.25	9.50

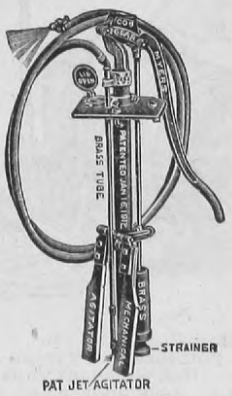
Brass Lead Pipe Couplings, **Extra**..Each, $..... ....

Extra Iron Pipe Couplings.....Each, ...

Extra Handles, All Sizes.....Each, $.....

Extra Plungers and Rods.....Each, $..... ....

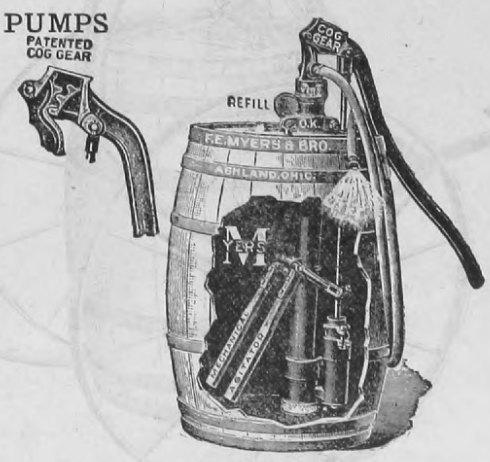
BARREL SPRAY PUMPS



No. R318B.

Myers Cog Gear Barrel Spray Pump, with Malleable Iron Base; Brass Cylinder, Plunger, Valves, Valve Seats and Discharge Pipes. Has both Jet and Mechanical Agitators, will handle hot, cold or any caustic mixture. Working parts all submerged in liquid, therefore no priming is necessary, does away with the need of a suction pipe. Air Chamber is 32 inches long, enabling the pump to throw a uniform, constant and elastic spray. **Equipped** with one lead of 15 feet of ½ inch 5 ply discharge hose and graduating Vermorel Nozzle.

No. R318B—Complete as shown above...Each, $21.00



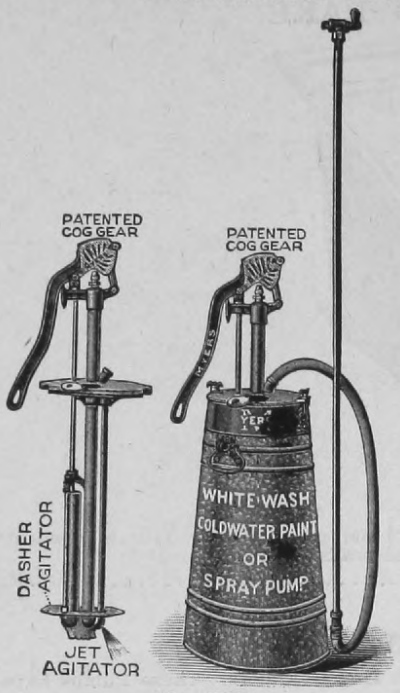
No. R308B.

Myers O. K. Cog Gear Spray Pump, with Malleable Iron Base and Handle. Solid Brass Ram Plunger, Ground Bevel Valve Seat. Has Mechanical Agitator, will handle hot, cold or any kind of mixture. The Air Chamber is 2½ inches, and this in connection with the cog gear enables the operator to carry a pressure of 200 pounds or more if necessary. **Equipped** with one lead of 15 feet of 7 ply, ½ inch discharge hose and one Fembro Nozzle. Base for end of barrel furnished regularly.

No. R308B—Without Barrel...Each, $34.13

Digitized By UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PAINTING AND WHITEWASHING MACHINES



No. R329.

No. R337B.

No. R329.

"With Easy Operating Cog Gear Pump."

Myers Whitewash, Cold Water Painting Machine and General Purpose Sprayer, with Patent Double Agitator. **A most** complete and serviceable outfit. The Tank is made of heavy galvanized Iron with a wide bottom so as to set steady in operation. The cover is removable and is held in place by two spring wire catches, one on each side, which holds the same tightly, preventing any spilling or splashing of the liquid. **Equipment**—The Pump is made of Brass and is fitted with Bordeaux Nozzle, Brass Ball Valves, Jet and Dasher Agitator, 1¼ inch Cylinder with solid Plunger and Malleable Iron Lever.

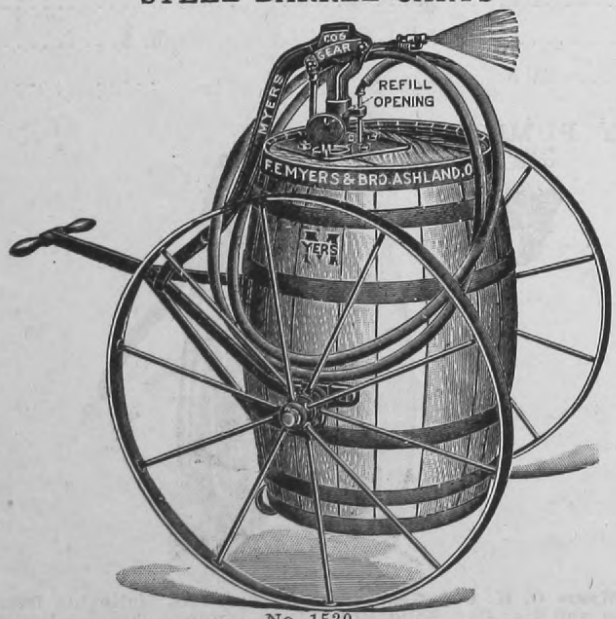
No. R329—Holds 7 Gallons, Complete as illustrated..... Each, $16.50

No. R337B.

Myers Portable Sprayer, with **Cog Gear** Spray Pump. Made of Extra Heavy Galvanized Iron with 2 inch Cylinder; suitable for Greenhouse work, Spraying Trees, Whitewashing, Painting, etc. **Equipped** with 12½ Gallon Tank mounted on small cart, wheels and Handles of which are made of Wrought Steel thoroughly braced; Dasher and Jet Agitator, 15 foot Hose, 8 foot Extension and Vermorel Nozzle.

No. R337B—Sprayer, Complete as illustrated..... Each, $37.50

STEEL BARREL CARTS



No. 1520.

Myers Steel Barrel Cart, has 36 inch Steel Wheels with three inch Tires. No Tires to get loose, or wood to break or rot when standing out in the weather. Any Myers Barrel Spray Pump can be used with it.

No. 1520—Steel Barrel Cart, **Cart** only.... Each, $18.00

Barrel Extra..... Each, 7.50

SPRAY PUMP OUTFITS

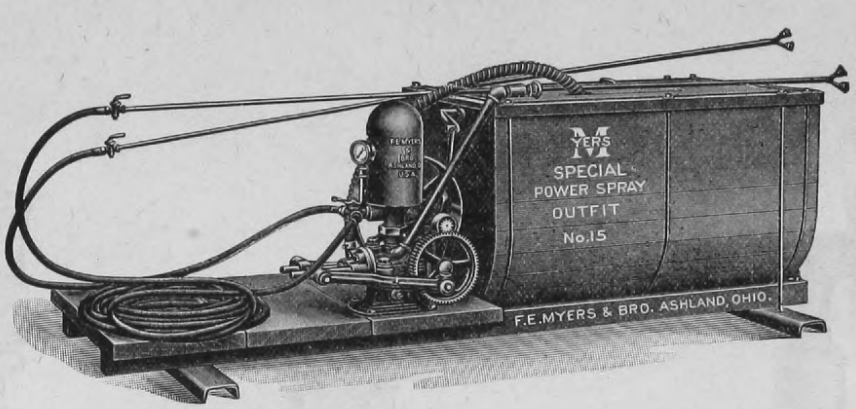
No. R316B.

Myers Double Acting Cog Gear Spray Pump Outfit, well adapted for spraying potatoes and for all kinds of spraying under heavy pressure. Has sufficient capacity for 8 nozzles. **The Pump** has the cog gear movement which greatly increases the leverage and is fitted with brass valves, ground bevel brass seats, 2 inch removable brass cylinder and hemp packed plunger. It also has a valve located between the air chamber and pump which retains the pressure of the air chamber on the nozzles and relieves the valves of the pump from all strain. **Equipped** with 50 gallon barrel mounted on skids, Pressure Gauge, one 15 foot lead, ½ inch 7 ply Discharge Hose, one Fembro Nozzle, one 8 foot Pipe Extension with lever shut-off and Mechanical Agitator.

No. R316B—Spray Pump Outfit.....Each, $60.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

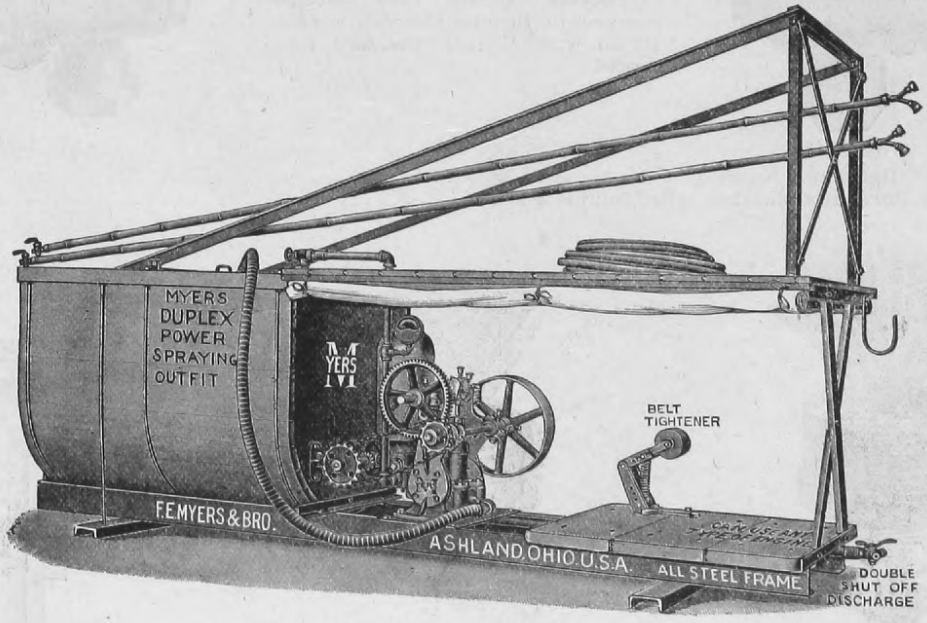
SPRAY PUMP OUTFITS



No. 15.

Myers Special Power Spray Outfit with 2 inch Horizontal Double Acting Force Pump. Tank is made of Cypress with capacity of 100 Gallons, fitted with semi-rotary agitator swung from top of tank and connected direct to face-plate on the Pump. **Equipped** with 50 feet of ⅜ inch discharge hose with fittings for two leads, Two Straight away Fembro Nozzles, Two 45 degree Fembro Nozzles, Two Y's, Two 8 foot Iron Pipe Extensions, Semi-rotary Agitator, Pressure Gauge, Relief Valve, Double Cut-off Strainer and Suction Hose.

No. 15—Special Power Spray Outfit without Engine.....Each, $150.00



No. 21.

Myers Duplex Power Spray Outfit. Made of Channel and Angle Iron, making a very stiff frame with the least possible weight. Fitted with a wrought steel bedplate on which the pump is mounted, and a plank platform for engine, making a solid foundation. Tank is made of selected Cypress, with rotary agitator with wooden blades. Agitator is driven by a link chain, which makes a flexible joint relieving the tank from all strain. Has two cross channel bars underneath the frame to fit the wagon bolsters preventing end or side movement. **Equipped** with 50 feet of ⅜ inch best grade high pressure discharge hose with fittings complete for two leads; Wire bound suction hose 8 feet long, with strainer; Two 10 foot Bamboo Pipe Extensions with lever shut-off; Two Straight away Fembro Nozzles and Two 45 degree Fembro Nozzles.

No. 21—Power Spray Outfit, without Engine .....Each, $232.50

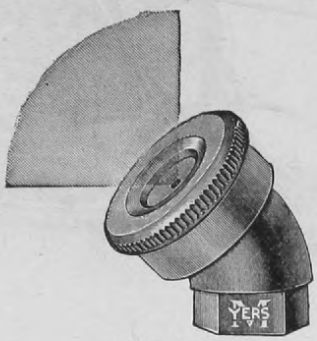
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MYERS SPRAY NOZZLES

No. 1563.

No. 1563—Regular Vermorel Nozzle .....Each, $1.20

Packed—One in a Box.



No. 1559.

No. 1559—Fembro 45 Degree Nozzle .....Each, $1.28

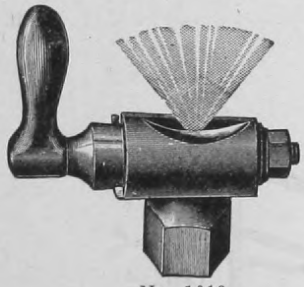
Packed—One in a Box.

No. 1564.

No. 1564—Graduating Vermorel Nozzle .....Each, $1.20

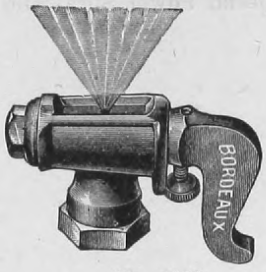
Packed—One in a Box.

Note—No. 1564 Nozzles are constructed on the same general plan as No. 1563, with the improvement that the spray can be graduated from a fine mist up to a solid spray, carrying the stream a much greater distance, or can be shut off entirely, by adjusting the screw plunger by means of the thumb nut. The degorger is operated by the screw plunger instead of by spring as is the case with No. 1563.



No. 1019.

Myers Spray Nozzles will throw a fine fan shaped spray, solid stream or can be shut off altogether if desired. They will readily free themselves, should they become clogged, by turning the cock handle. Fitted with ¼ inch standard pipe thread.



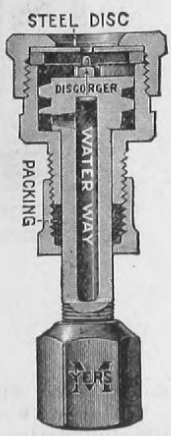
No. 1378.

No. 1019—Regular Bordeaux Nozzles.....Each, $1.35
No. 1378—Special Bordeaux Nozzles, with Double Faces.....Each, 1.50

No. 1317.

No. 1290.

No. 1290—Hand and Power Fembro Nozzle, same size and capacity as No. 1317 but without self-cleaning device. Fitted with removable Steel Disc in Cap.....Each, $1.13



No. 1317.
Sectional Cut.

This Nozzle operates by the liquid passing up through the waterway and then through the spiral groove around the center part of the nozzle, thus forming a whirling motion, which in connection with the passage through the steel plate forms the spray. Has removable steel disc in cap. When the nozzle becomes clogged by pressing it against a limb on the tree the small disgorging pin is thrust through the spray opening in the steel disc, which cleans it, after which the natural pressure from the pump forces the nozzle open ready for spraying again.

No. 1317—Power Spray Nozzle with Self Cleaner or Disgorger.....Each, $1.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MYERS SPRAY NOZZLES

No. 1065.

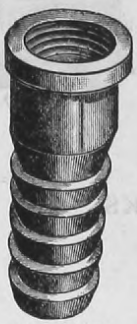
No. 1066.

Intended for use where parties wish to cover a large surface and do it rapidly. Nozzles are swivel and can be set at any angle. Fitted with ¼ inch standard pipe thread for use with ¼ inch pipe extension or male end.

No. 1065—Double Vermorel Nozzle.....Each, $3.00
No. 1066—Triple Vermorel Nozzle.....Each, 3.75

Packed—One in a Box.

SPRAY PUMP FITTINGS



No. 1091.

No. 549.

No. 1325.

No. 1284.

No. 1091—Female Ends for ½ inch Hose and ¼ inch Pipe.....Each, $0.45
No. 549—Male Ends, Regular, for ½ inch Hose and ¼ inch Pipe.....Each, .45
No. 1325—Male Ends, Extra Length for 2 Bands, for ½ inch Hose and ¼ inch Pipe.....Each, .53
No. 1284—Special Brass Hose Coupling, with double length Nipples and heavy ribs; size ½ inch.....Each, .98

No. 772.

No. 1381.

No. 1281.

No. 1283.

No. 772—Hose Reducers, for ¾ inch Hose and ¼ inch Pipe.....Each, $0.38
No. 1381—Brass Y Connections, with 45 degree Bend and ¼ inch Pipe Thread.....Each, .90
No. 1281—Brass Shut-Off Cocks, with ¼ inch Pipe Connections.....Each, .90
No. 1283—Lever Shut-Off Cocks, with ¼ inch Pipe Connections.....Each, 1.13

IRON PIPE EXTENSIONS

No. 480.

No. 480—¼ inch Iron Pipe Extensions, Length 8 feet, with coupling. Both ends threaded.....Each, $0.75

BAMBOO PIPE EXTENSIONS

No. 1536.

Selected Bamboo, with 5/16 inch Brass Tube in center. Shut-off lever and male end are attached to tube by heavy threads.

No. 1536—Bamboo Pipe Extension, Length 8 feet, with Shut-Off Cock.....Each, $5.25

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DOUBLE ACTING HORIZONTAL FORCE PUMPS

No. 600.

New Design Planet Double Acting Horizontal Force Pump, with Regular Lever Handle, Brass Cased Piston Rod, Brass Valves, Brass Valve Seats, Iron Cylinder and Brass Stuffing Box. This Pump embodies all the desirable features in its construction. The Valves are all on the outside of the pump where they can readily be exposed or taken out by merely removing the individual caps directly over them. This is a great feature as it gives free access to the valves without disturbing suction, discharge or any part of the pump except caps referred to. Provided with drain plugs, to prevent freezing, so designed that they can be removed or replaced without the aid of a wrench. **Fitted for Iron Pipe.**

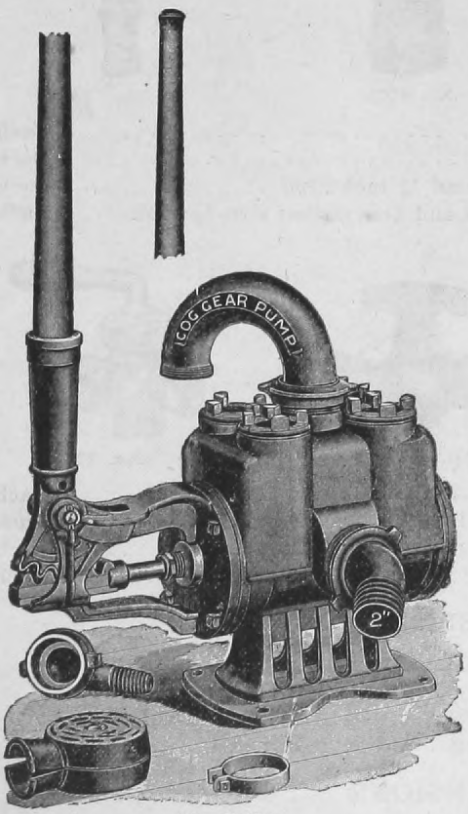
Total Lift and Force 75 Feet.

Total lift and force should be measured from supply to point of delivery, pump not to be placed over 20 vertical feet above supply.

No. 600—Size	2	4
Cylinder, inches	2½	3
Suction fitted for Pipe, inches	1¼	1½
Discharge fitted for Pipe, inches	1	1¼
Stroke, inches	5	5
Capacity Per Complete Stroke	.21 Gal.	.31 Gal.
Each	$13.00	13.00

Lead Pipe Couplings, Extra.....Each, $.....

TANK PUMPS



No. R472.

Myers Low Down Tank Pump with Cog Gear Handle. Has Brass Valve Seats and Metal Valves faced with Rubber. For filling Thresher Tanks, Washing out Boilers, Pumping Water from Shallow Wells, Cellars and Barnyards, Irrigating Purposes, etc. Cog Gear Handle is reversible and can be placed on either end of the cylinder. Pump is fitted for 2 inch suction hose. Both suction and discharge are tapped for 2 inch Iron Pipe. Has enlarged waterways throughout thus reducing the friction.

No. R472—Cog Gear Tank Pump.....Each, $16.88

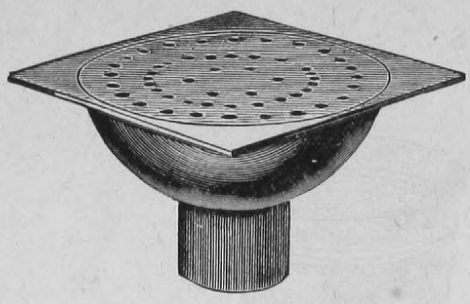
PUMP JACKS

No. H936.

Power may be delivered to this Jack from any source, such as Gasoline Engines, power windmill, tread power or water wheel. Furnished with tight and loose pulleys 13 inches in diameter for 12 inch belt which should not be driven over 200 turns per minute. Can be fastened to the pump or used on the wall, ceiling and floor or a walking beam can be used in connection making it convenient to be used with all makes of ordinary Well Pumps.

No. H936—Jack, Only.....Each, $12.00

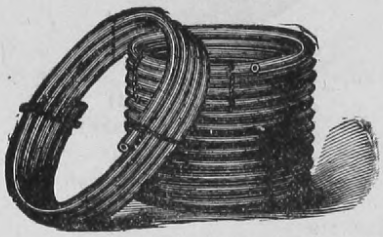
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

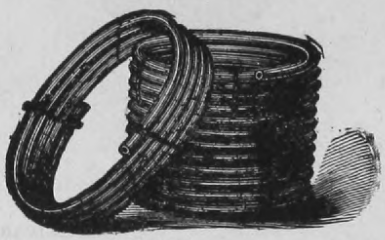


CESS POOL OR BELL TRAPS

Size, inches	4x4	6x6	8x8	10x10	12x12
Outlet, inches	1	2	3	4	4
Each	$0.75	.90	1.10	1.80	2.50

LEAD PIPE





Caliber	Weight Per Foot Lbs.	Weight Per Foot Oz.	Average Length of Coil Feet
¼ in. Tubing	...	6	.....
⅜ in. Ex. Light.	...	9	155
Light	...	12	235
Medium	1	....	175
Strong	1	8	120
Ex. Strong	2	....	90
½ in. Ex. Light.	...	12	235
Light	1	....	175
Medium	1	4	140
Strong	1	12	100
Ex. Strong	2	8	70
⅝ in. Ex. Light.	1	4	140
Light	1	12	100
Medium	2	....	85
Strong	2	8	70
Ex. Strong	3	....	58

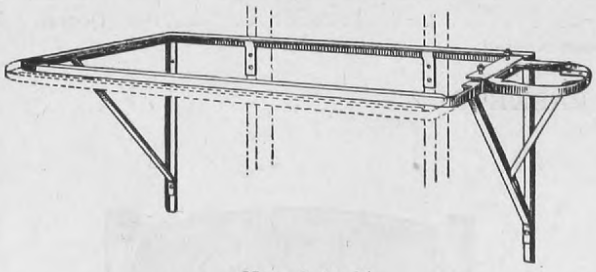
Caliber	Weight Per Foot Lbs.	Weight Per Foot Oz.	Average Length of Coil Feet
¾ in. Ex. Light.	1	8	115
Light	2	....	85
Medium	2	4	75
Strong	3	....	58
Ex. Strong	3	8	48
⅞ in. Ex. Light.	2	....	85
Light	2	8	70
1 in. Ex. Light.	2	....	85
Light	2	8	70
Medium	3	4	53
Strong	4	....	43
Ex. Strong	4	12	35
1¼ in. Ex. Light.	2	8	70
Light	3	....	55
Medium	3	12	48
Strong	4	12	35

Caliber	Weight Per Foot Lbs.	Weight Per Foot Oz.	Average Length of Coil Feet
1¼ in. Ex. Strong	6	....	28
1½ in. Ex. Light.	3	8	42
Light	4	....	40
Medium	5	....	32
Strong	6	....	36
Ex. Strong	7	8	20
1¾ in. Ex. Light.	3	12	40
Light	4	8	35
Medium	5	8	28
Strong	6	8	23
Ex. Strong	8	....	20
2 in. Ex. Light.	4	....	40
Light	5	....	30
Medium	7	....	22
Strong	8	....	18
Ex. Strong	9	....	16

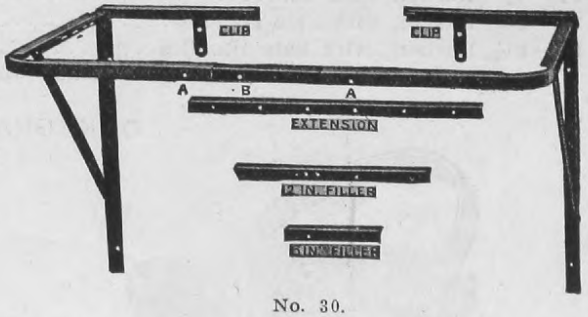
Lead Pipe, All Sizes, Tubing, Extra Light, Light, Medium, Strong and Extra Strong.....Per Pound, $.....

Extra for wrapping.....Per Coil, ...

SINK FRAMES AND PUMP SUPPORTS



Nos. 3 to 34.



No. 30.

Sink Frames and Pump Supports

Frame made of Angle Steel which fastens to the wall with adjustable clips that may be fastened anywhere along the back of the frame wherever the studding may be. Has an adjustment of 3 inches in width to accommodate the different widths of sinks. The Steel Pump Support makes a rigid, sanitary place to fasten the pump. It allows the pump to be placed well over the rim of the sink so the water falls well into it. Can be used with all sizes of frames and at either end of the sink.

No. 3—Frame Only, 30 inches long, holds an 18x30 or 20x30 inch sink.....Per Dozen, $24.00

No. 4—Frame Only, 36 inches long, holds an 18x36 or 20x36 inch sink or an 18x30 or 20x30 inch Sink and Pump Board.....Per Dozen, 24.00

No. 34—Pump Support Only.....Per Dozen, 10.00

ADJUSTABLE SINK FRAMES

This Sink Frame is made of ¾ inch Angle Steel, Black Enamel Finish, making them easy to wash and keep clean. Is adjustable in length from 24 to 36 inches and in width from 16 to 22 inches, making it possible to fit all frames to any sink of regular size, with or without a Pump Board or Sink Back.

No. 30—Adjustable Sink Frames.....Per Dozen, $24.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STEEL GRAIN BASKETS

GALVANIZED

No. 020.

Nos. 024 and 026.

With Bail and Side Handle. Refined Smooth Rolled Steel.

No.	**020**
Size	½ Bushel
Per Dozen	$11.00

Packed—Half Dozen Nested.

With Drop Side Handles. Refined Smooth Rolled Steel.

Nos.	**024**	**026**
Sizes	1 Bushel	1½ Bushel
Per Dozen	$16.00	21.00

Packed—Half Dozen Nested.

Galvanized Steel Grain or Coal Baskets

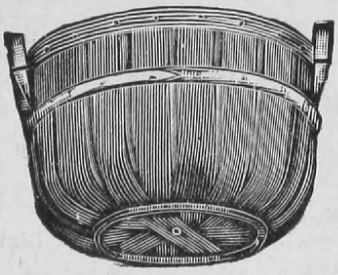
With Rope Handles, Refined Smooth Rolled Steel.

Nos.	**26R**	**28R**
Sizes	1½ Bushels	2 Bushels
Per Dozen	$22.50	27.00

Packed—Half Dozen Nested.

ELM GRAIN BASKETS

No. 14.



Nos. 15 and 16.

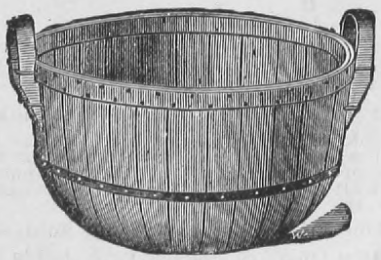
Double Stave Elm Baskets, Double Rim Bottom.

No. 14—½ Bushel, with Bail.....Per Dozen, $2.50
No. 15—1 Bushel, with Side Handles.....Per Dozen, 2.60
No. 16—1½ Bushels, with Side Handles.....Per Dozen, 5.00

Packed—Half Dozen Nested.

OAK GRAIN BASKETS

No. 1.



Nos. 3 to 5.

Oak, Tight Staves, with Riveted Galvanized Iron Hoop.

No. 1—½ Bushel, with Bail.....Per Dozen, $ 7.00
No. 3—1 Bushel, with Side Handles.....Per Dozen, 8.50
No. 4—1½ Bushels, with Side Handles.....Per Dozen, 11.50
No. 5—2 Bushels, with Side Handles.....Per Dozen, 20.00

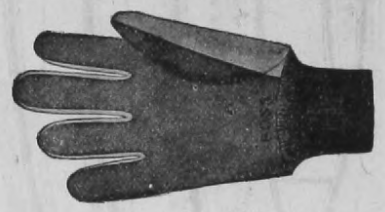
Packed—Half Dozen Nested.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GLOVES

Nos. 6651, 6651B, and 861

No. 6651K.



No. 6775.

No. 6651 —Medium Weight Canton Flannel, Knit Wrist, Fleece Inside .....Per Dozen Pairs, $2.30

No. 6651B—Boys' Size, otherwise same as No. 6651.....Per Dozen Pairs, 2.20

No. 6651K—Kid's Size, otherwise same as No. 6651.....Per Dozen Pairs, 2.20

No. 861 —Heavy Weight Canton Flannel, Knit Wrist, Fleece Inside .....Per Dozen Pairs, 2.70

No. 6775 —Heavy Weight Canton Flannel, Knit Wrist, **Leather Face**, Fleece Inside.....Per Dozen Pairs, 7.00

Packed—One Dozen Pairs in a Bundle.

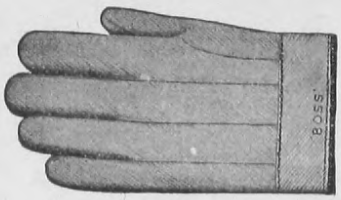
No. 676.

No. 845.

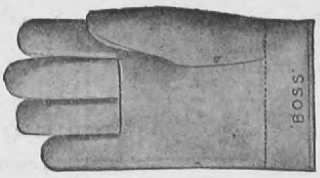
No. 676—Little Folks ages 5 to 9 years—Heavy Weight Jersey Glove, Assorted in tan, brown and black mixed Jersey with red and blue mixed Knit Wrist.....Per Dozen Pairs, $2.40

No. 845—Men's Extra Heavy Weight Canton Flannel Glove, Fleece Inside, Sky Blue Knit Wrist. Three Seamed Back Pattern .....Per Dozen Pairs, 3.00

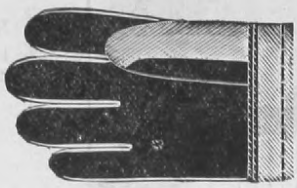
Packed—One Dozen Pairs in a Bundle.



No. 164.



No. 174.



No. 3775.

No. 164—Heavy Weight Canton Flannel, Band Top, Fleece Inside .....Per Dozen Pairs, $2.40

No. 174—Heavy Weight Drab Husking Cloth, Band Top, Fleece Inside .....Per Dozen Pairs, 2.40

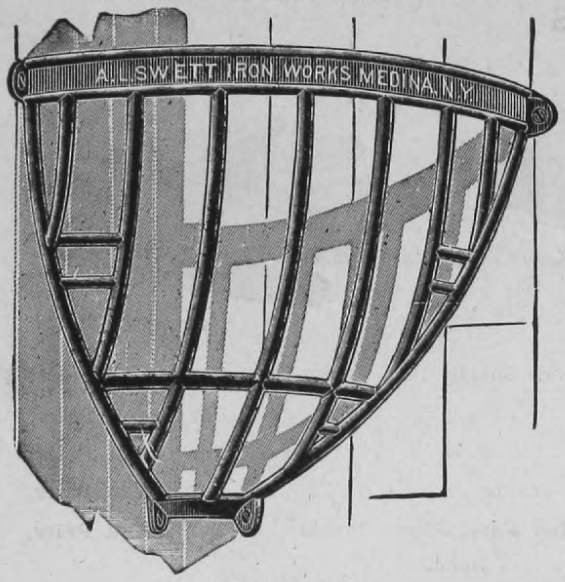
No. 3775—Heavy Weight Canton Flannel, Short Cuff or Band, **Leather Face**, Fleece Inside.Per Dozen Pairs, 6.80

Packed—One Dozen Pairs in a Bundle.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STABLE FITTINGS

CORNER HAY RACKS

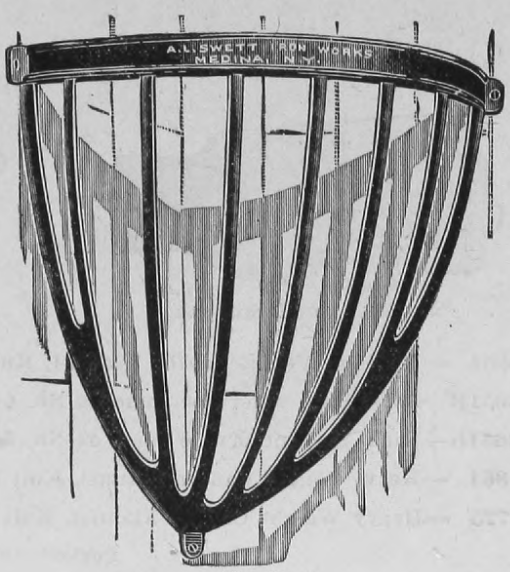


Nos. 0 and 1.

Cast Iron Corner Hay Racks. Projects from corner 1 foot, 10 inches.

No. 0—Height, 2 feet, 3 in., Light...Per Dozen, $30.00
No. 1—Height, 2 feet, 4 in., Heavy..Per Dozen, 34.00

CORNER HAY RACKS



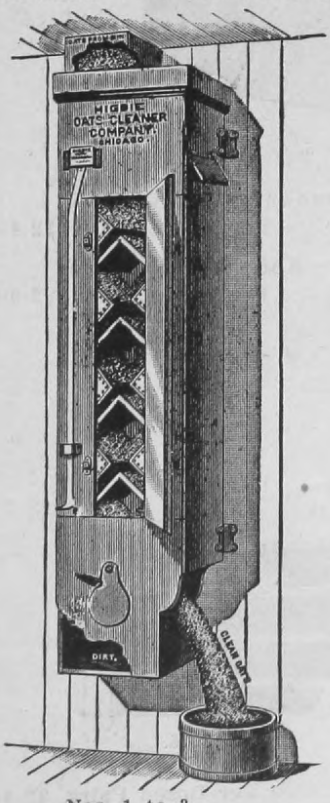
No. 2.

Cast Iron Corner Hay Racks. Projects from corner 1 foot, 11 inches.

Heavy Pattern.

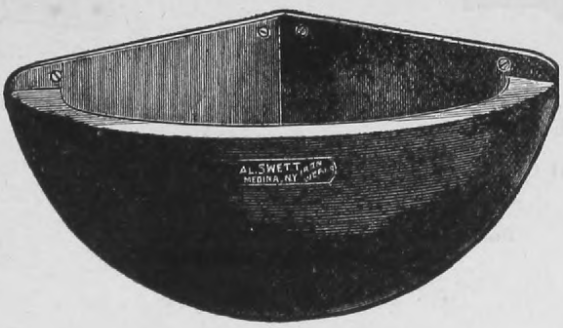
No. 2—Height, 2 feet, 8 inches.....Per Dozen, $45.00

HIGBIE OAT CLEANERS



Nos. 1 to 3.

CORNER MANGERS

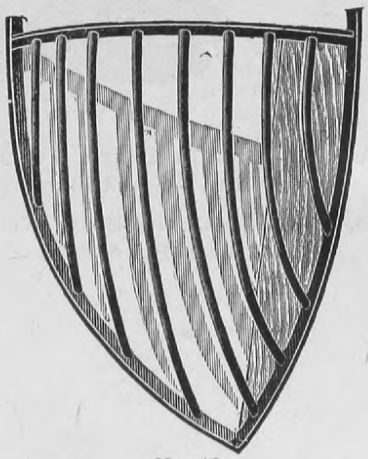


Nos. 1 and 3.

Cast Iron with Flat Food Guard. Two Sizes.

Nos.	Size	Per Dozen
1	13x13x 8 inches	$27.00
3	17x17x10 inches	30.00

CORNER HAY RACKS



No. 12.

Wrought Steel Corner Hay Racks. Projects from corner 2 feet.

No. 12—Height, 2 feet, 11 inches.....Per Dozen, $37.00

HIGBIE OAT CLEANERS

Whitewood, Varnished

Brass Trimmed and Natural Finish with Two Coats of Varnish.

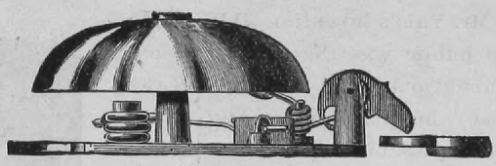
No. 1— 1 to 15 Horses. 8½ x 15 inches x 6½ feet. Capacity, ½ bushel per minute.....Each, $.....
No. 2—15 to 50 Horses. 11 x 16 inches x 6½ feet. Capacity, 1 bushel per minute.....Each, ...
No. 3—50 to 300 Horses. 12 x 16 inches x 6½ feet. Capacity, 2 bushels per minute.....Each, ...

Note.—Specify Left Hand if discharge of oats is wanted opposite from illustration.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

ALARM DOOR BELLS

Reduced Size Cuts.



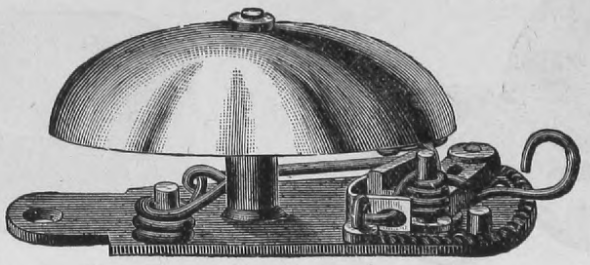
No. 104.

Bronzed Steel Bell, 4 inch, Nichols' Patent.

No. 104—Alarm Door Bells.....Per Dozen, $6.00

Packed—One-Twelfth Dozen in a Box.

GONG HOUSE BELLS



Nos. 204 to 306, Nichols' Patent.

Bronzed Steel Gong.

Nos.	204	206
Diameter, inches	4	6
Per Dozen	$5.00	10.00

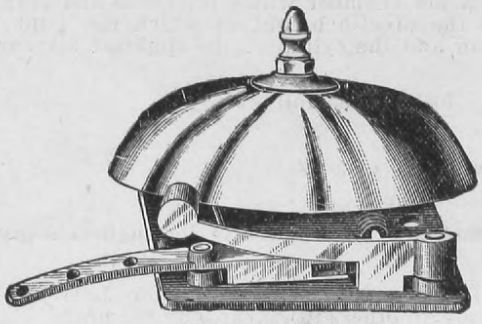
Packed—One-Twelfth Dozen in a Box.

Polished Bell Metal Gong

Nos.	304	306
Diameter, inches	4	6
Per Dozen	$10.00	20.00

Packed—One-Twelfth Dozen in a Box.

TRIP GONG BELLS



Nos. 404 to 512.

Bells over 8 inches in diameter have Wood Hammers.

Polished Bell Metal Gong.

Nos.	404	406	408	410	412	414
Diameter, inches	4	6	8	10	12	14
Per Dozen	$12.50	24.00	46.00	84.00	150.00	212.00

Nickel Plated Steel Gong.

Nos.	504	506	508	510	512
Inches	4	6	8	10	12
Per Dozen	$10.80	18.00	36.00	60.00	96.00

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE LOCKS AND HARDWARE

THE YALE CYLINDER LOCK

The Pin-tumbler Cylinder Lock was invented by Linus Yale.

Undoubtedly the feature of Mr. Yale's invention which made the deepest impression on the public was the small flat key (only one-third in length and about one-tenth in weight of the round keys then in universal use), but the fundamental inventions which made the small key possible were the detached "cylinder" (containing the tumbler mechanism), the "plug," to support the flat key during its rotation, and the "pin-tumbler" mechanism. From these inventions have been derived the now familiar terms "cylinder lock" and "pin-tumbler lock." The character and operation of these parts are explained below.

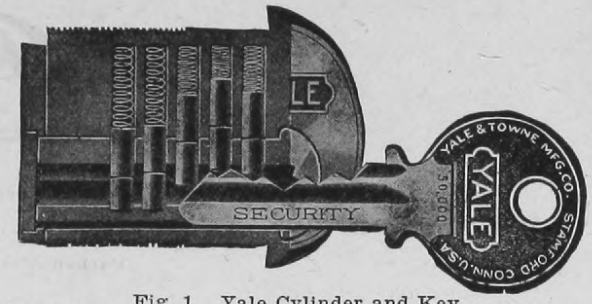


Fig. 1. Yale Cylinder and Key.
The Cylinder as it would look if cut in half to expose the mechanism. The key is only partly inserted, so that some of the pins keep the plug from turning.

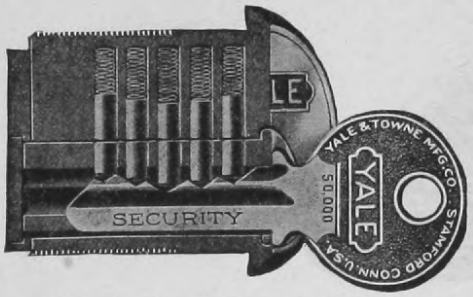


Fig. 2. Yale Cylinder and Key.
The key being fully inserted, the pins are raised to an exact line, and the key and plug may turn freely.

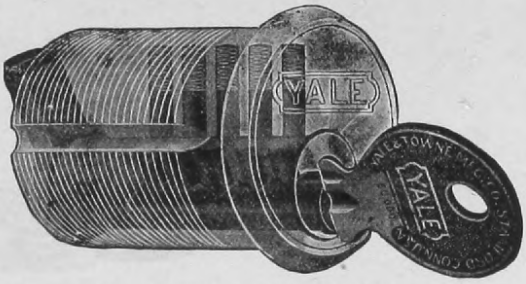


Fig. 3. Yale Cylinder and Key.
Cylinder with key fully inserted, showing operation of cam at rear, which actuates the bolt mechanism.

The Cylinder: This is shown in section by Figs. 1 and 2, and complete by Fig. 3. It is inserted through the door from the outside, thereby permitting the length of the key to be constant whatever the thickness of the door, and it connects at its rear end with the lock case in order to operate the bolt. It contains the plug and the pin-tumblers.

The Plug: This is a cylindrical barrel, which contains the key-way and supports the flat key during its rotation. At its rear end it carries a cam or other connection whereby, when the plug is rotated, the bolt of the lock is operated.

The Pin-tumblers: The cylinder contains usually five sets of pin-tumblers, each "set" consisting of a tumbler, a driver, and a spring, all contained in a pin chamber which intersects the plug and the cylinder. The plug can only rotate when each set is raised to the precise height at which the joint between each pin and its driver coincides with the joint between the plug and the cylinder: the slightest inaccuracy in the setting of any pin will prevent rotation of the plug.

The three chief essentials of a good lock are as follows:

1. Security against picking.
2. Security against accidental interchange of keys.
3. Security against illicit duplication of keys.

The Yale Cylinder Lock possesses each and all of these in the **highest degree.**

Fig. 6.
Yale Paracentric Key. (Reverse.)

Key Changes: The Cylinder Lock excels all others in its capacity for practical key-changes; that is, in the number of locks whose keys are all different, no key passing any lock but its own. Common locks have but few key-changes, whereas those of the Cylinder Lock are practically unlimited.

Fig. 7.
Yale Paracentric Key. (Obverse.)

The key of each Yale Cylinder Lock is cut or "bitted" from numerical lists, carefully prepared to ensure that no two keys in the whole series shall be alike. As each key is numbered consecutively (but so as to afford no clue to its bitting or combination), it follows that the makers could furnish duplicate keys by number; but it is their invariable rule to decline to do this, and to require in all cases that an original key must accompany every order for duplicate keys as evidence of the right of the customer to obtain the latter. The contrary policy, pursued by some manufacturers, of furnishing duplicate keys by number, is highly dangerous and should be discountenanced.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE LOCKS AND HARDWARE

MASTER-KEYED LOCKS

The use of "master-keys" to control locks in series is increasing so rapidly as to prompt us to furnish the following technical information on this subject.

A series of locks may be arranged, as to their keys, in either of three different ways, viz:

1. **All different,** each key opening only one lock: (regular; obtainable from stock).

2. **All alike,** any key opening all of the locks: (special; but easily obtainable).

3. **Master-keyed,** with keys all different (as in 1), but with a master-key also, which passes all of the locks (as in 2): (special; must be made to order).

WARDED LOCKS should not be selected for master-key work, because of their inferior quality and security, and limited number of key changes.

LEVER-TUMBLER LOCKS of many kinds are well suited for master-key work, afford excellent protection, and for some uses, especially in hotels, are often the preferred type.

CYLINDER LOCKS of **all kinds** can be master-keyed, not only those of the same, but also those of different kinds. They are master-keyed under the following systems, viz:

1. By using the Bicentric Cylinder.

2. By using Duplex Cylinder Locks.

3. By using the Standard Cylinder, with master-keys of regular or special sections.

The choice between the various kinds of locks, and various methods of master-keying, should be made carefully and with reference to all the conditions of use and the purposes in view.

HOTEL LOCKS of many kinds can be master-keyed in series by floors, or otherwise, as desired. Usually each corridor or room lock is controlled by its own change (or guest's) key, by a floor master-key for servant's use (the maid's key), and by a grand master-key for the manager's (or housekeeper's) use. Usually the construction preferred is such that, when locked from the inside, **none** of these keys will open the lock from the outside. With certain types of hotel locks it is possible to furnish also a fourth, or "emergency," master-key (usually kept in the manager's safe), which is capable of opening the lock under all conditions, even when **locked from the inside.** All of these questions should be determined before selecting the type of lock, and before planning a master-key system.

A "system" of master-keyed locks may be divided into subordinate groups, the locks in each group being controlled by a "submaster-key" each lock in the system having its own "change-key," differing from all others, and all the locks in the entire system being controlled by a "grand master-key."

Cylinder Locks **not only of the same but of different kinds** may be controlled by a single master-key; as for example, those on the entrance and other doors of the owner's residence, of his office or store, of his stable or garage, of his private desks, and even of some padlocks.

In planning a system of master-keyed locks provision should be made not only for the locks needed immediately, but for future possible extensions; otherwise it may be difficult or impossible to make such extensions later. The planning of such a system should be done by the manufacturer, or by a dealer or locksmith having technical experience in this specialty, who is fully informed as to the results desired by the customer, and familiar with the kinds of locks available for master-key work.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE LOCKS AND HARDWARE

MASTER-KEYED LOCKS

A record is kept by us of the keys used in every important installation of master-keyed locks. This is necessary because without it we would be unable afterwards to make additions to a series without danger of unintentional duplication of keys, and because without it there would be great danger that a master-key furnished to one customer might control some or all of the locks furnished to another customer in the same locality. Our system of records, which has been maintained for upwards of 25 years, obviates this danger. To maintain unimpaired the protection thus guaranteed to our customers, both old and new, we have always made it a rule to decline to accept orders for master-keyed locks unless advised as to the **name and location** of the party by whom they are to be used. The information thus required is, of course, treated as strictly confidential.

MASTER-KEY SYSTEMS

LEVER-TUMBLER LOCKS. As to each of these, its capacity for master-keying depends upon its internal construction, and, therefore, is stated definitely in the description accompanying the illustration of each lock.

CYLINDER LOCKS. As the capacity of each of these for master-keying depends upon the size of cylinder used, and as nearly all such locks are furnished with our standard cylinder, the following general statement will apply to all Cylinder Door Locks emanating from any one factory.

"Can be master-keyed in one set, of any number of changes usually required, all different, with a master-key to pass all locks; or in any number of sets usually required, each set having any number of changes, all changes different, with master-key to pass the locks in each set, and a grand master-key to pass all the locks."

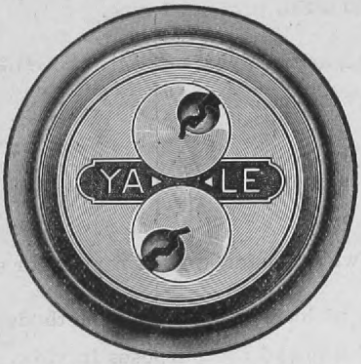


Fig. 1. The Bicentric Cylinder.
Full Size.

YALE SYSTEM No. 1. The Yale Bicentric Cylinder. This is identical in size with the standard Yale cylinder, and can be substituted for the latter in any Yale cylinder lock. Instead of one pin-tumbler mechanism, however, it contains two, each complete and independent (as shown by Figs. 1 and 2), each mechanism controlled by its own key only. The two key-ways have reversed sections, so that each key will enter only its own key-way.

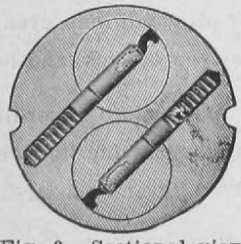


Fig. 2. Sectional view
showing position of pins.

The rear end of the lower "plug" carries a cam, rigidly attached, which operates the bolt work of the lock in the usual manner (see Fig. 3). Behind this cam, mounted on the same plug, but loose thereon, is another similar cam, rigdly attached to which is a small gear wheel driven by a similar gear wheel also rigidly attached to the inner end of the upper "plug." Each plug is thus free to rotate independently of the other, but in so doing operates one of the two cams, both of which engage with the bolt work, and either of which is therefore effective to operate the lock.

The Bicentric cylinder is available for use in any Yale lock which uses the standard cylinder. It is not available with Yale locks taking the small (.40 inch plug) cylinder, with Yale cabinet locks, or with Yale padlocks.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE LOCKS AND HARDWARE

MASTER-KEYED LOCKS

By this simple but important invention the following results and advantages, never heretofore combined, are obtained, viz:

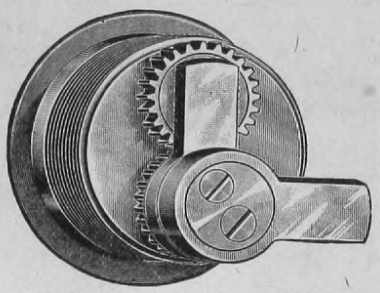


Fig. 3. Rear view showing cams.

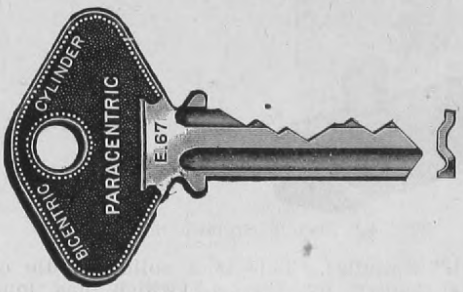


Fig. 4. Change-key.

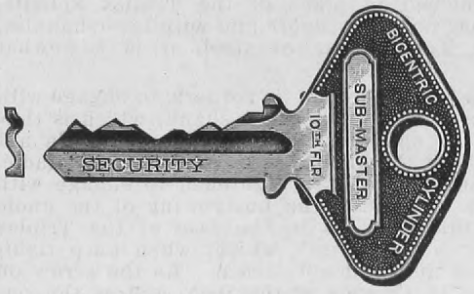


Fig. 5. Master-key.

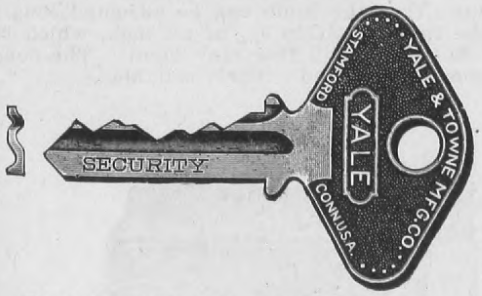


Fig. 6. Reverse side of bow of Change and Master-keys.

1. The full and unrivaled capacity of the Yale cylinder lock for **key changes** is available, unimpaired, both for the change-key and the master-key, this capacity exceeding all practical requirements.

2. The unrivaled **security** of the Yale cylinder lock is retained unimpaired.

3. The absolute **simplicity** and durability in service of the Yale cylinder lock are retained unimpaired.

4. The Bicentric cylinder can be utilized with any Yale cylinder lock in place of the standard cylinder.

5. The use of master-keys does not require locks of increased size or of special design.

6. The system facilitates the grouping of locks under grand master-keys, sub-master-keys, floor master-keys, etc.

7. A special cross sectional shape of key and keyway, such that no other keys can be used with these cylinders, and that the keys used with the Bicentric cylinder will not enter the keyways of other cylinders.

8. A new and attractive form of key bow whereby the keys used with the Bicentric cylinder can be distinguished at a glance from all other keys.

9. These advantages entail but slightly greater cost than the inferior methods heretofore in use.

YALE SYSTEM No. 2. The Yale Duplex Lock. This consists in providing a Yale cylinder lock with **two independent cylinders,** each actuating the bolt, one used for the master-key and the other for the change-key. The result thus obtained is identical with that gotten by means of the Bicentric cylinder, as explained above, but the method involves a lock of special form, of larger size and more expensive construction than the corresponding lock of regular form. The Yale Duplex lock maintains its position as the best form of master-keyed lock ever devised, but the Bicentric cylinder enables the same results to be obtained with Yale cylinder locks of the regular models, and at less cost.

YALE SYSTEM No. 3. This uses the regular lock, with standard cylinder. It can be master-keyed in small groups (usually sufficient in number and variety to cover residence requirements), with the regular key, and in larger groups by means of the "surety" system of master-keys of special sections. This system is slightly cheaper than System No. 1, in which the Bicentric cylinder is used, but the latter is in all respects better and should be given preference in view of the small difference in cost. If a series of master-keyed Yale cylinder locks comprising 1000 or more locks is required, either the Bicentric cylinder should be availed of, or Yale Duplex locks.

We invite correspondence on this subject.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE LOCKS AND HARDWARE

LOCK SPINDLES

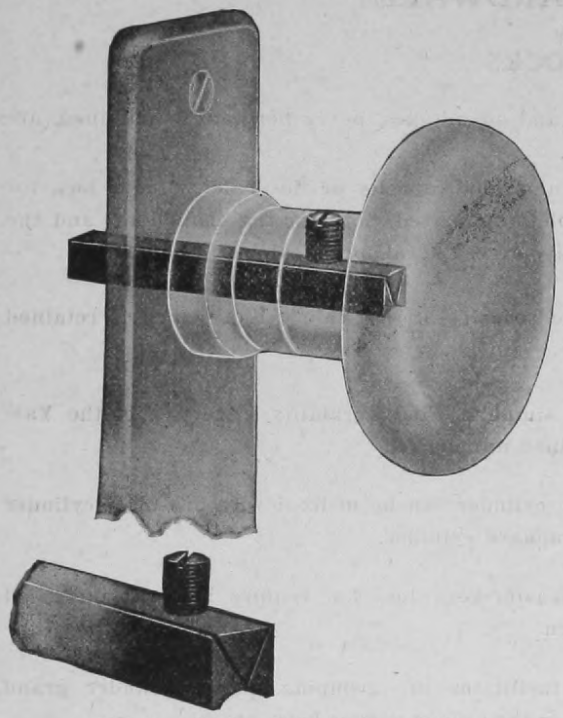


Fig. 2. Triplex Spindle in position.

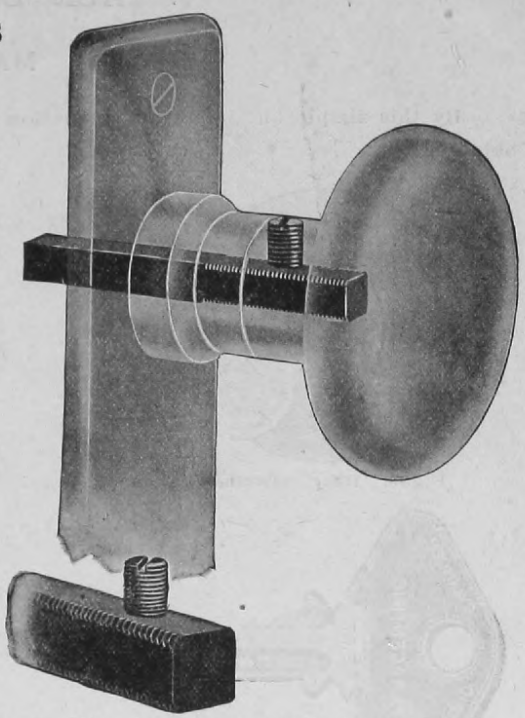


Fig. 4. French Spindle in position.

The "Triplex" Spindle (Patented): As shown by Figs. 2 and 3 the "Triplex" Spindle consists of three parallel bars which together form a square rod. A set-screw in the knob-shank bears on the centre bar, the wedge form of which forces the other two bars apart and into frictional engagement with the knob-shank. The three bars are pinned together at one end, and one knob is permanently pinned to this end of the spindle, the entire adjustment usually being made with the other knob.

The spindle itself is "screwless," and the set-screw, when tightened into place, is "jammed" against its thread so that it has no tendency to loosen and will remain tight under all conditions of use. The "Triplex" Spindle is the best and simplest lock spindle on the market. It has been in use nearly twenty years, and many millions of it have been sold. Its utility and reliability are absolutely established.

The "Triplex" Spindle is invariably furnished with all Yale knobs shown in this catalogue, except where otherwise specified.

The "French" Spindle: This is a solid spindle of the construction shown by Fig. 4 (which has long been used in France), and which, at a moderate extra charge, is furnished in place of the Triplex Spindle, especially for use on heavy doors and with lever handles, because, being a solid bar of steel, it is somewhat stronger.

This spindle is threaded on its corners, to engage with a corresponding thread in the knob-shank, which is thus screwed on to the spindle in the same manner as a nut on to a bolt. After the knob is screwed on to the spindle, the set-screw on the former is tightened to engage with the latter, thus preventing the unscrewing of the knob. The screw in this case, as in the case of the Triplex Spindle, is a true "set-screw" which, when once tightened, is jammed and will not loosen. As the screw on the spindle has 16 threads to the inch, and as the set-screw may be tightened on any of the four sides of the spindle, it follows that the knob can be adjusted longitudinally on the spindle within $1/64$ of an inch, which is as close as is consistent with free movement. The construction is strong, simple and entirely reliable.

RIM LOCK STRIKES

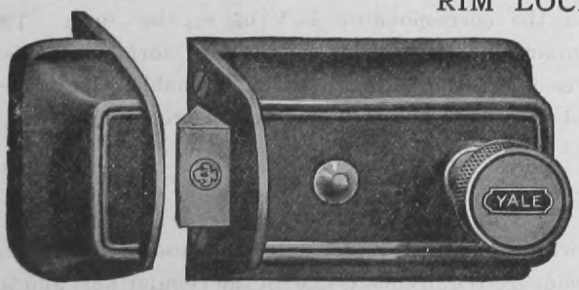


Fig. 19

Right-hand door, opening *inward;* requires *regular* bevel bolt and strike

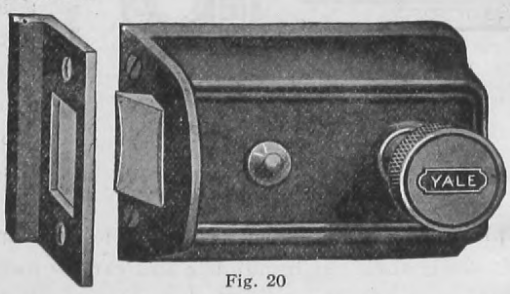


Fig. 20

Right-hand door, opening *outward;* requires *reverse* bevel bolt and strike

A **mortise** lock takes the same strike whether the lock is regular or reverse bevel. A **rim** lock, as shown by Figs. 19 and 20, if reverse bevel requires a different strike than if regular bevel.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAND OF DOORS

MORTISE LOCKS

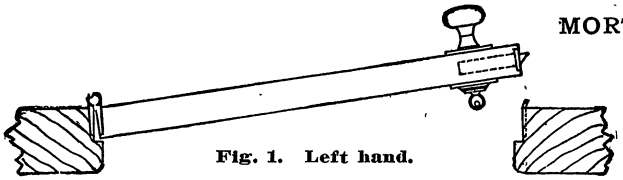


Fig. 1. Left hand.

A Door Hinged on the Left Hand Side and Opening from You as You Enter from the Outside is a Left Hand Door.

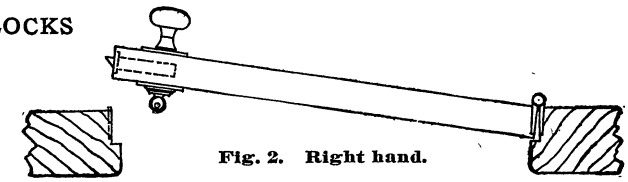


Fig. 2. Right hand.

A Door Hinged on the Right Hand Side and Opening from You as You Enter from the Outside is a Right Hand Door.

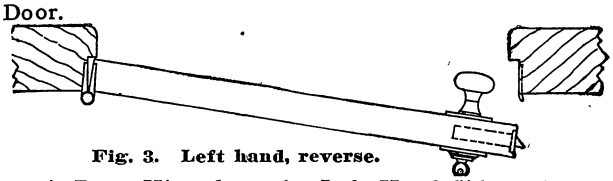


Fig. 3. Left hand, reverse.

A Door Hinged on the Left Hand Side and Opening Toward You as You Enter from the Outside is a Left Hand Reverse Bevel Door.

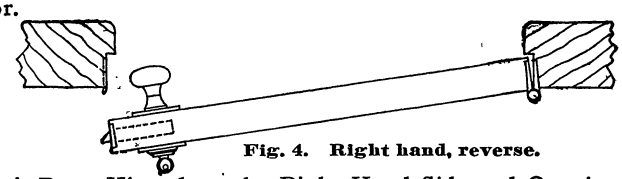


Fig. 4. Right hand, reverse.

A Door Hinged on the Right Hand Side and Opening Toward You as You Enter from the Outside is a Right Hand Reverse Bevel Door.

RIM LOCKS

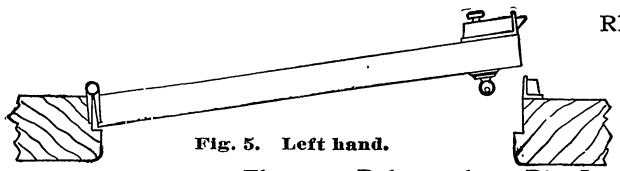


Fig. 5. Left hand.

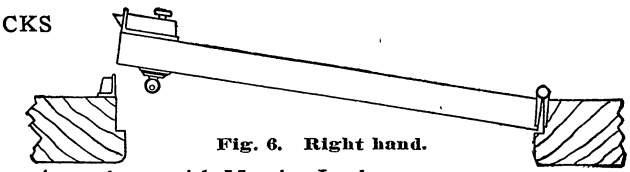


Fig. 6. Right hand.

The same Rules apply to Rim Locks as are given above with Mortise Locks

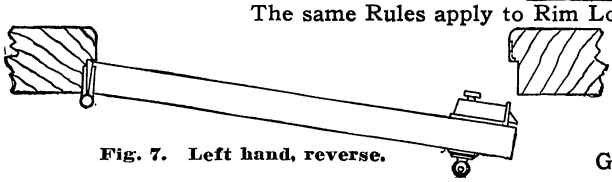


Fig. 7. Left hand, reverse.

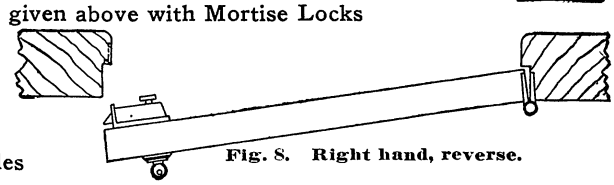


Fig. 8. Right hand, reverse.

General Rules

1. The hand of an entrance door is always determined from the **outside.**
2. The "outside" is the street side of an entrance door, and the corridor or hall side of a room door.
3. The "outside" of a communicating door, from room to room, is the side from which, when the door is closed the butts are not visible.
4. The "outside" of a pair of twin doors is the space between them.
5. The "outside" of a closet door is the "room side," **thus** reversing the rule which applies in other cases.
6. The foregoing definitions apply to sliding doors as well as to hinged doors.

Note

1. If standing "outside" of a door, the butts are on the right, it is a right hand door; if on the left, it is a left hand door; **except** as to casement sashes, where the point of view is assumed to be from the inside.—See Figs. 11 to 14.
2. If standing "outside" and the door opens from you or inward it takes a lock with a regular bevel bolt; if opening outward it takes a lock with reverse bevel bolt. In this connection see paragraph "3" below.
3. Mortise and Rim Locks as commonly made have reversible bolts, this provision permits any "reversible" lock to be used on either a right-hand or left-hand door. Thus the question of a reverse bevel bolt is involved only in the case of locks which are **not** reversible, and where the edge of the door is beveled.
5. A door is beveled when its edge is not at a right angle with its surface and a mortise lock for such a door requires a beveled front. This bevel is expressed by stating the thickness of the door and the distance which one edge drops back of the other. The standard bevel is ⅛ inch in 2¼ inches.

CUPBOARD AND BOOK-CASE LOCKS

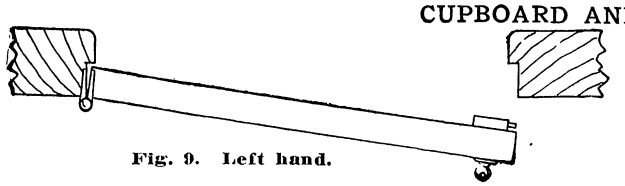


Fig. 9. Left hand.

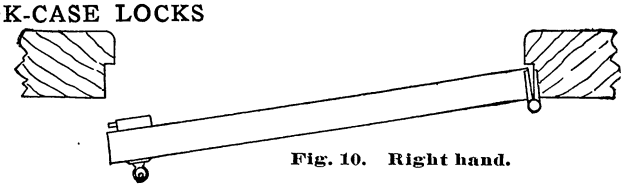


Fig. 10. Right hand.

Note

As cupboard and book-case doors always open out, locks for such doors are regularly made with reverse bevel bolts; therefore, as to such locks, it is unnecessary to specify "reverse bevel."—See Figs. 9 and 10.

CASEMENT WINDOWS OPENING IN

Left hand.

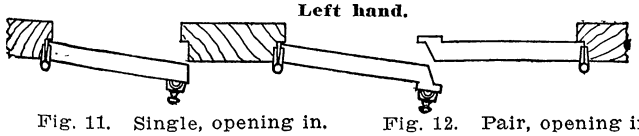


Fig. 11. Single, opening in.

Fig. 12. Pair, opening in.

Right hand.

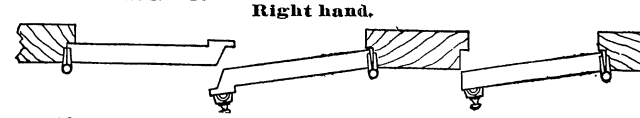


Fig. 13. Pair, opening in.

Fig. 14. Single, opening in.

Note

In connection with casement windows the point of view is assumed to be from the **inside** instead of the outside. Casement windows opening out follow the same rule as applies to those opening in. **Specify** hand and state whether opening in or opening out, as the case may be.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE MONO-LOCK SETS

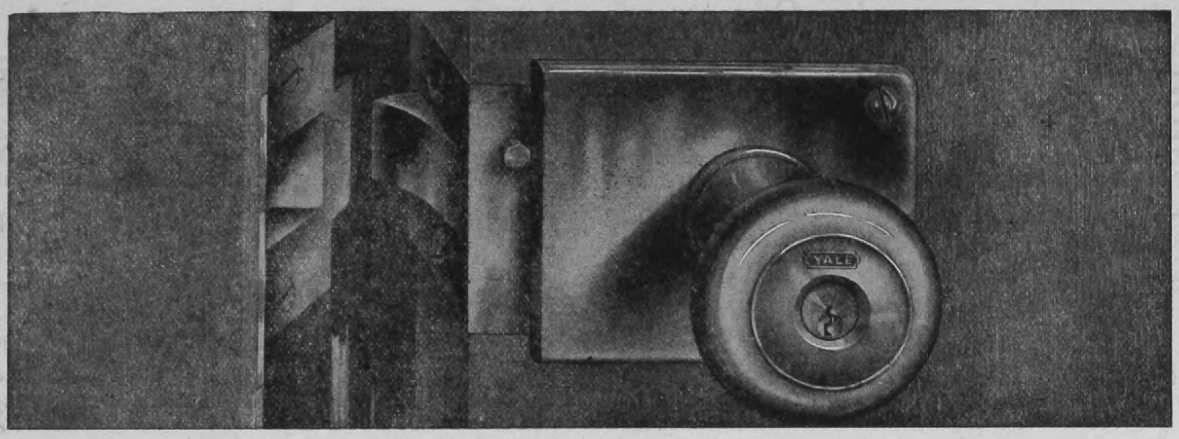


Fig. 10.

The strike regularly furnished for Yale Mono-Locks is of the "protected box" type which prevents tampering with the bolt, and covers the cut in the woodwork made to receive the strike.

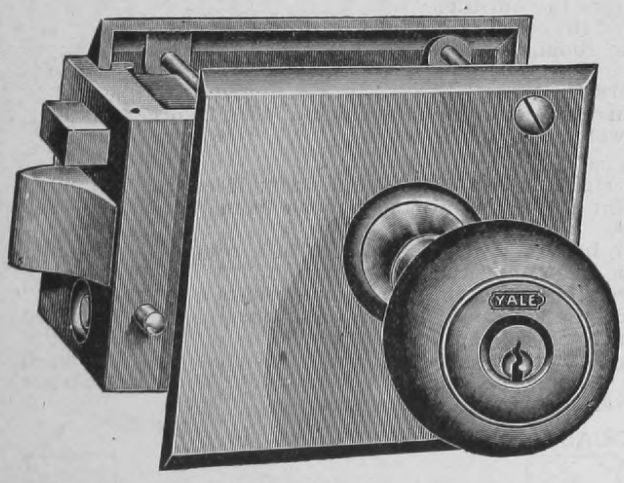
Yale Mono-Lock Sets with Ornamental Trim

Any of the vast number of ornamental designs, already in use in connection with Yale Cylinder Locks, may be adapted as trim for the Yale Mono-locks. For example see GR, Yuma and Dartmouth Designs, pages 1059 to 1061.

In connection with these designs, attention is called to the use of both vertical and horizontal plates with the Mono-locks. Certain designs are not suited to both types of plate, but we are prepared to undertake the study and execution of special designs for office buildings, hotels, etc., and correspondence is invited on this subject.

DESCRIPTION OF YALE MONO-LOCK SETS

FRONT DOOR



No. 3100M Series for Front Doors

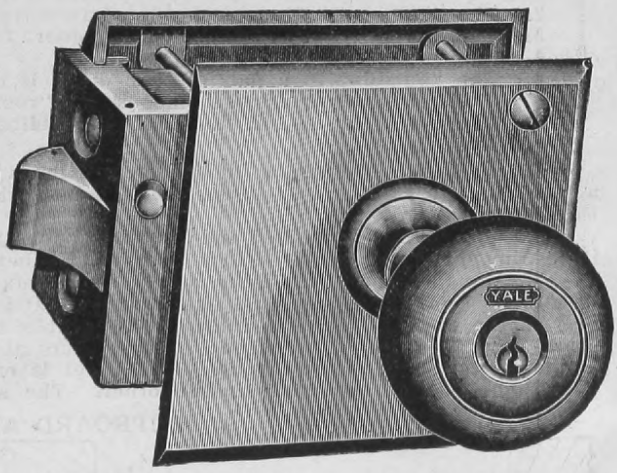
With Deadlocking Plunger.

OPERATED—Latch bolt by knob from both sides; outer knob may be set by stop in front. When outer knob is stopped, latch bolt is operated by key. Dead bolt by key from outside, by thumb-turn from inside. The stop-work and latch bolt are automatically deadlocked by plunger when door is closed, which prevents tampering.

CYLINDERS—Bronze Metal. Five Pin Tumblers. Changes practically unlimited.

KEYS—3 Paracentric, Nickel-Bronze Keys with coined, gold plated bows.

VESTIBULE DOOR



No. 3000M Series for Vestibule and Corridor Doors

With Deadlocking Plunger.

OPERATED—By knob from both sides; outer knob may be set by stop in front. When outer knob is stopped, bolt is operated by key. The stop-work and bolt are automatically deadlocked by plunger when door is closed, which prevents tampering.

CYLINDERS—Bronze Metal. Five Pin Tumblers. Changes practically unlimited.

KEYS—3 Paracentric, Nickel-Bronze Keys with coined, gold plated bows.

Packed—Each Set in a paper box with screws, directions for applying and template to show size and shape of cut in door and location of wood screws.

Note.—The above items are **Not** stock. **For Stock Items** in Mono-Locks, see pages 1059 to 1061.

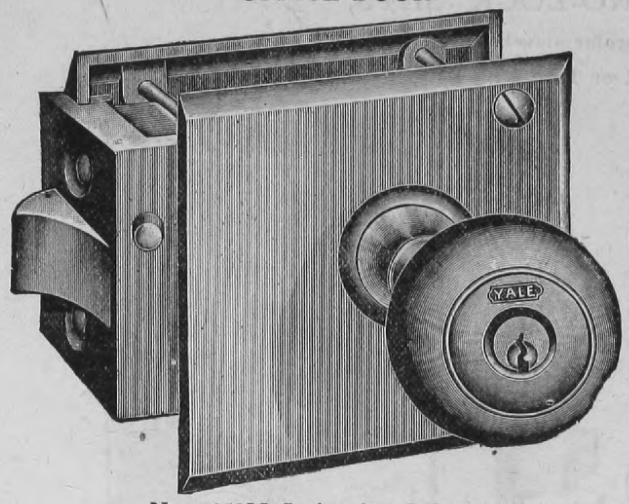
For General Description See Following Page.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

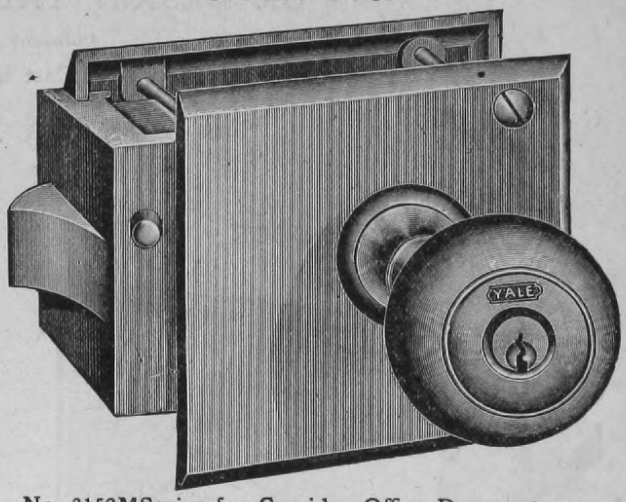
Half Size Cuts.

DESCRIPTION OF YALE MONO-LOCK SETS

OFFICE DOOR



CLOSET DOOR



No. 3050M Series for Office Doors

With Deadlocking Plunger.

OPERATED—By knob from both sides; outer knob may be set by stop in front. When outer knob is stopped bolt is operated by key. Thumb-Turn on inside deadlocks bolt against key and sets outer knob. The Stop-work and bolt are automatically deadlocked by plunger when door is closed, which prevents tampering.

CYLINDERS—Bronze Metal. Five Pin Tumblers. Changes practically unlimited.

KEYS—3 Paracentric, Nickel-Bronze Keys with coined gold plated bows.

No. 3152MSeries for Corridor Office Doors, etc.

With Deadlocking Plunger.

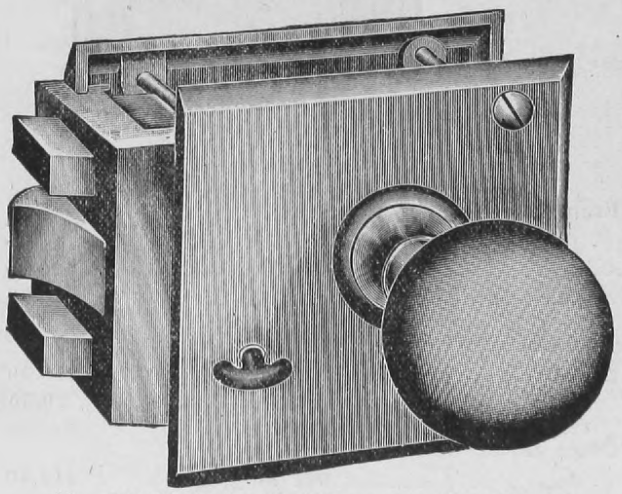
OPERATED—By knob from both sides, except when outer knob is set by key, there being no stop-work in front. The bolt is automatically deadlocked against end pressure by plunger when door is closed.

This lock is especially adapted for corridor closets, toilet rooms or elevator shaft openings, where the control of stop-work is in the hands of authorized persons only.

CYLINDERS—Bronze Metal. Five Pin Tumblers. Changes practically unlimited.

KEYS—3 Paracentric, Nickel-Bronze Keys with coined gold plated bows.

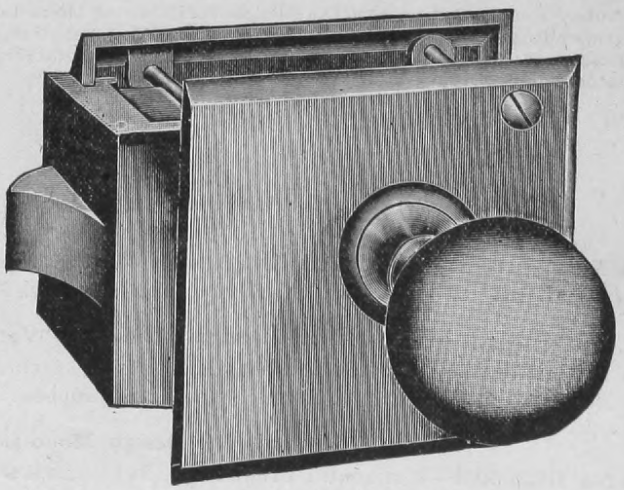
COMMUNICATING DOOR



No. 3207M Series for Communicating Doors

OPERATED—Latch Bolt by Knob from both sides. Dead Bolts by Thumb-Turns from both sides, making it possible to Deadlock independently from either side.

KNOB LATCH



No. 3257M Series Knob Latch

OPERATED—By Knob from both sides. This Latch is intended for Closet and other doors where no key is necessary.

Packed—Each Set in a paper box with screws, directions for applying and template to show size and shape of cut in door and location of wood screws.

Note.—The above items are **not** stock. For Stock items see pages 1059 to 1061.

GENERAL DESCRIPTION

The following features are common with all Mono-Locks:

Master-Keyed—All Mono-Locks having Keys can be Master-Keyed as explained on pages 1049-1051.
Front—Beveled. Regular Bevel (No. 2), ⅛ inch in 2¼ inches **only.**
Reversible—Regular Bevel Locks may be reversed for doors of either hand, **opening in** only. Reverse Bevel Locks for Doors of either hand, **opening out** only. But it is desirable that the hand wanted be specified on order whenever possible.
For Doors—1⅜ to 2½ inches thick. Exact thickness to be specified. Can be furnished for Doors thicker than 2½ inches to order, and at an additional price.
Backset—2¾ inches only. Cannot be furnished with special Backset.
Bronze Metal Front, Hinged Bolt, Plates, Knobs, and Protected Box Strike. Copper Plated Iron Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

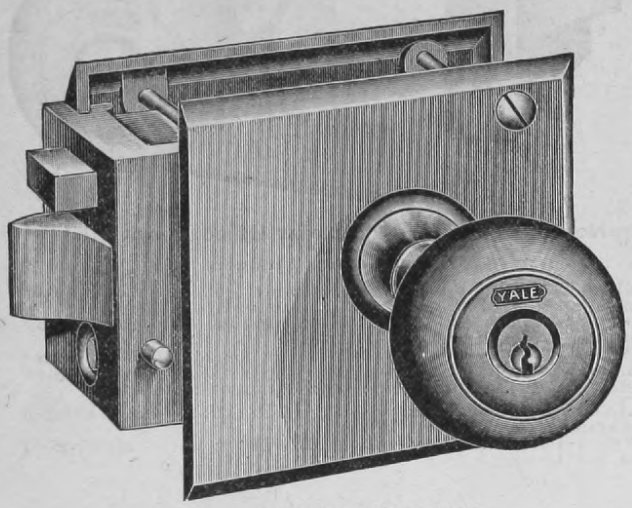
Half Size Cuts.

GR DESIGN YALE MONO-LOCK SETS

Colonial School—Regular Bevel.

Cast Brass Metal or Iron

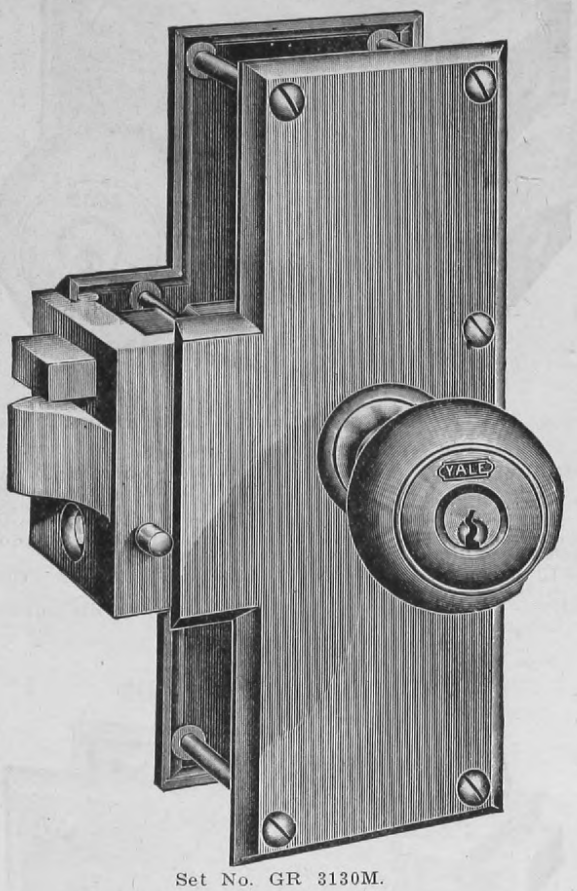
FRONT DOOR



Set No. GR 3100M.

Note.—For Operation and Detailed Description of Mono-Locks, see corresponding Locks on pages 1056 and 1057. The Operation, Backset and General Description is the same whether Horizontal or Upright Escutcheons are applied.

FRONT DOOR



Set No. GR 3130M.

GR Design Mono-Lock "Front Door" Sets

		Dull Brass.	Bower Barff.
Set No. GR3100M—Horizontal Escutcheon, 3¼x4 inches	Per Set,	$22.75	$20.25
Set. No. GR3130M—Upright Escutcheon, 8x2⅞ inches, Knobs 2½x2¼ inches	Per Set,	25.30	22.80

GR Design Mono-Lock "Vestibule and Corridor Door" Sets

Set No. GR3000M—Horizontal Escutcheon, 3x4¼ inches	Per Set,	$20.80	$18.30
Set No. GR3020M—Upright Escutcheon, 8x2⅞ inches	Per Set,	23.00	20.50

GR Design Mono-Lock "Office Door" Sets

Set No. GR3050M—Horizontal Escutcheon, 3x4¼ inches	Per Set,	$22.10	$19.60
Set No. GR3070M—Upright Escutcheon, 8x2⅞ inches	Per Set,	24.30	21.80

GR Design Mono-Lock "Closet and Elevator Door" Sets

Set No. GR3152M—Horizontal Escutcheon, 3x4¼ inches	Per Set,	$21.80	$19.30
Set No. GR3172M—Upright Escutcheon, 8x2⅞ inches	Per Set,	24.00	21.50

GR Design Mono-Lock "Communicating Door" Sets

Set No. GR3207M—Horizontal Escutcheon, 3¼x4¼ inches	Per Set,	$14.75	$12.25
Set No. GR3227M—Upright Escutcheon, 8x2⅞ inches	Per Set,	16.85	14.35

GR Design Mono-Latch "Inside Door" Sets

Set No. GR3257M—Horizontal Escutcheon, 3x4¼ inches	Per Set,	$12.40	$ 9.90
Set No. GR3277M—Upright Escutcheon, 8x2⅞ inches	Per Set,	14.55	12.05

Packed—Each Set in a paper box with screws, directions for applying and template to show size and shape of cut in door and location of wood screws.

Note.—For Application, illustrations and descriptions in detail see pages 1056 and 1057. Can be furnished in a variety of other appropriate finishes. For finishes see page 1054. **When ordering** give **Set Number** and **Finish** desired. Prices quoted on application.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

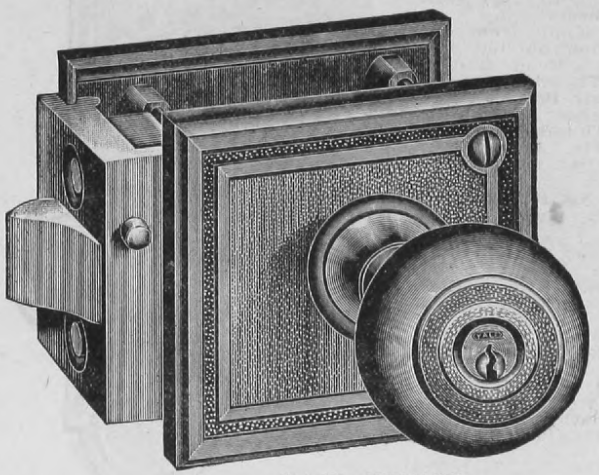
Half Size Cuts.

YUMA DESIGN MONO-LOCK SETS

Mission School.

Cast Brass Metal or Iron

VESTIBULE DOOR



Set No. NY3000M.

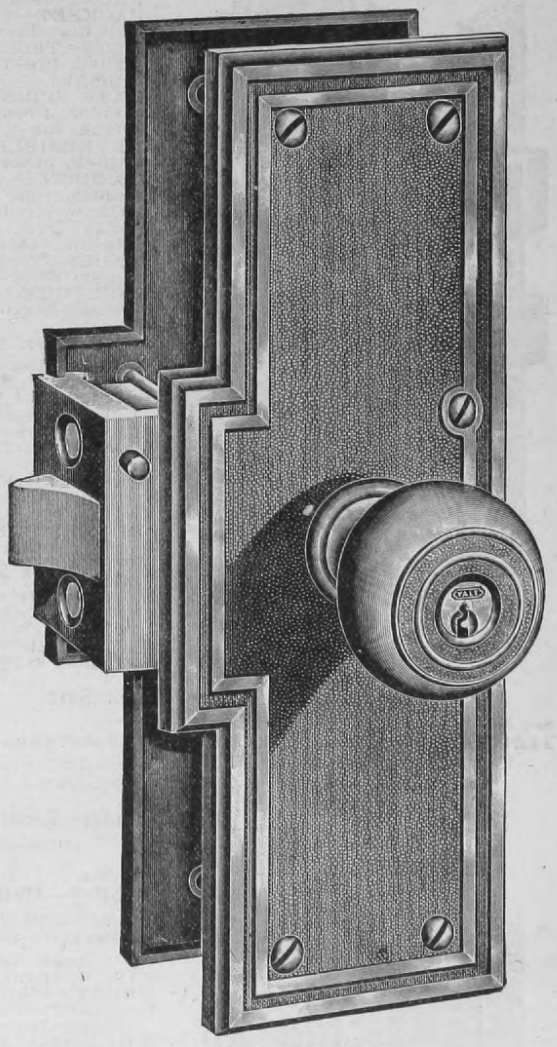
Note.—For Operation and Detailed Description of Mono-Locks see corresponding Locks on pages 1056 and 1057. The Operation, Backset and General Description is the same whether Horizontal or Upright Escutcheons are applied.

Yuma Design Mono-Lock "Front Door" Sets

	Dull Brass	Bower Barff
Set No. NY3100M—Horizontal Escutcheons, 3¾x4¼ inches ..... Per Set,	$24.95	$22.45
Set No. NY3130M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	28.55	26.05

Packed—One Set in a Box, with Screws.

VESTIBULE DOOR



Set No. NY3020M.

Yuma Design Mono-Lock "Vestibule and Corridor Door" Sets

	Dull Brass	Bower Barff
Set No. NY3000M—Horizontal Escutcheons, 3⅜x4¼ inches ..... Per Set,	$23.00	$20.50
Set No. NY3020M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	26.25	23.75

Yuma Design Mono-Lock "Office-Door" Sets

Set No. NY3050M—Horizontal Escutcheons, 3⅜x4¼ inches ..... Per Set,	$24.30	$21.80
Set No. NY3070M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	27.60	25.10

Yuma Design Mono-Lock "Closet and Elevator Door" Sets

Set No. NY3152M—Horizontal Escutcheons, 3⅜x4¼ inches ..... Per Set,	$24.00	$21.50
Set No. NY3172M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	27.25	24.75

Yuma Design Mono-Lock "Communicating-Door" Sets

Set No. NY3207M—Horizontal Escutcheons, 3¾x4¼ inches ..... Per Set,	$16.90	$14.40
Set No. NY3227M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	20.20	17.70

Yuma Design Mono-Latch "Inside Door" Sets

Set No. NY3257M—Horizontal Escutcheons, 3¾x4¼ inches ..... Per Set,	$14.55	$12.05
Set No. NY3277M—Upright Escutcheons, 10x3¼ inches ..... Per Set,	17.90	15.40

Packed—Each Set in a paper box with screws, directions for applying and template to show size and shape of cut in door and location of wood screws.

Note.—For Application, illustrations and descriptions in detail see pages 1056 and 1057. Can be furnished in a variety of other appropriate finishes. For finishes see page 1054. **When ordering** give **Set Number** and **Finish** desired. Prices quoted on application.

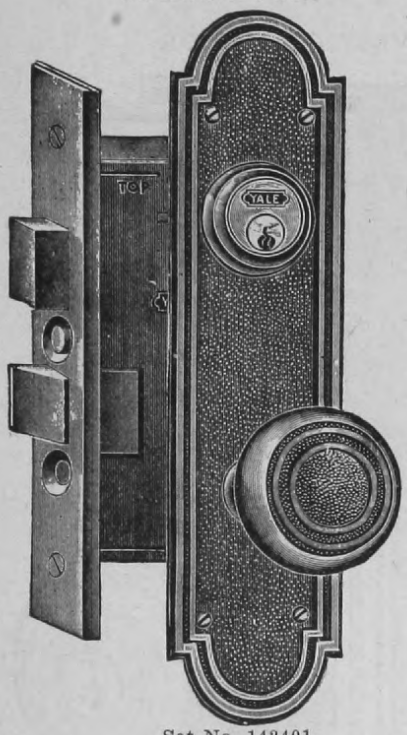
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One Third Size Cuts.

MALAGA DESIGN LOCK SETS

Spanish Renaissance School.

FRONT DOOR



Set No. 142401.

Cast Brass Metal

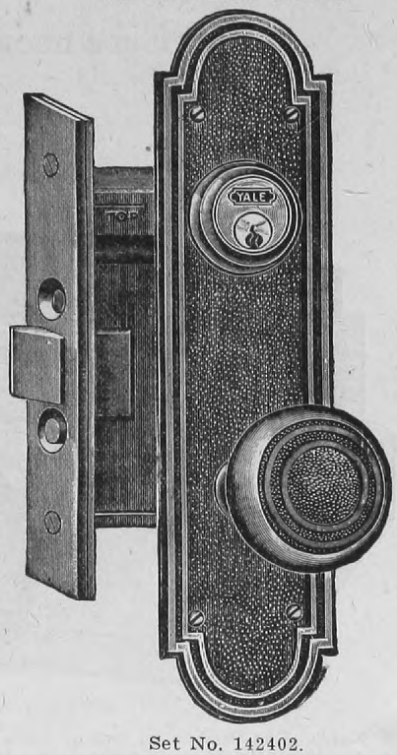
Lock No. 750. For Set No. 142401.

CASE—Japanned Iron, 6x3¾x¾ inches.
FRONT—Flat Armored Front, 8¼x1⅛ inches.
BACKSET—2¾ inches. Spacings; Outside, 4 inches; Inside, 3¾ inches.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front Bolts and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. One Key operates both Bolts.
KNOBS—Two, 2½ and 2¼ inches; ⅜ inch Triplex 'Swivel" Spindle; One Thumb-Turn.
ESCUTCHEONS—Two. Outside, 10¾x2¾ inches; Inside, 9x2½ inches. One Cylinder.

Lock No. 790. For Set No. 142402.

CASE—Japanned Iron, 5x3¾x¾ inches.
FRONT—Flat Armored Front, 7¼x1⅛ inches.
BACKSET—2¾ inches. Spacing: Outside, 3 inches; Inside has Knob only.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolt and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—By Knob from both sides, and by Key only from outside when Outer Knob is set by Stop.
KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Triplex "Swivel" Spindle.
ESCUTCHEON—Two. Outside, 10¾x2¾ inches; Inside, 9x2½ inches. One Cylinder.

VESTIBULE DOOR



Set No. 142402.

Cylinder Front Door Lock Sets

Set No.	Finish	Per Set
142401	Dull Brass, Dark Matted Background, High Parts Relieved	$20.90

Packed.—One Set in a Box, with Screws.

Cylinder Vestibule Door Lock Sets

Set No.	Finish	Per Set
142402	Dull Brass, Dark Matted Background, High Parts Relieved	$18.50

Packed.—One Set in a Box, with Screws.

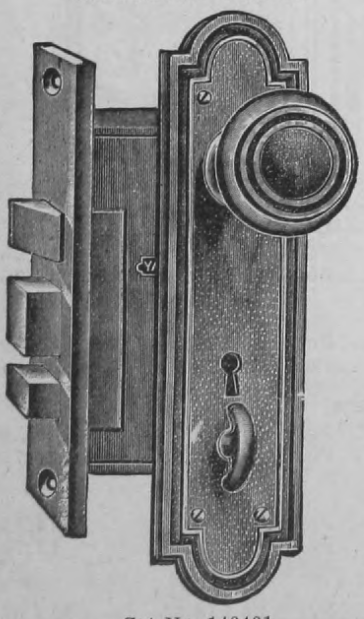
Cylinder Front and Vestibule Door Lock Sets

Composed of Set Nos. 142401 and 142402.
With Keys to Pass.

Set No.	Finish	Per Set
142405	Dull Brass, Dark Matted Background, High Parts Relieved	$39.40

Packed.—One Set in a Box, with Screws.

CHAMBER DOOR



Set No. 142421.

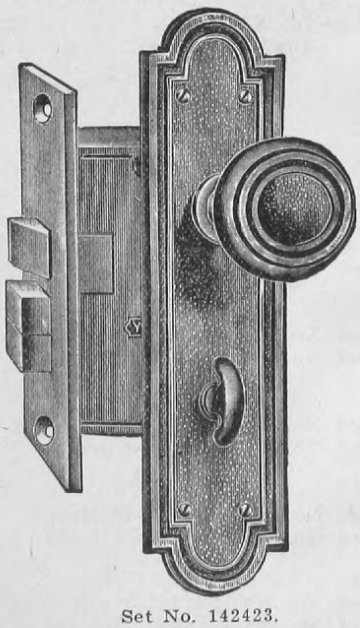
Lock No. 1402. For Set No. 142421.

CASE—Japanned Iron, 5x3½x¾ inches.
FRONT—Flat Cast Front, 7⅛x1 inches.
BACKSET—2¾ inches. Spacing: Outside, 2¾ inches; Inside, 2¾ and 4 inches.
KEYS—One, Nickel Plated Solid Steel Key **Three** Tumblers, 54 Changes.
EASY SPRING Latch Bolt—Bronze Metal Front, Bolts and Strike. Bronze Metal Hub; 5/16 inch for Knob, 3/16 inch for Thumb-Turn.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides; Thumb-Bolt by Thumb-Turn from inside only.
KNOBS—Two, 2¼ in., 5/16 in. Triplex Spindle.
ESCUTCHEONS—Two, 9x2½ inches. One Thumb-Turn.

Lock No. 1524. For Set No. 142423.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—None are required.
EASY SPRING Latch Bolt—Split Dead Bolt and Split Hub for Dead Bolt. Bronze Metal Front, Bolts, Strike and 5/16 inch Hubs for Knobs and Thumb-Turns.
REVERSIBLE—For Doors of either hand.
OPERATED—Latch Bolt by Knob from both sides. Dead Bolt; One on either side by Thumb-Turn, making it possible to deadlock independently from either side. Lever Escapement action on Dead Bolts.
KNOBS—Two, 2¼ in., 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7¼x2⅜ inches. Two Thumb-Turns.

COMMUNICATING DOOR



Set No. 142423.

Chamber Door Lock Sets

Set No.	Finish	Per Set
142421	Dull Brass, Dark Matted Background, High Parts Relieved	$11.30

Packed.—One Set in a Box, with Screws.

Communicating Door Lock Sets

Set No.	Finish	Per Set
142423	Dull Brass, Dark Matted Background, High Parts Relieved	$9.55

Packed.—One Set in a Box, with Screws.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

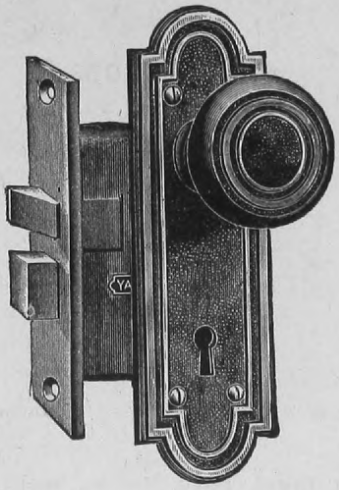
One-Third Size Cuts.

MALAGA DESIGN LOCK SETS

Spanish Renaissance School.

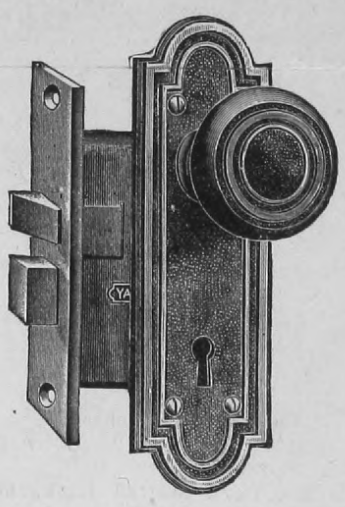
Cast Brass Metal

INSIDE DOOR



Set No. 142427.

INSIDE DOOR



Set No. 142428.

Inside Door Lock Sets

Set No. Finish Per Set

142427—Dull Brass, Dark Matted Background, High Parts Relieved $7.70

Packed.—One Set in a Box, with Screws.

Lock No. 820.

CASE—Japanned Iron, 3½x3⅝x½ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Wrought Lever-Tumblers, 36 Changes.
EASY SPRING Latch Bolt—Cast Brass Metal Front and Bolts. Wrought Brass Metal Strike, 5/16 inch Iron Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7¼x2⅜ inches.

Set No. Finish Per Set

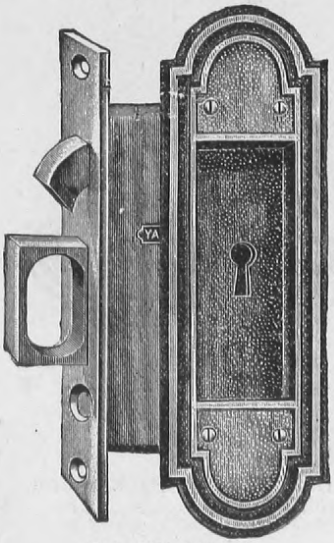
142428—Dull Brass, Dark Matted Background, High Parts Relieved $7.45

Packed.—One Set in a Box, with Screws.

Lock No. 821.

CASE—Japanned Iron, 3½x3⅝x½ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. One Wrought Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Cast Brass Metal Front and Bolts. Wrought Brass Metal Strike, 5/16 inch Iron Hub.
REVERSIBLE—For doors of either hand.
OPERATED—By Knobs and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7¼x2⅜ inches.

SLIDING DOOR



Set No. 142436.
Set No. 142437.

Sliding Door Lock Sets

For Single Doors.

Set No. Finish Per Set

142436—Dull Brass, Dark Matted Background, High Parts Relieved . . . $7.75

Packed.—One Set in a Box, with Screws.

Lock No. 1705.

CASE—Japanned Iron, 5¼x4x⅝ inches.
FRONT—Flat Wrought Front, 7⅛x⅞ inches. Flat Strike, 4x⅞ inches.
BACKSET—2¾ inches.
KEYS—One Bronze Metal Adjustable Extension Key, Changes alike.
REVERSIBLE—For Doors 1⅜ to 2½ inches thick.
BRONZE METAL Front, Bolt, Pull and Strike.
OPERATED—Door may be closed by Pull in front and may be locked by key from either side.
CUP ESCUTCHEONS—Two, 8⅛x2⅝ inches.

For Double Doors.

Set No. Finish Per Set

142437—Dull Brass, Dark Matted Background, High Parts Relieved . . $14.50

Packed.—One Set in a Box, with Screws.

Lock No. 1715.

CASE—Japanned Iron, 5¼x4x⅝ inches.
FRONT—Flat Wrought Front, 7⅛x⅞ inches. Box Strike.
BACKSET—2¾ inches.
KEYS—One Bronze Metal Adjustable Extension Key, Changes alike.
REVERSIBLE—For Doors 1⅜ to 2½ inches thick.
BRONZE METAL Fronts, Bolt and Pulls.
OPERATED—Doors may be closed by Pulls in fronts and may be locked by Key from either side.
CUP ESCUTCHEONS—Four, 8⅛x2½ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

MALAGA DESIGN HARDWARE

Spanish Renaissance School.

Cast Brass Metal

KEY PLATES

No. 142442.

Size—2¼x1¼ inches.

No.	Finish	Per Dozen
142442—Dull Brass, Dark Matted Background, High Parts Relieved		$10.80

Packed.—One Dozen in a Box, with Screws.

DOOR KNOBS

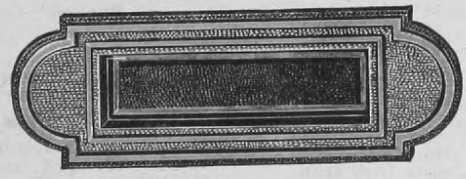
No. 142474.

Knob, 2¼ inches—Rose, 2¼ inches.

No.	Finish	Per Dozen Pairs.
142474—Dull Brass, Dark Matted Background, High Parts Relieved		$54.60

Packed—Half Dozen Pairs in a Box, with Screws.

LETTER DROP PLATES



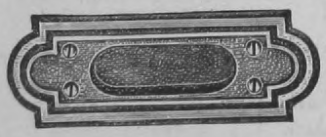
No. 142434½.

Letter Drop Plate, 2⅞x10½ inches—With Hood for Inside 3x10¾.

No. 142434½—Dull Brass, Dark Matted Background, High Parts Relieved ..... Each, $9.50

Packed.—One in a Box, with Screws.

FLUSH SASH LIFTS



No. 142444.

Size—1¾x4¾ inches.

No.	Finish	Per Dozen
142444—Dull Brass, Dark Matted Background, High Parts Relieved		$17.40

Packed.—Half Dozen in a Box, with Screws.

BAR SASH LIFTS

No. 142464.

Size—1¾x7¾ inches.

No.	Finish	Per Dozen
142464—Dull Brass, Dark Matted Background, High Parts Relieved		$20.40

Packed.—One Dozen in a Box, with Screws.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

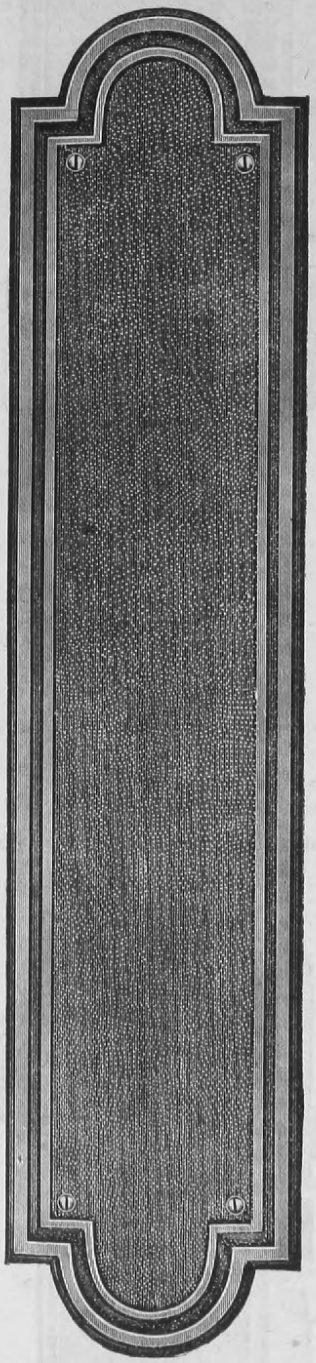
One-Third Size Cuts.

MALAGA DESIGN HARDWARE

Spanish Renaissance School.

Cast Brass Metal

PUSH PLATES



Nos. 142430, Etc.

PUSH PLATES

Size—10¾x2¾ inches.

No.	Finish	Each
142430—	Dull Brass, Dark Matted Background, High Parts Relieved	$3.05

Size—20½x4½ inches.

No.	Finish	Each
142431—	Dull Brass, Dark Matted Background, High Parts Relieved	$9.25

Packed.—Two in a Box, with Screws.

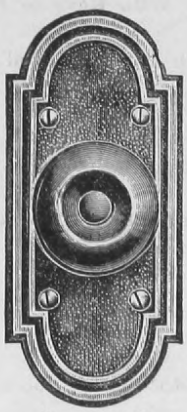
DOOR PULLS

Size—20½x4½ inches.

No.	Finish	Each
142449—	Dull Brass, Dark Matted Background, High Parts Relieved	$19.50

Packed.—Two in a Box, with Screws.

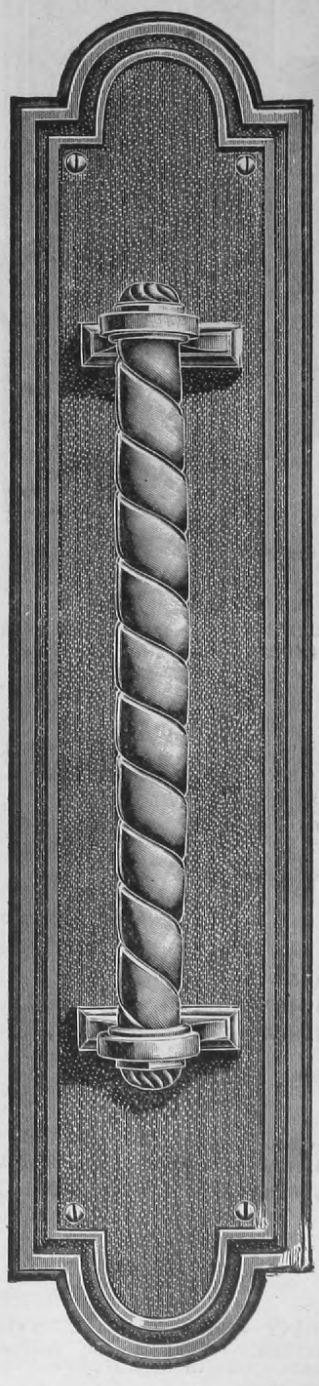
PUSH BUTTONS



No. 142433.

Size—5⅝x2½ inches.

DOOR PULLS



No. 142449.

No. 142433—Dull Brass, Dark Matted Background, High Parts Relieved ..... Each, $3.20

Packed—One in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

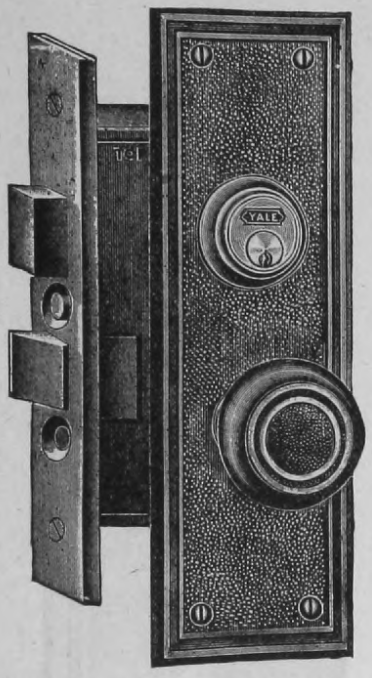
One-Third Size Cuts.

YUMA DESIGN LOCK SETS

Mission School.

Cast Brass Metal or Iron

FRONT DOOR



Set Nos. 242401 and 241801.

Cylinder Front Door Lock Sets

Set No.	Finish.	Per Set.
242401	Dull Brass, Dark Matted Background, High Parts relieved	$21.00
241801	Bower Barff	17.95

Packed—One Set in a Box, with Screws.

Lock No. 750.

CASE—Japanned Iron, 6x3¾x¾ inches.

FRONT—Flat Armored Front, 8¼x1⅛ inches.

BACKSET—2¾ inches. Spacing: Outside, 4 inches; Inside, 3¾ inches.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.

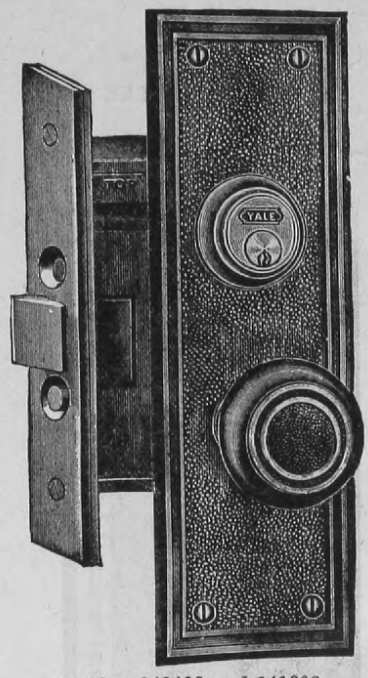
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.

OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when outer Knob is set by Stop; Dead Bolt by Key from outside and by Thumb-Turn from inside. One Key opertes both Bolts.

KNOBS—Two, 2½ and 2¼ inches; ⅜ inch Triplex "Swivel" Spindle; One Thumb-Turn.

ESCUTCHEONS—Two. Outside, 10x3¼ inches; Inside, 8½x2¾ inches. One cylinder.

VESTIBULE DOOR



Set Nos. 242402 and 241802.

Cylinder Vestibule Door Lock Sets

Set No.	Finish.	Per Set.
242402	Dull Brass, Dark Matted Background, High Parts relieved	$18.60
241802	Bower Barff	15.65

Packed—One Set in a Box, with Screws.

Lock No. 790.

CASE—Japanned Iron, 5-3¾x¾ inches.

FRONT—Flat Armored Front, 7¼x1⅛ inches.

BACKSET—2¾ inches. Spacing: Outside, 3 inches; Inside has Knob only.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolt and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.

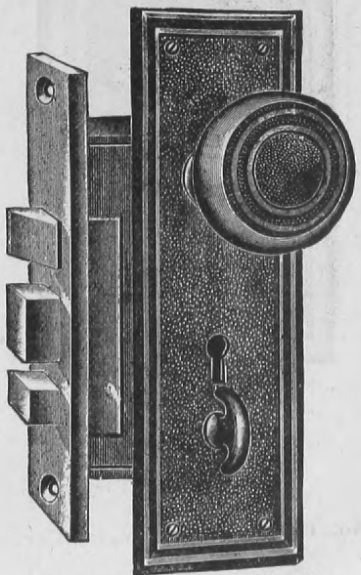
REVERSIBLE—For Doors 1½ to 2¼ inches thick. Other thicknesses to order.

OPERATED—By Knob from both sides, and by Key only from outside when Outer Knob is set by Stop.

KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Triplex "Swivel" Spindle.

ESCUTCHEONS—Two. Outside, 10x3¼ inches; Inside, 8½x2¾ inches. One Cylinder.

CHAMBER DOOR



Set Nos. 242421 and 241821.

Cylinder Front and Vestibule Door Lock Sets

Composed of Sets No. 242401 and 242402, etc. With Keys to Pass.

Set No.	Finish.	Per Set.
242405	Dull Brass, Dark Matted Background, High Parts relieved	$39.60
241805	Bower Barff	33.60

Packed—One Set in a Box, with Screws.

Chamber Door Lock Sets

Set No.	Finish.	Per Set.
242421	Dull Brass, Dark Matted Background, High Parts relieved	$12.40
241821	Bower Barff	10.00

Packed—One Set in a Box, with Screws.

Lock No. 1402.

CASE—Japanned Iron, 5x3½x¾ inches.

FRONT—Flat Cast Front, 7⅛x1 inches.

BACKSET—2¾ inches. Spacing: Outside, 2¾ inches; Inside, 2¾ and 4 inches.

KEYS—One Nickel Plated Solid Steel Key. **Three** Tumblers, 54 Changes.

EASY SPRING Latch Bolt, Bronze Metal Front, Bolts and Strike. Bronze Metal Hub. 5/16 inch for Knob, 3/16 inch for Thumb-Turn.

REVERSIBLE—For Doors of either hand.

OPERATED—By Knob and Key from both sides; Thumb-Bolt by Thumb-Turn from inside only.

KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.

ESCUTCHEONS—Two, 8½x2¾ inches. One Thumb-Turn.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

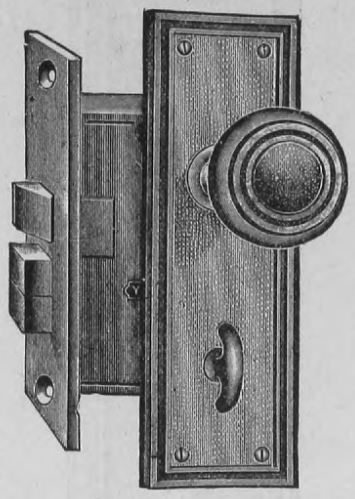
YUMA DESIGN LOCK SETS

One-Third Size Cuts.

Mission School.

Cast Brass Metal or Iron

COMMUNICATING DOOR



Set Nos. 242423 and 241823.

Communicating Door Lock Sets

Set No.	Finish.	Per Set.
242423	Dull Brass, Dark Matted Background, High Parts Relieved	$9.75
241823	Bower Barff	7.50

Packed—One Set in a Box, with Screws.

Lock No. 1524.

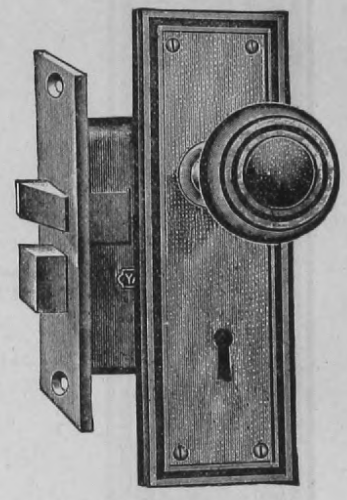
CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—None are required.
EASY SPRING Latch Bolt—Split Dead Bolt and Split Hub for Dead Bolt. Bronze Metal Front, Bolts, Strike and 5/16 inch Hubs for Knobs and Thumb-Turns.
REVERSIBLE—For Doors of either Hand.
OPERATED—Latch Bolt by Knob from both sides. Dead Bolts: One on either side by Thumb-Turn, making it possible to deadlock independently from either side. Lever Escapement action on Dead Bolts.
KNOBS—Two, 2¼ inches.
ESCUTCHEONS—Two, 7½x2½ inches. Two Thumb-Turns.

Inside Door Lock Sets

Set No.	Finish	Per Set
242427	Dull Brass, Dark Matted Background, High Parts Relieved	$7.90
241827	Bower Barff	5.85

Packed—One Set in a Box, with Screws.

INSIDE DOOR



Set No. 242427.
to
Set No. 241828.

Lock No. 820.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Wrought Lever Tumblers, 36 Changes.
EASY SPRING Latch Bolt—Cast Brass Metal Front and Bolts, Wrought Brass Metal Strike, 5/16 inch iron hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7½x2½ inches.

Inside Door Lock Sets

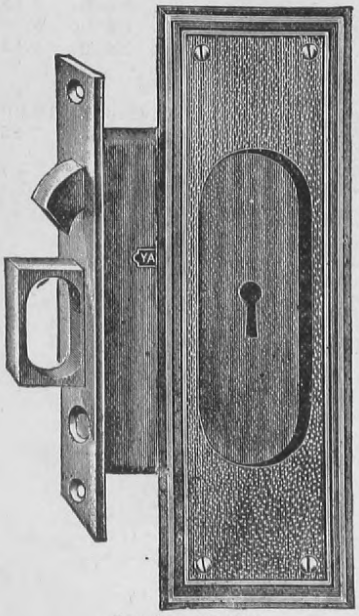
Set No.	Finish.	Per Set.
242428	Dull Brass, Dark Matted Background, High Parts Relieved	$7.65
241828	Bower Barff	$5.60

Packed—One Set in a Box, with Screws.

Lock No. 821.

One Tumbler—12 changes, otherwise same as Set No. 242427.

SLIDING DOOR



Set No. 242436.
to
Set No. 241837.

Sliding Door Lock Sets

For Single Doors.

Set. No.	Finish.	Per Set.
242436	Dull Brass, Dark Matted Background, High Parts Relieved	$8.45
241836	Bower Barff	6.55

For Double Doors.

Set. No.	Finish.	Per Set.
242437	Dull Brass, Dark Matted Background, High Parts Relieved	$16.10
241837	Bower Barff	12.10

Packed—One Set in a Box, with Screws.

Lock Nos. 1705 and 1715.

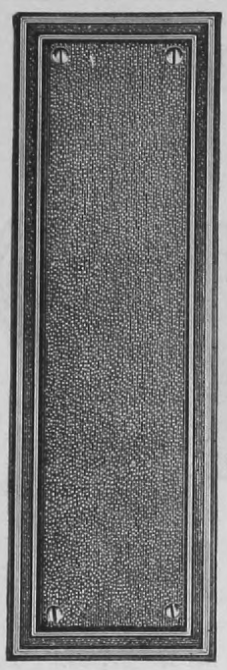
LOCKS—Japanned Iron Case, 5¼x4x⅝ inches. Flat Wrought Front, 7⅛x⅞ inches. Backset, 2¾ inches. One Bronze Metal Adjustable Extension Key, Changes alike. Bronze Metal Fronts, Bolts, Pulls and Strikes. Reversible. For Doors 1⅜ to 2½ inches thick. Doors may be closed by pulls in fronts and may be locked by key from either side.

CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors; 8½x2¾ inches. Flat Strike for Single Doors, 4x⅞ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

PUSH PLATES



Nos. 242430 and 241830.

YUMA DESIGN HARDWARE

Mission School.

Cast Brass Metal or Iron

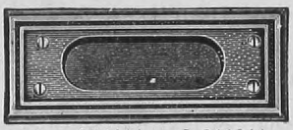
BAR SASH LIFTS

Nos. 242464 and 241864.
Size—1⅝x5⅝ inches.

Nos.	Finish	Per Dozen
242464—	Dull Brass, Dark Matted Background, High Parts Relieved	$16.65
241864—	Bower Barff	12.45

Packed.—One Dozen in a Box, with Screws.

FLUSH SASH LIFTS



Nos. 242444 and 241844.
Size—1⅝x4½ inches.

Nos.	Finish	Per Dozen
242444—	Dull Brass, Dark Matted Background, High Parts Relieved	$12.70
241844—	Bower Barff	8.90

Packed.—Half Dozen in a Box, with Screws.

DOOR KNOBS

No. 242474.

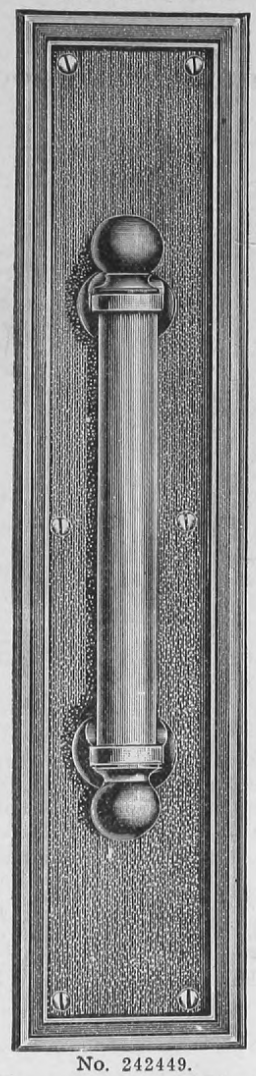
Door Knobs

242474—2¼ inches, Dull Brass, Dark Matted Background, High Parts Relieved, ... Per Dozen Pairs, $46.55

241874—2¼ inches, Bower Barff 33.65

Packed.—Half Dozen in a Box, with Screws.

DOOR PULLS



No. 242449.

Push Plates

No. 242430—10x3¼ inches, Dull Brass, Dark Matted Background, High Parts Relieved ..... Each, $3.35
No. 241830—10x3¼ inches, Bower Barff ..... Each, 2.45
No. 242431—16x3½ inches, Dull Brass, Dark Matted Background, High Parts Relieved ..... Each, 5.70
No. 241831—16x3½ inches, Bower Barff ..... Each, 4.15

Packed.—Two in a Box, with Screws.

Door Pulls

No. 242449—16x3½ inches, Dull Brass, Dark Matted Background, High Parts Relieved ..... Each, $10.00
No. 241849—16x3½ inches, Bower Barff ..... Each, 7.25

Packed.—Two in a Box, with Screws.

LETTER DROP PLATES

Nos. 242434½ and 241834½.
Plate—2¾x7½ inches.
With Inside Plate—2⅞x7½ inches.

Nos.	Finish	Each
242434½—	Dull Brass	$4.55
241834½—	Bower Barff	3.10

Packed.—One in a Box, with Screws.

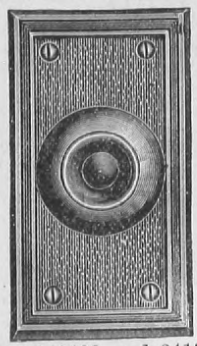
KEY PLATES

Nos. 242442 and 241842.
Size—2¼x1¼ inches.

Nos.	Finish	Per Dozen
242442—	Dull Brass	$9.90
241842—	Bower Barff	7.40

Packed—One Dozen in a Box, with Screws.

PUSH BUTTONS



Nos. 242433 and 241833.
Size—5x2¾ inches.

Nos.	Finish	Each
242433—	Dull Brass	$3.20
241833—	Bower Barff	3.00

Packed.—One in a Box, with Screws.

Note.—The Dull Brass Finish has Dark Matted Background with High Parts Relieved.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

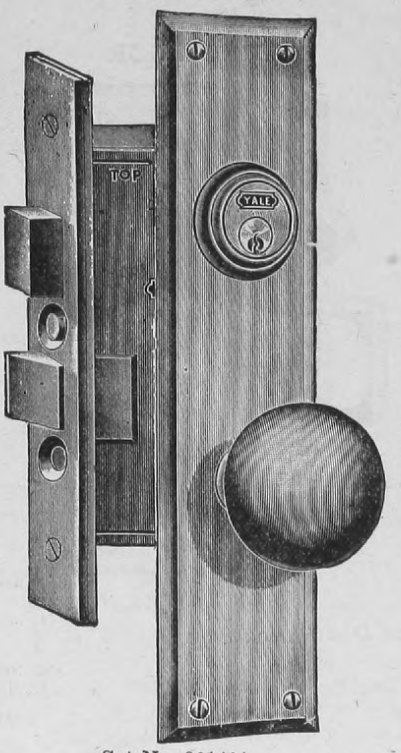
One-Third Size Cuts

STONINGTON DESIGN LOCK SETS

Colonial School.

FRONT DOOR

Cast Brass Metal or Iron



Set No. 301401.

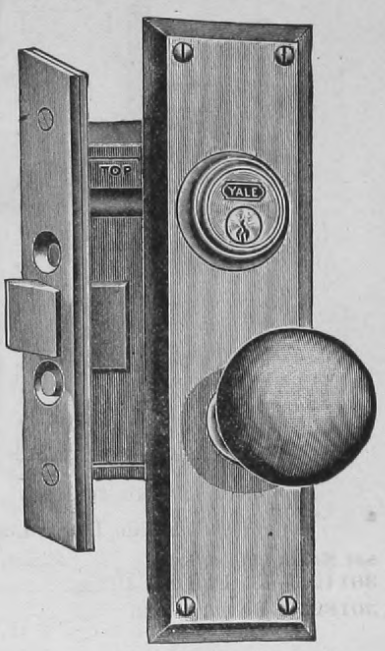
Lock No. 750.

CASE—Japanned Iron, 6x3¾x¾ inches.
FRONT—Flat Armored Front, 8¼x1⅛ inches.
BACKSET—2¾ inches. Spacings: Outside, 4 inches; Inside, 3¾ inches.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike. Bronze Metal Hub, for ⅜ inch Swivel Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Knob from Both sides, and by Key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. One key operates both Bolts.
KNOBS—Two, 2½ and 2¼ inches; ⅜ inch Triplex Swivel Spindle; One Thumb-Turn.
ESCUTCHEONS—Two. Outside, 11x2¾ inches; Inside 7½x2½ inches. One Cylinder.

Lock No. 790.

CASE—Japanned Iron, 5x3¾x¾ inches.
FRONT—Flat Armored Front, 7¼x1⅛ inches.
BACKSET—2¾ inches. Spacing: Outside, 3 inches; Inside has Knob only.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes Practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolt and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—By Knob from both sides, and by Key only from outside when Outer Knob is set by Stop.
KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Triplex "Swivel" Spindle.
ESCUTCHEONS—Two. Outside, 9½x2¾ inches; Inside, 7½x2½ inches. One Cylinder

VESTIBULE DOOR



Set No. 301402.

Cylinder Front Door Lock Sets

With Lock No. 750 as described above.

Set No.	Finish	Per Set
301401	Light Dull Brass	$18.20
301801	Bower Barff	16.10

Packed—One Set in a Box, with Screws.

Cylinder Vestibule Door Lock Sets

With Lock No. 790 as described above.

Set No.	Finish	Per Set
301402	Light Dull Brass	$15.45
301802	Bower Barff	13.50

Packed—One Set in a Box, with Screws.

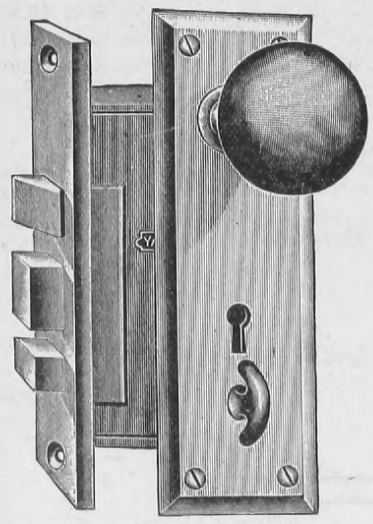
Cylinder Front and Vestibule Door Lock Sets

With Keys to Pass.

Set No.		Per Set
301405	Consisting of Sets No. 301401 and 301402, Light Dull Brass	$33.65
301805	Consisting of Sets No. 301801 and 301802, Bower Barff	29.60

Packed—One Set in a Box, with Screws.

CHAMBER DOOR



Set No. 301421.

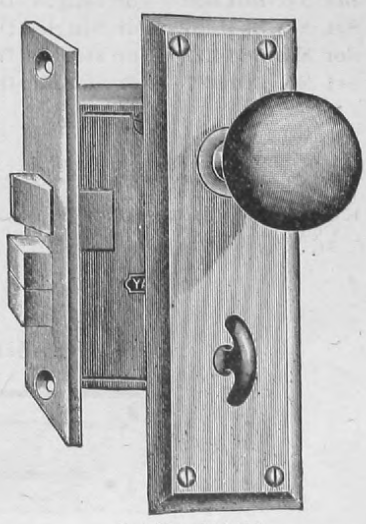
Lock No. 1402.

CASE—Japanned Iron, 5x3½x¾ inches.
FRONT—Flat Cast Front, 7⅛x1 inches.
BACKSET—2¾ inches. Spacings: Outside, 2¾ inches; Inside 2¾ and 4 inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Tumblers, 54 Changes.
EASY SPRING Latch Bolt—Bronze Metal Front, Bolts and Strike. Bronze Metal Hub; 5/16 inch for Knob, 3/16 inch for Thumb-Turn.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from Both sides; Thumb-Bolt by Thumb-Turn from inside only.
KNOBS—Two, 2¼ in., 5/16 in. Triplex Spindle.
ESCUTCHEONS—Two, 7½x2½ inches. One Thumb-Turn.

Lock No. 1524.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 6⅛x1 inches.
BACKSET—2¾ inches. Spacing: 2¾ inches.
KEYS—None are required.
EASY SPRING Latch Bolt—Split Dead Bolt and Split Hub for Dead Bolt. Bronze Metal Front Bolts, Strike and 5/16 inch Hubs for Knobs and Thumb-Turns.
REVERSIBLE—For Doors of either hand.
OPERATED—Latch Bolt by Knob from Both sides. Dead Bolts; One on either side by Thumb-Turn, making it possible to deadlock independently from either side. Lever Escapement action on Dead Bolts.
KNOBS—Two, 2¼ in., 5/16 in. Triplex Spindle.
ESCUTCHEONS—Two, 7½x2½ inches. Two Thumb-Turns.

COMMUNICATING DOOR



Set No. 301423.

Chamber Door Lock Sets

With Lock No. 1402 as described above.

Set No.	Finish	Per Set
301421	Light Dull Brass	$9.10
301821	Bower Barff	7.70

Packed—One Set in a Box, with Screws.

Communicating Door Lock Sets

With Lock No. 1525 as described above.

Set No.	Finish	Per Set
301423	Light Dull Brass	$7.25
301823	Bower Barff	5.85

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

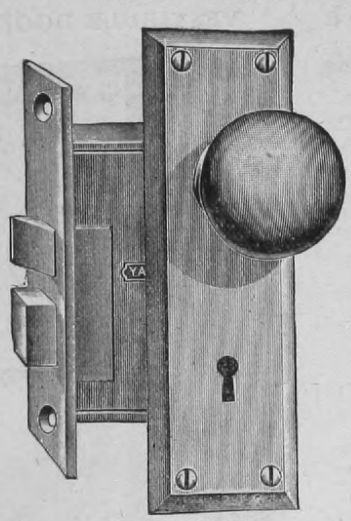
STONINGTON DESIGN LOCK SETS

One-Third Size Cuts.

Colonial School.

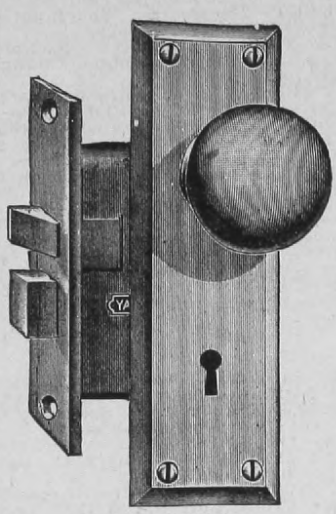
Cast Brass Metal or Iron

INSIDE DOOR



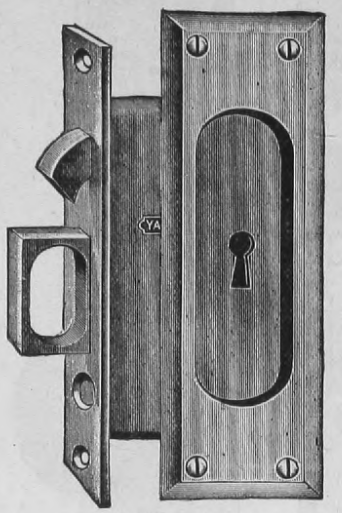
Set No. 301425.

INSIDE DOOR



Set No. 301428.

SLIDING DOOR



Set No. 301436.

Inside Door Lock Sets

Set No.	Finish	Per Set
301425—	Light Dull Brass	$7.15
301825—	Bower Barff	5.95

Packed—One Set in a Box, with Screws.

Lock No. 1500.

CASE—Japanned Iron, 4¼x3½x⅝ inches.
FRONT—Flat Cast Front, 6x1 inches.
BACKSET—2¾ inches. Spacing: 2¾ inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Lever Tumblers, 54 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front, Bolts, Strikes and 5/16 inch Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindles.
ESCUTCHEONS—Two, 7½x2½ inches.

Inside Door Lock Sets

Set No.	Finish	Per Set
301428—	Light Dull Brass	$5.15
301828—	Bower Barff	4.00

Packed—One Set in a Box, with Screws.

Lock No. 821.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key, One Wrought Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Cast Brass Metal Front and Bolts, Wrought Brass Metal Strike, 5/16 inch iron hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7½x2½ inches.

Sliding Door Lock Sets

Set No. 301436—For **Single** Doors—Light Dull Brass.....Per Set, $5.95
Set No. 301836—For **Single** Doors—Bower Barff.....Per Set, 4.70
Set No. 301437—For **Double** Doors—Light Dull Brass.....Per Set, 10.90
Set No. 301837—For **Double** Doors—Bower Barff.....Per Set, 8.40

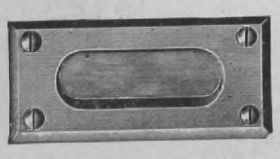
Packed—One Set in a Box, with Screws.

Locks No. 1705 and 1715.

LOCKS—Japanned Iron Case, 5¼x4x⅝ inches.
FRONT—Flat Wrought Front, 7⅛x⅞ inches.
BACKSET—2¾ inches.
KEYS—One Bronze Metal Adjustable Extension Key. Changes alike. Bronze Metal Fronts, Bolts, Pulls and Strikes.
REVERSIBLE—For Doors 1⅜ to 2½ inches thick. Doors may be closed by pulls in fronts and may be locked by key from either side.
CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors; 7½x2½ inches. Flat Strike for Single Doors, 4x⅞ inches.

STONINGTON DESIGN HARDWARE

FLUSH SASH LIFTS



No. 301444.
Size—1⅞x4 inches.

No.	Finish	Per Dozen
301444—	Light Dull Brass	$8.40
301844—	Bower Barff	5.40

Packed—Half Dozen in a Box, with Screws.

BAR SASH LIFTS

No. 301464.
Size—1½x5¾ inches.

No.	Finish	Per Dozen
301464—	Light Dull Brass	$14.40
301864—	Bower Barff	10.20

Packed—One Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

STONINGTON DESIGN HARDWARE

Colonial School.

Cast Brass Metal and Iron

KEY PLATES

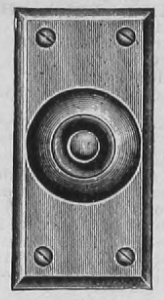
No. 301442.

Size—2¼x1¼ inches.

No.	Finish	Per Dozen
301442—	Light Dull Brass	$3.60
301842—	Bower Barff	2.40

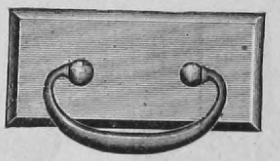
Packed—One Dozen in a Box, with Screws.

PUSH BUTTONS



No. 301433.

DROP DRAWER PULLS



No. 301443.

Size—1⅞x4 inches.

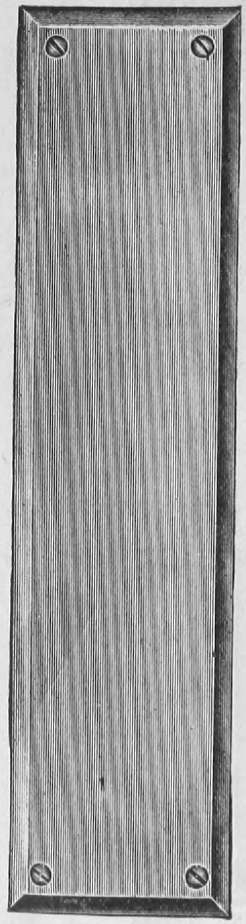
No.	Finish	Per Dozen
301443—	Light Dull Brass	$17.40
301843—	Bower Barff	12.00

Packed—One Dozen in a Box, with Screws.

No. 301433—	4⅛x2 inches, Light Dull Brass	Each 1.85
No. 301833—	4⅛x2 inches, Bower Barff	Each 1.65

Packed—One in a Box, with Screws.

PUSH PLATES



No. 301430.

LETTER DROP PLATES

No. 301434½.

Drop Plate—2½x6⅜ inches.
With Hood.

No.	Finish	Each
301434½—	Light Dull Brass	$4.55
301834½—	Bower Barff	2.75

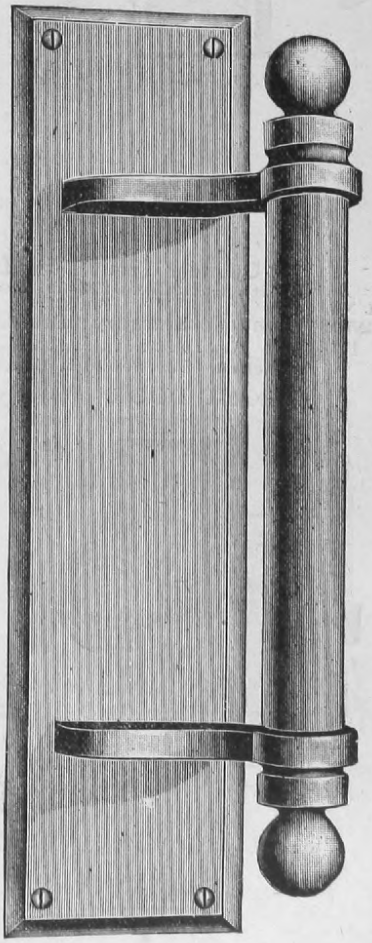
Packed—One in a Box, with Screws.

PUSH PLATES

No.	Size	Finish	Each
301430—	14x3½ in.,	Light Dull Brass	$4.00
301830—	14x3½ in.,	Bower Barff	2.80
301431—	18x4 in.,	Light Dull Brass	5.70
301831—	18x4 in.,	Bower Barff	4.10

Packed—Two in a Box, with Screws.

DOOR PULLS



No. 301449.

DOOR PULLS

No.	Size	Grip	Finish	Each
301449—	14x3½ inches,	8½ inches	Center to Center, Light Dull Brass	$11.50
301849—	14x3½ inches,	8½ inches	Center to Center, Bower Barff	8.25
301449½—	18x4 inches,	10¾ inches	Center to Center, Light Dull Brass	13.90
301849½—	18x4 inches,	10¾ inches	Center to Center, Bower Barff	10.15

Packed—Two in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Quarter Size Cuts.

BEACON DESIGN LOCK SETS

Greek School.

Wrought Brass and Steel

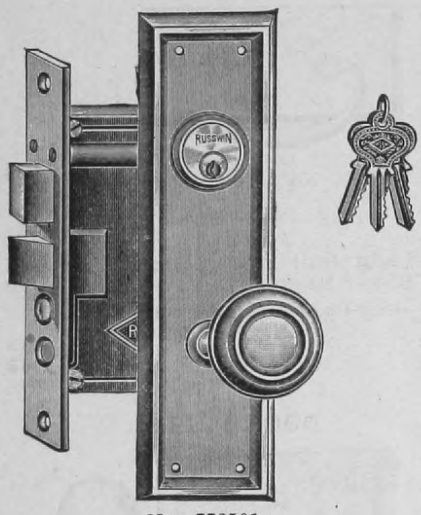
Lock No. 1248.

CASE — Japanned Iron, 5½x3⅞x1 1/16 inches.
FRONT—Flat, 7¾x1⅛ inches.
BACKSET—2⅞ inches. Spacing: Outside 3⅝ inches.
KEYS—Three Nickel-Silver, Five Pin Tumblers, Changes unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike. Brass Hub for ⅜x5/16 inch Swivel Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by knob from both sides and by key from outside when outer knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. One key operates both bolts.
KNOBS—Two, 2¼ inches, ⅜x5/16 inch. Swivel Spindle. One Thumb Turn.
ESCUTCHEONS—Two. Outside 10x2¾ inches; Inside 7x2⅜ inches. One Cylinder.

Lock No. 1248½.

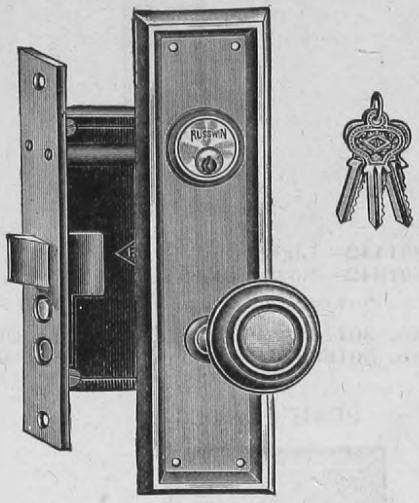
CASE—Japanned Iron, 5½x3⅞x1 1/16 in.
FRONT—Flat, 7¾x1⅛ inches.
BACKSET—2⅞ inches. Spacing: Outside 3⅝ inches. Inside has Knob only.
KEYS—Three Nickel-Silver, Five Pin Tumblers. Changes Unlimited.
EASY SPRING Latch Bolt. Bronze Metal Cylinder, Front, Bolt and Strike. Brass Hub for ⅜x5/16 inch Swivel Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—By Knob from both sides and by key only from outside when outer knob is set by Stop.
KNOBS—Two, 2¼ inches, ⅜x5/16 inch. Swivel Spindle.
ESCUTCHEONS—Two. Outside 10x2¾ inches; Inside 7x2⅜ inches. One Cylinder.

FRONT DOOR



No. 772501.

VESTIBULE DOOR



No. 772502.

Cylinder Front Door Lock Sets

With Lock No. 1248 as described above.

Set No.	Finish.	Per Set.
772501	Sanded Statuary Brass, High Parts Polished	$12.72

Packed—One Set in a Box, with Screws.

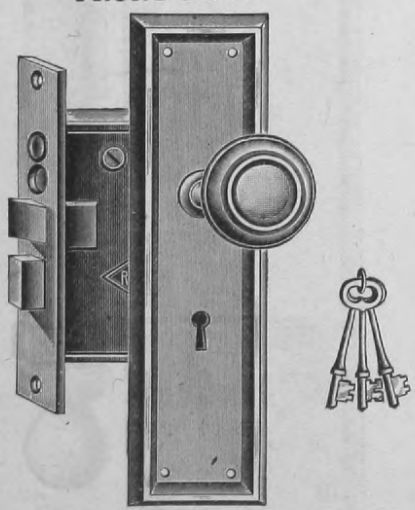
Cylinder Vestibule Door Lock Sets

With Lock No. 1248½ as described above.

Set No.	Finish.	Per Set.
772502	Sanded Statuary Brass, High Parts Polished	$11.31

Packed—One Set in a Box, with Screws.

FRONT DOOR



No. 772507.

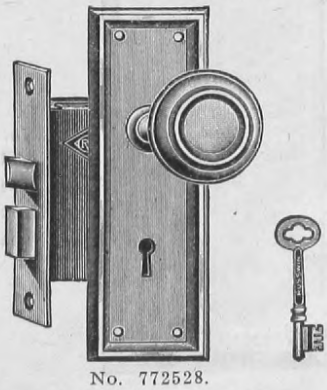
Lock No. 0122.

CASE—Japanned Iron, 4½x3⅝x1 1/16 in.
FRONT—Flat, 6½x1⅛ inches.
BACKSET—2¾ inches. Spacing: 2⅝ inches.
KEYS—Three Nickel Plated Steel, One Tumbler, 24 Changes.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—Latch Bolt by knob from both sides and by key from outside when outer knob is set by Stop. Dead Bolt by key from either side. Both Bolts are operated by the same key and through the same keyhole.
KNOBS—Two, 2¼ inches. 5/16 inch Swivel Spindle.
ESCUTCHEONS—Two. Outside 10½x3 inches; Inside 7x2⅜ inches.

Lock No. 0389

CASE—Japanned Iron, 3½x3⅜x½ in.
FRONT—Flat, 5¼x1 inch.
BACKSET—2½ inches. Spacing 2 3/16 inches.
KEYS—One Nickel Plated Steel. One Tumbler, 12 Changes.
BRONZE METAL Front and Bolts.
REVERSIBLE—For Doors of either hand.
KNOBS—Two, 2¼ inches, 5/16 inch Spindle.
ESCUTCHEONS—Two, 7x2⅜ inches.

INSIDE DOOR



No. 772528.

Bit Key Front Door Lock Sets

With Lock No. 0122 as described above.

Set Nos.	Finish.	Per Set.
772507	Sanded Statuary Brass, High Parts Polished	$5.04
0772507	Sanded Statuary Brass, High Parts Polished	3.60

Packed—One Set in a Box, with Screws.

Inside Door Lock Sets

With Lock No. 0389 as described above.

Set Nos.	Finish.	Per Dozen Sets.
772528	Sanded Statuary Brass, High Parts Polished	$28.48
0772529	Sanded Statuary Brass, High Parts Polished	14.17

Packed—One Set in a Box, with Screws.

Note—The 0 prefix indicates Wrought Steel.

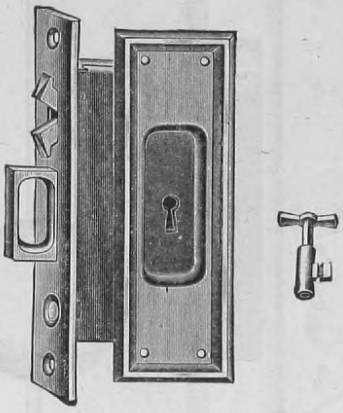
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BEACON DESIGN HARDWARE

Greek School.

Wrought Brass and Steel

SLIDING DOOR SETS



Set No. 0772536.
Set No. 0772537.

Lock No. 01331½

LOCK—Japanned Iron Case, 5½x3½x 7/16 inches. Wrought Steel Front, 7¾x1 inch. Backset, 2½ inches. One Brass Metal Adjustable Extension Key. Changes alike. Plated Front, Bolts, Strikes and Pulls. Reversible, for Doors 1⅜ to 2½ inches thick. Doors may be closed by Pulls in fronts and may be locked by Key from either side.

CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors, 7x2⅝ inches. Flat Strike for Single Doors.

Sliding Door Lock Sets

For Single Doors.

Set No.	Finish	Per Set
0772536—Sanded	Statuary Brass, High Parts Buffed	$2.55

Packed—One Set in a Box, with Screws.

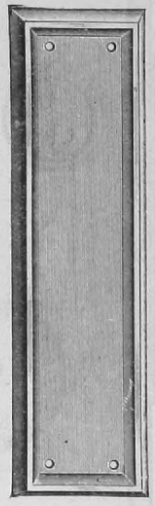
For Double Doors.

Set No.	Finish	Per Set
0772537—Sanded	Statuary Brass, High Parts Buffed	$4.20

Packed—One Set in a Box, with Screws.

Note—The 0 prefix indicates Wrought Steel.

PUSH PLATES



No. 772530.

Size, 10x2¾ inches.

Nos.	Finish	Per Dozen
772530—	Sanded Statuary Brass, High Parts Buffed.	$10.05
0772530—	Sanded Statuary Brass, High Parts Buffed.	7.20

Packed—Half Dozen in a Box, with Screws.

The 0 prefix indicates Wrought Steel.

PUSH BUTTONS

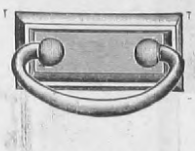
No. 772533.

Size, 3⅜x1½ inches.

No.	Finish	Per Dozen
772533—	Sanded Statuary Brass, High Parts Buffed	$10.80

Packed—One in a Box, with Screws.

DROP DRAWER PULLS



No. 0772543.

Size, 1½x3⅜ inches.

No.	Finish	Per Dozen
0772543—	Sanded Statuary Brass, High Parts Buffed	$4.08

Packed—Half Dozen in a Box, with Screws.

FLUSH SASH LIFTS

No. 0772544.

Size, 1½x3¾ inches.

No.	Finish	Per Dozen
0772544—	Sanded Statuary Brass, High Parts Buffed	$1.80

Packed—Two Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

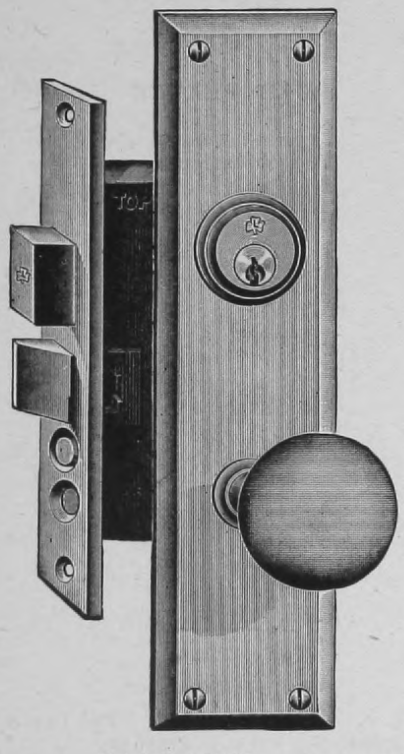
One-Third Size Cuts.

MADISON DESIGN LOCK SETS

Colonial School—Wide Bevel.

Wrought Bronze or Brass Metal

FRONT DOOR



Set No. 741201.

Cylinder Front Door Lock Sets

Set Nos.	Finish	Per Set
741201—Antique Cppper		$11.65
741401—Light Dull Brass		11.65

Packed—One Set in a Box, with Screws.

Lock No. 5000.

CASE—Japanned Iron, 5½x4x¾ inches.
FRONT—Flat Cast Front, 7¾x1¼ inches.
BACKSET—2¾ inches. Spacing: Outside, 3¾ inches; Inside 2⁵⁄₁₆ inches.
KEYS—Three Nickel-Silver Keys. Five Pin Tumblers, Changes practically unlimited.
PLAIN Latch Bolt. Bronze Metal Cylinder, Front, Bolts, and Strike. Hub for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1¾ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Knob from both sides and by Key only from outside when outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. One Key operates both bolts.
KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Swivel Spindle. One Thumb-Turn.
ESCUTCHEONS—Two. Outside 9½x2¾ inches; Inside 7x2½ inches. One Cylinder.

Cylinder Vestibule Door Lock Sets

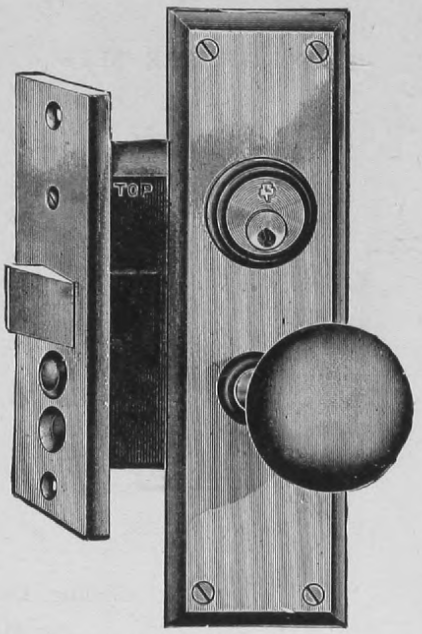
Set Nos.	Finish	Per Set
741202—Antique Copper		$10.15
741402—Light Dull Brass		10.15

Packed—One Set in a Box, with Screws.

Lock No. 5000½.

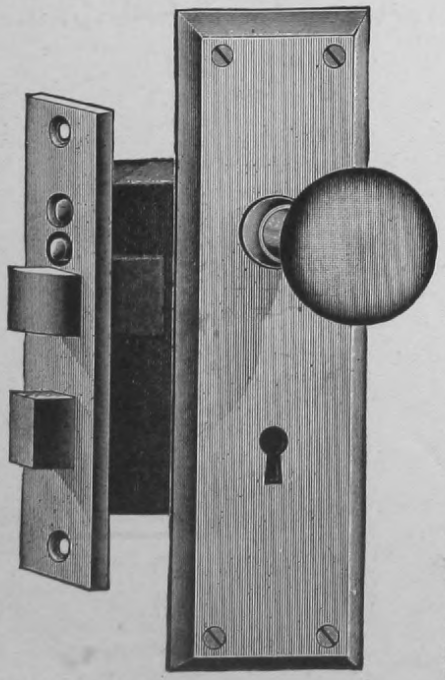
CASE—Japanned Iron, 4¾x4x¾ inches.
FRONT—Flat Cast Front, 6¾x1¼ inches.
BACKSET—2¾ inches. Spacing: Outside, 2¾ inches; Inside has Knob only.
KEYS—Three Nickel-Silver Keys. Five Pin Tumblers, Changes practically unlimited.
PLAIN Latch Bolt, Bronze Metal Cylinder, Front, Bolt and Strike. Hub for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1¾ to 2¼ inches thick. Other thicknesses to order.
OPERATED—By Knob from both sides and by Key only from outside when Outer Knob is set by Stop.
KNOBS—Two 2½ and 2¼ inches. ⅜ inch "Swivel" Spindle.
ESCUTCHEONS — Two. Outside 9½x2¾ inches; Inside 7x2½ inches. One Cylinder.

VESTIBULE DOOR



Set No. 741202.

FRONT DOOR



Set No. 741207.

Bit Key Front Door Lock Sets

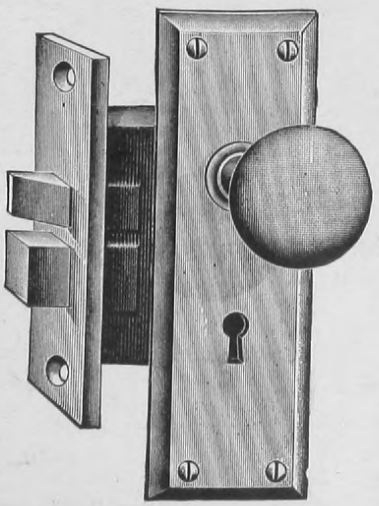
Set Nos.	Finish	Per Set
741207—Antique Copper		$4.45
741407—Light Dull Brass		4.45

Packed—One Set in a Box, with Screws.

Lock No. 5204.

CASE—Japanned Iron, 4¾x3¾x¾ inches.
FRONT—Flat Cast Front, 6¾x1¹⁄₁₆ inches.
BACKSET—2⅝ inches. Spacing: 3⅛ inches.
KEYS—Two Nickel Plated Steel Keys. One Tumbler. 12 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front, Bolts and Strike, ⁵⁄₁₆ inch "Swivel" Hub.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—Latch Bolt by Knob from both sides, and by Key only when Outer Knob is set by Stop; Dead Bolt by Key from either side. Both Bolts are operated by the same key and through the same Keyhole.
KNOBS—Two, 2¼ inches. ⁵⁄₁₆ inch "Swivel" Spindle.
ESCUTCHEONS—Two. One 9½x2¾ inches for outside; One 7x2½ inches for inside.

INSIDE DOOR



Set No. 741228.

Inside Door Lock Sets

Set Nos.	Finish	Per Doz. Sets
741228—Antique Copper		$28.75
741428—Light Dull Brass		28.75

Packed—One Set in a Box, with Screws.

Lock No. 3127.

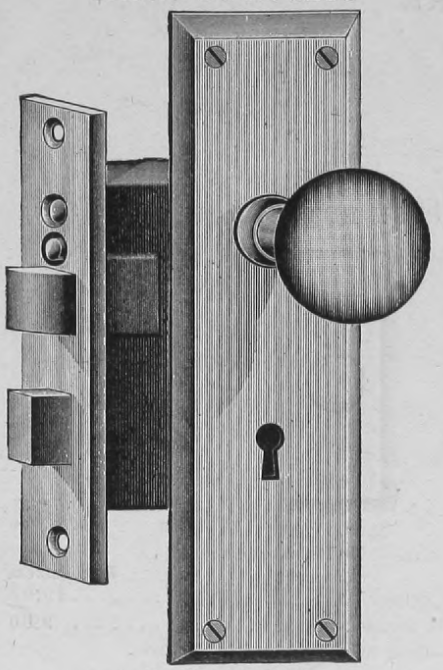
CASE—Japanned Iron, 3¾x3¼x⅝ inches.
FRONT—Flat Cast Front, 5½x⅞ inches.
BACKSET—2⅜ inches. Spacing: 2⁹⁄₁₆ inches.
KEYS—One Nickel Plated Steel Key. One Tumbler, 12 Changes.
BRONZE Metal Front, Bolts and Strike. ⁵⁄₁₆ inch Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from either side.
KNOBS—Two, 2¼ inches. ⁵⁄₁₆ inch Spindle.
ESCUTCHEONS—Two, 7x2½ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MADISON DESIGN HARDWARE

One-Third Size Cuts.

FRONT DOOR SETS



Set No. 0741207.

Colonial School—Wide Bevel.

Wrought Steel

Lock No. 5232. Used in Front Door Sets

CASE—Japanned Iron, 4¾x3¾x9/16 inches.
FRONT—Flat Cast Front, 6¾x1 1/16 inches.
BACKSET—2⅝ inches. Spacing: 3⅛ inches.
KEYS—Two Nickel Plated Steel Keys, One Tumbler, 12 Changes.
EASY SPRING Latch Bolt, Plated Iron Front and Strike. Bronze Metal Bolts. 5/16 inch "Swivel" Hub.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—Latch Bolt by Knob from both sides and by Key only when Outer Knob is set by Stop. Dead Bolt by Key from either side. Both Bolts are operated by the same key and through the same keyhole.
KNOBS—Two, 2¼ inches. 5/16 inch "Swivel" Spindle.
ESCUTCHEONS—Two. One, 9½x2¾ inches, for outside; One, 7x2½ inches for inside.

Bit Key Front Door Lock Sets

With **One Piece** Knobs.

Set Nos.	Finish	Per Set
0741207	Antique Copper	$3.75
0741407	Light Dull Brass	3.75

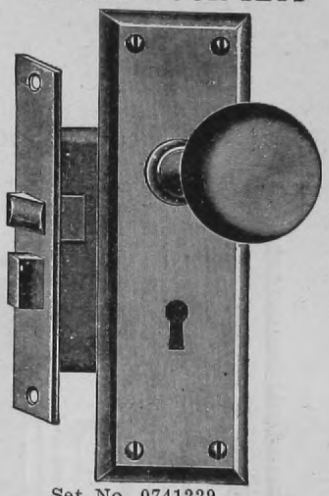
Packed.—One Set in a Box, with Screws.

With **Two Piece** Knobs.

Set Nos.	Finish	Per Set
0741207½	Antique Copper	$3.50
0741407½	Light Dull Brass	3.50

Packed.—One Set in a Box, with Screws.

INSIDE DOOR SETS



Set No. 0741229.

Inside Door Lock Sets

With **One Piece** Knobs.

Set Nos.	Finish	Per Dozen Sets
0741229	Antique Copper	$12.28
074129	Light Dull Brass	12.28

Packed.—One Set in a Box, with Screws.

With **Two Piece** Knobs.

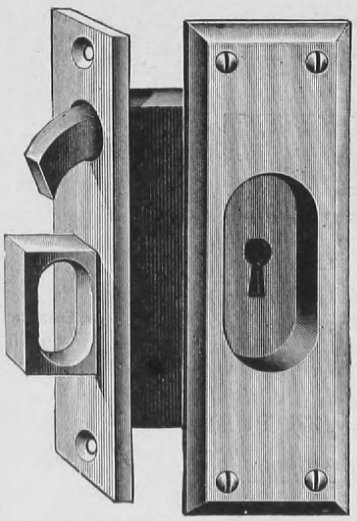
Set Nos.	Finish	Per Dozen Sets
0741229½	Antique Copper	$11.28
0741429½	Light Dull Brass	11.28

Packed.—One Set in a Box, with Screws.

Lock No. 3109. Used in Inside Door Sets.

CASE—Japanned Iron, 3¾x3¼x⅝ inches.
FRONT—Flat Wrought Front, 5½x⅞ inches.
BACKSET—2⅜ inches. Spacing; 2 3/16 inches.
KEYS—One Nickel Plated Steel Key, One Tumbler, 12 Changes.
PLATED Steel Front and Strike. Iron Bolts, 5/16 inch Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from either side.
KNOBS—Two, 2¼ inches. 5/16 inch Spindle.
ESCUTCHEONS—Two, 7x2½ inches.

SLIDING DOOR SETS



Set No. 0741236-37.

Sliding Door Lock Sets

For Single Doors.

Set Nos.	Finish	Per Set
0741236	Antique Copper	$1.95
0741436	Light Dull Brass	1.95

For Double Doors.

Set Nos.	Finish	Per Set
0741237	Antique Copper	$3.15
0741437	Light Dull Brass	3.15

Packed.—One Set in a Box, with Screws.

Locks Nos. 05600 and 05605.

LOCKS—Japanned Iron Case, 4½x3½x⅞ inches. Flat Cast Fronts, 6⅞x1 inches. Backset 2¾ inches. Bronze Metal Adjustable Extension Key, Changes alike.
PLATED Iron Fronts, Bronze Metal Bolts, Pulls and Strikes. Reversible, for Doors 1⅜ to 2½ inches thick. Doors may be closed by Pulls in fronts and may be locked by key from either side.
CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors; 7x2½ inches. Flat Strike for Single Doors, 3x⅞ inches.

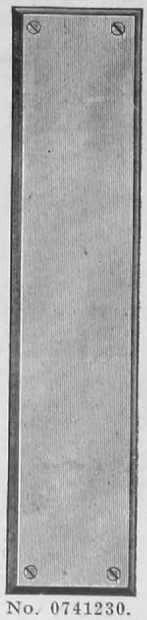
Push Plates

Size—9½x2¾ inches.

Nos.	Finish	Per Dozen
0741230	Antique Copper	$6.88
0741430	Light Dull Brass	6.88

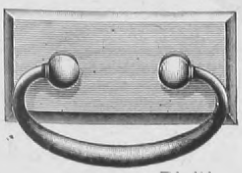
Packed.—Half Dozen in a Box, with Screws.

PUSH PLATES



No. 0741230.

DROP DRAWER PULLS



No. 0741243.

Drop Drawer Pulls

Size—1⅝x3⅝ inches

Nos.	Finish	Per Dozen
0741243	Antique Copper	$3.75
0741443	Light Dull Brass	3.75

Packed.—One Dozen in a Box, with Screws.

Flush Sash Lifts

Size—1⅝x3⅝ inches.

Nos.	Finish	Per Dozen
0741244	Antique Copper	$1.25
0741444	Light Dull Brass	1.25

Packed.—Two Dozen in a Box, with Screws.

FLUSH SASH LIFTS

No. 0741244.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

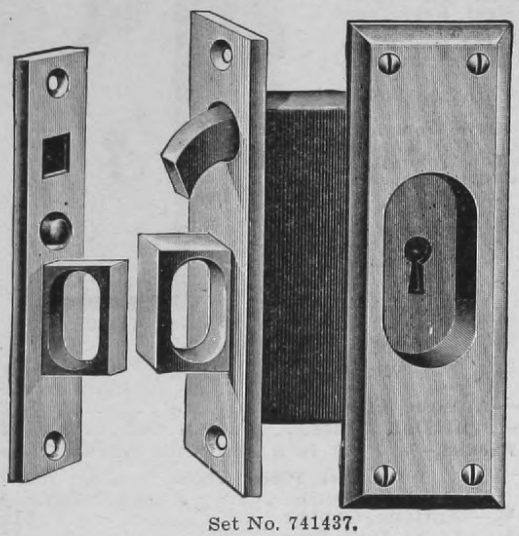
One-Third Size Cuts.

MADISON DESIGN HARDWARE

Colonial School—Wide Bevel.

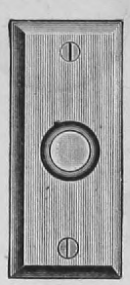
Wrought Bronze or Brass Metal

SLIDING DOOR SETS



Set No. 741437.

PUSH BUTTONS



No. 741233.
Size—3⅝x1⅝ inches.

Nos.	Finish.	Per Dozen.
741233—	Antique Copper	$9.00
741433—	Light Dull Brass	9.00

Packed—One in a Box, with Screws.

Sliding Door Lock Sets

For Single Doors.

Set No.	Finish.	Per Set.
741436—	Light Dull Brass	$2.80

Packed—One Set in a Box, with Screws.

For Double Doors.

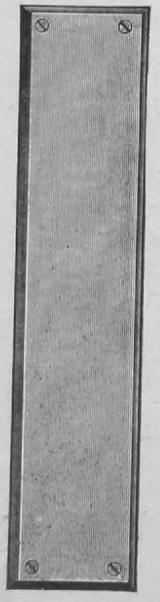
Set No.	Finish.	Per Set.
741437—	Light Dull Brass	$4.60

Packed—One Set in a Box, with Screws.

Locks No. 5600 and 5605.

LOCKS—Japanned Iron Cases, 4½x3⅝x⅝ inches. Flat Cast Fronts, 6⅞x1 inches. Backset, 2¾ inches. One Bronze Metal Adjustable Extension Key, Changes alike. Bronze Metal Fronts, Bolts, Pulls and Strikes. Reversible, for Doors 1⅜ to 2½ inches thick. Doors may be closed by Pulls in fronts and may be locked by Key from either side. CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors, 7x2½ inches. Flat Strike for Single Doors, $2\frac{15}{16}$x$1\frac{5}{16}$ inches.

PUSH PLATES

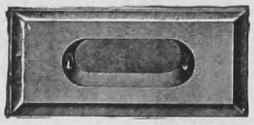


No. 741430.
Size—9½x2¾ inches.

No.	Finish.	Per Dozen.
741430—	Light Dull Brass	$11.90

Packed—Half Dozen in a Box, with Screws.

FLUSH SASH LIFTS

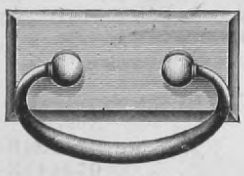


No. 741444.
Size—1⅝x3⅝ inches.

No.	Finish.	Per Dozen.
741444—	Light Dull Brass	$2.40

Packed—Two Dozen in a Box, with Screws.

DROP DRAWER PULLS



No. 741243.
Size—1⅝x3⅝ inches.

Nos.	Finish.	Per Dozen.
741243—	Antique Copper	$6.00
741443—	Light Dull Brass	6.00

Packed—One Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

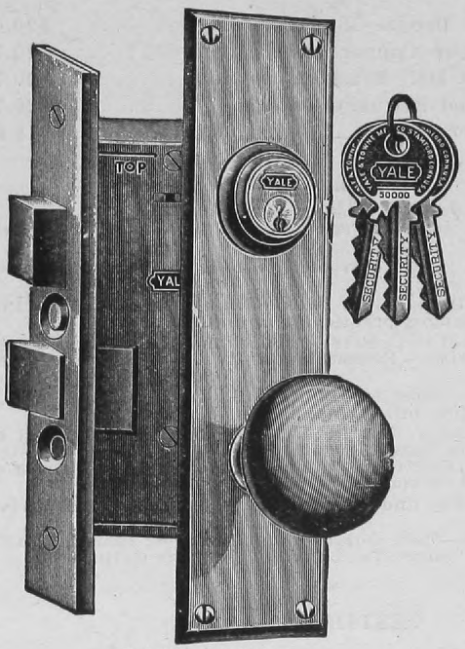
One-Third Size Cuts.

GR DESIGN LOCK SETS

Colonial School—Regular Bevel.

FRONT DOOR SET

Cast Bronze, Brass or Iron



Set No. 381101.

Cylinder Front Door Lock Sets

Set No.	Finish.	Per Set.
381101	—Plain Bronze Metal	$16.75
381201	—Antique Copper	17.45
381401	—Light Dull Brass	17.45
381501	—Sanded Statuary Brass	17.45
381801	—Bower Barff	15.55

Packed—One Set in a Box, with Screws.

Lock No. 750.

CASE—Japanned Iron, 6x3¾x¾ in.
FRONT—Flat Armored Front, 8¼x1⅛ inches.
BACKSET—2¾ inches. Spacing: Outside, 4 inches; Inside, 3¾ inches.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. One Key operates both Bolts.
KNOBS—Two, 2½ and 2¼ inches; ⅜ inch Triplex "Swivel" Spindle; One Thumb-Turn.
ESCUTCHEONS—Two, Outside, 10x2¾ inches; Inside, 7½x2¼ inches. One Cylinder.

VESTIBULE DOOR SET

Set No. 381102.

Cylinder Vestibule Door Lock Sets

Set No.	Finish.	Per Set.
381102	—Plain Bronze Metal	$13.95
381202	—Antique Copper	14.65
381402	—Light Dull Brass	14.65
381502	—Sanded Statuary Brass	14.65
381802	—Bower Barff	12.95

Packed—One Set in a Box, with Screws.

Lock No. 790.

CASE—Japanned Iron, 5x3¾x¾ in.
FRONT—Flat Armored Front, 7¼x1⅛ inches.
BACKSET—2¾ inches. Spacing: Outside, 3 inches; Inside has Knob only.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolt and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.
REVERSIBLE—For Doors 1½ to 2¼ inches thick, other thicknesses to order.
OPERATED—By Knob from both sides, and by Key only from outside when Outer Knob is set by Stop.
KNOBS—Two, 2½x2¼ inches. ⅜ inch Triplex "Swivel" Spindle.
ESCUTCHEONS—Two, Outside, 9x2½ inches; Inside, 7½x2¼ inches. One Cylinder.

Cylinder Front and Vestibule Door Lock Sets

Composed of Sets No. 381101 and 381102, Etc.

With Keys to Pass.

Set No.	Finish.	Per Set.
381105	—Plain Bronze Metal	$30.70
381205	—Antique Copper	31.90
381405	—Light Dull Brass	31.90
381505	—Sanded Statuary Brass	31.90
381805	—Bower Barff	28.50

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

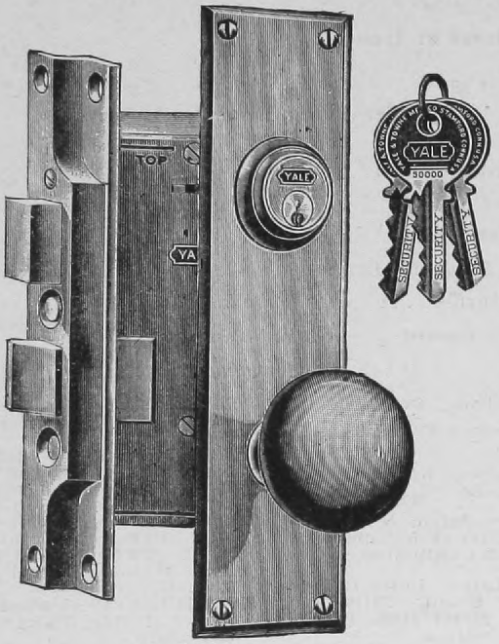
GR DESIGN LOCK SETS

One-Third Size Cuts.

Colonial School—Regular Bevel.

FRONT DOOR

Cast Bronze, Brass or Iron



No. 381103.

Cylinder Front Door Lock Sets

Rabbeted Front.

Set No.	Finish	Per Set
381103	—Plain Bronze Metal	$20.05
381203	—Antique Copper	20.75
381403	—Light Dull Brass	20.75
381503	—Sanded Statuary Brass	20.75
381803	—Bower Barff	18.85

Packed—One Set in a Box, with Screws.

Lock No. 750½.

CASE—Japanned Iron, 6x3¾x¾ inches.

FRONT—Rabbeted Cast Front, 8⅜x1¼ inches. ½ inch Rabbet.

BACKSET—2¾ inches extreme. Spacings: Outside, 4 inches; Inside, 3¾ inches.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike. Bronze Metal Hub, for ⅜ inch Swivel Spindle.

NOT Reversible—Specify Hand of Door. For Doors 1½ to 2¼ inches thick, other thicknesses to order.

OPERATED—Latch Bolt by Knob from both sides, and by key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside, and by Thumb-Turn from inside. One key operates both bolts.

KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Triplex Swivel Spindle.

ESCUTCHEONS—Two, Outside, 10x2¾ inches; Inside, 7½x2¼ inches, with Thumb-Turn for inside. One Cylinder.

Vestibule Door Lock Sets

Rabbeted Front.

Set No.	Finish	Per Set
381104	—Plain Bronze Metal	$17.25
381204	—Antique Copper	17.95
381404	—Light Dull Brass	17.95
381504	—Sanded Statuary Brass	17.95
381804	—Bower Barff	16.25

Packed—One Set in a Box, with Screws.

Lock No. 790½.

CASE—Japanned Iron, 5x3¾x¾ inches.

FRONT—Rabbeted Cast Front. 7¼x1¼ inches. ½ inch rabbet.

BACKSET—2¾ inches extreme. Spacings: Outside, 3 inches; Inside has Knob only.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin-Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolt and Strike. Bronze Metal Hub, for ⅜ inch "Swivel" Spindle.

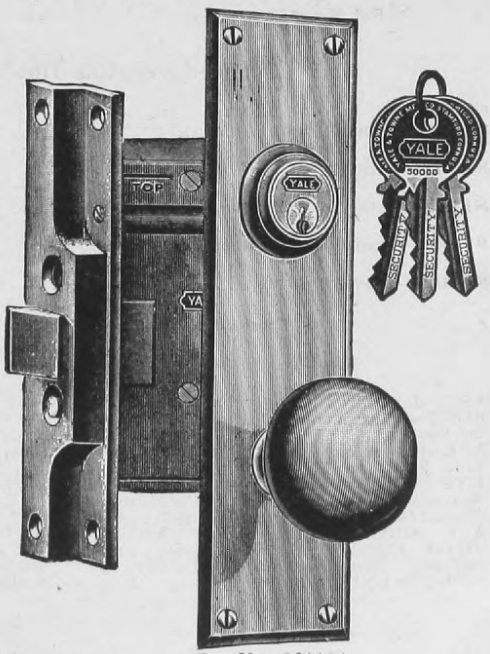
NOT Reversible—Specify Hand of Door. For Doors 1½ to 2¼ inches thick, other thicknesses to order.

OPERATED—By Knob from both sides and by Key only from outside when Outer Knob is set by Stop.

KNOBS—Two. Outside, 2½ inches; Inside, 2¼ inches. ⅜ inch Triplex "Swivel" Spindle.

ESCUTCHEONS—Two. Outside, 10x2¾ inches; Inside, 7½x 2¼ inches. One Cylinder.

VESTIBULE DOOR



Set No. 381104.

Cylinder Front and Vestibule Door Lock Sets

Composed of Sets No. 381103 and 381104, Etc.

With Keys to Pass.

Set No.	Finish	Per Set
381106	—Plain Bronze Metal	$37.30
381206	—Antique Copper	38.70
381406	—Light Dull Brass	38.70
381506	—Sanded Statuary Brass	38.70
381806	—Bower Barff	35.10

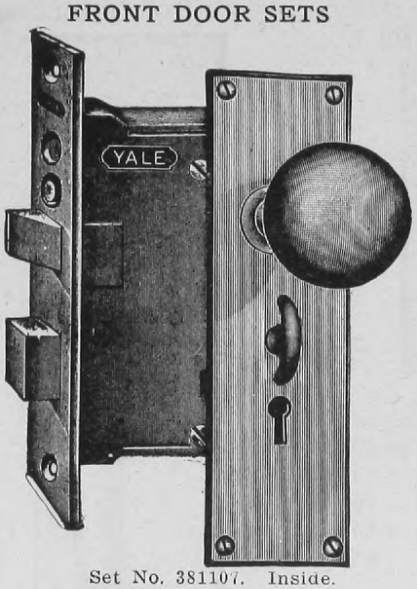
Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

GR DESIGN LOCK SETS

FRONT DOOR SETS



Set No. 381107. Inside.

Colonial School—Regular Bevel.

Cast Bronze Metal and Iron
Front Door Lock Sets

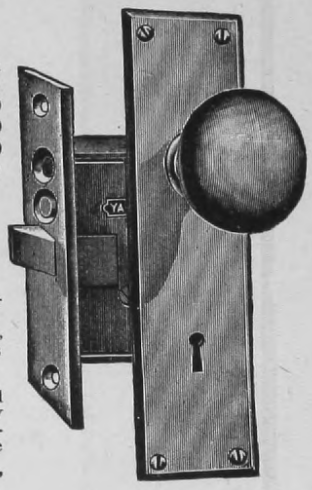
Set Nos.	Finish	Per Set
381107	Plain Bronze Metal	$8.80
381207	Antique Copper	9.10
381407	Light Dull Brass	9.10
381507	Sanded Statuary Brass	9.10
381807	Bower Barff	7.70

Packed.—One Set in a Box, with Screws.

Lock No. 743.

CASE—Japanned Iron, 5⅛x3 11/16x⅝ inches.
FRONT—Flat Wrought Front, 6¾x1 inches.
BACKSET—2¾ inches. Spacing: 2¾ inches.
KEYS—Two Nickel Plated Solid Steel Keys. One Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Wrought Bronze Metal Front, and Strike. Cast Bronze Metal Bolts. Iron Hub, for 5/16 inch "Swivel" Spindle.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb-Turn from inside. Both Bolts are operated by the same Key and through the same keyhole.
KNOBS—Two, 2¼ inches. 5/16 inch Triplex "Swivel" Spindle.
ESCUTCHEONS—Two. Outside, 10x2¾ inches; Inside, 7x2¼ inches.

VESTIBULE DOOR SETS



Set No. 381108.

Vestibule Lock No. 771.

CASE—Japanned Iron, 3⅜x3⅝x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: Outside, 1¾ inches; Inside has Knob only.
KEYS—Two Nickel Plated Solid Steel Keys. One Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front and Bolt, Wrought Bronze Metal Strike. Iron Hub, for 5/16 inch "Swivel" Spindle.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—By Knob from both sides and by Key only from outside when Outer Knob is set by Stop.

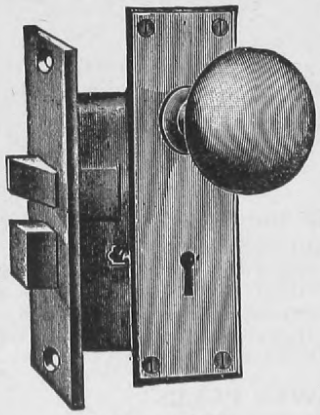
Vestibule Door Lock Sets

Set Nos.	Finish	Per Set
381108	Plain Bronze Metal	$5.75
381208	Antique Copper	6.00
381408	Light Dull Brass	6.00
381508	Sanded Statuary Brass	6.00
381808	Bower Barff	5.20

Packed.—One Set in a Box, with Screws.

KNOBS—Two, 2¼ inches. 5/16 inch Triplex "Swivel" Spindle.
ESCUTCHEONS—Two. Outside, 7½x2¼ inches; Inside, 6x2 inches.

INSIDE DOOR SETS



Set No. 381128.

Inside Door Lock Sets

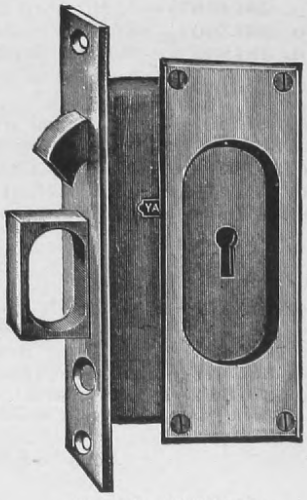
Set Nos.	Finish	Per Dozen Sets
381128	Plain Bronze Metal	$43.80
381228	Antique Copper	46.80
381428	Light Dull Brass	46.80
381528	Sanded Statuary Brass	46.80
381828	Bower Barff	37.35

Packed.—One Set in a Box, with Screws.

Lock No. 821.

CASE—Japanned Iron, 3½x3⅝x½ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. One Wrought Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front and Bolts, Wrought Bronze Metal Strike, 5/16 inch Iron Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 6x2 inches.

SLIDING DOOR SETS



Set No. 381136-37.

Sliding Door Lock Sets

For Single Doors.

Set Nos.	Finish	Per Set
381136	Plain Bronze Metal	$4.80
381236	Antique Copper	5.20
381436	Light Dull Brass	5.20
381536	Sanded Statuary Brass	5.20
381836	Bower Barff	4.15

Packed.—One Set in a Box, with Screws.

For Double Doors.

Set Nos.	Finish	Per Set
381137	Plain Bronze Metal	$8.60
381237	Antique Copper	9.40
381437	Light Dull Brass	9.40
381537	Sanded Statuary Brass	9.40
381837	Bower Barff	7.30

Packed.—One Set in a Box, with Screws.

Assembled with Locks Nos. 1705 and 1715 as described on page 1093.
CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors; 6x2½ inches.

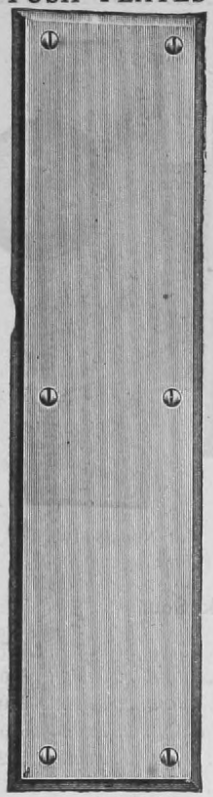
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GR DESIGN HARDWARE

Colonial School Regular Bevel.
Cast Bronze, Brass or Iron

One-Third Size Cuts.

PUSH PLATES

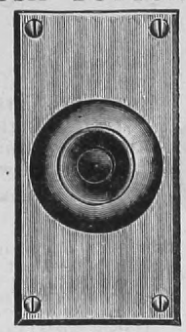


No. 381130½.

KEY PLATES

No. 381142.

PUSH BUTTONS



No. 381133.

Key Plates—2x1¼ inches.

	Per Dozen
No. 381142—Plain Bronze Metal	$2.50
No. 381242—Antique Copper	2.70
No. 381442—Light Dull Brass	2.70
No. 381542—Sanded Statuary Brass	2.70
No. 381842—Bower Barff	1.90

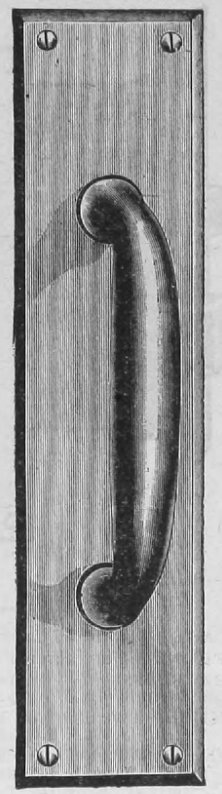
Packed—One Dozen in a Box, with Screws.

Push Buttons—3¼x1⅞ inches.

	Per Dozen
No. 381133—Plain Bronze Metal	$13.20
No. 381233—Antique Copper	15.20
No. 381433—Light Dull Brass	15.20
No. 381533—Sanded Statuary Brass	15.20
No. 381833—Bower Barff	13.20

Packed—One in a Box, with Screws.

DOOR PULLS



No. 381149

PUSH PLATES

Push Plates—12x3 inches.

	Per Dozen
No. 381130½—Plain Bronze Metal	$29.70
No. 381230½—Antique Copper	31.70
No. 381430½—Light Dull Brass	31.70
No. 381530½—Sanded Statuary Brass	31.70
No. 381830½—Bower Barff	22.30

Packed—Two in a Box, with Screws.

Push Plates—16x4 inches.

	Per Dozen
No. 381131—Plain Bronze Metal	$52.80
No. 381231—Antique Copper	55.20
No. 381431—Light Dull Brass	55.20
No. 381531—Sanded Statuary Brass	55.20
No. 381831—Bower Barff	39.60

Packed—Two in a Box, with Screws.

Door Pulls

No. 381149—Plain Bronze Metal	Size—12x3 inches	Per Dozen, $57.75
No. 381249—Antique Copper	Size—12x3 inches	Per Dozen, 62.70
No. 381449—Light Dull Brass	Size—12x3 inches	Per Dozen, 62.70
No. 381549—Sanded Statuary Brass	Size—12x3 inches	Per Dozen, 62.70
No. 381849—Bower Barff	Size—12x3 inches	Per Dozen, 43.35

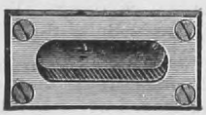
Packed—Two in a Box, with Screws.

FLUSH SASH LIFTS

Size—1¼x3 inches.

	Per Dozen
No. 381144—Plain Bronze Metal	$4.30
No. 381244—Antique Copper	4.90
No. 381444—Light Dull Brass	4.90
No. 381544—Sanded Statuary Brass	4.90
No. 381844—Bower Barff	3.25

Packed—One Dozen in a Box, with Screws.



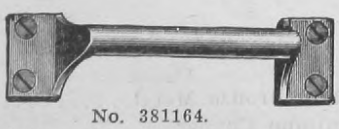
Nos. 381144 to 381844½.

Size—1½x3½ inches.

	Per Dozen
No. 381144½—Plain Bronze Metal	$5.80
No. 381244½—Antique Copper	6.40
No. 381444½—Light Dull Brass	6.40
No. 381544½—Sanded Statuary Brass	6.40
No. 381844½—Bower Barff	4.35

Packed—One Dozen in a Box, with Screws.

BAR SASH LIFTS



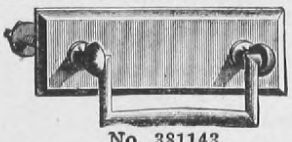
No. 381164.

Size—1¼x5 inches.

	Per Dozen
No. 381164—Plain Bronze Metal	$6.90
No. 381264—Antique Copper	7.00
No. 381464—Light Dull Brass	8.00
No. 381564—Sanded Statuary Brass	8.00
No. 381864—Bower Barff	3.85

Packed—Two Dozen in a Box, with Screws.

DROP DRAWER PULLS



No. 381143.

Size—1x4⅛ inches.

	Per Dozen
No. 381143—Plain Bronze Metal	$6.90
No. 381243—Antique Copper	8.00
No. 381443—Light Dull Brass	8.00
No. 381543—Sanded Statuary Brass	8.00
No. 381843—Bower Barff	6.90

Packed—One Dozen in a Box, with Nuts and Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

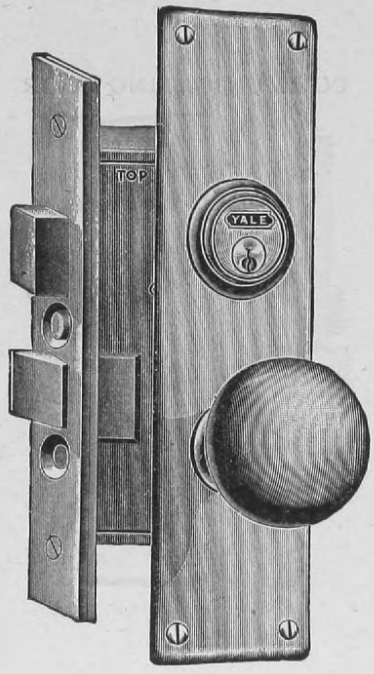
One-Third Size Cuts.

DT DESIGN LOCK SETS

Colonial School—Round Edge.

Wrought Bronze, Brass or Steel

FRONT DOOR SETS



Set No. 701101.

Cylinder Front Door Lock Sets

With Lock No. 750 as described on page 1114.

Set No.	Finish	Per Set
701101—	Plain Bronze Metal	$10.75
701201—	Antique Copper	11.00
701401—	Light Dull Brass	11.00
701801—	Bower Barff	10.35

KNOBS—Two, 2½ and 2¼ inches. ⅜ inch Triplex "Swivel" Spindle. One Thumb-Turn.

ESCUTCHEONS—Two. Outside, 10x2¾ inches. Inside, 7½x2¼ inches. One Cylinder.

Packed—One Set in a Box, with Screws.

Cylinder Vestibule Door Lock Sets

With Lock No. 790 as described on page 1114.

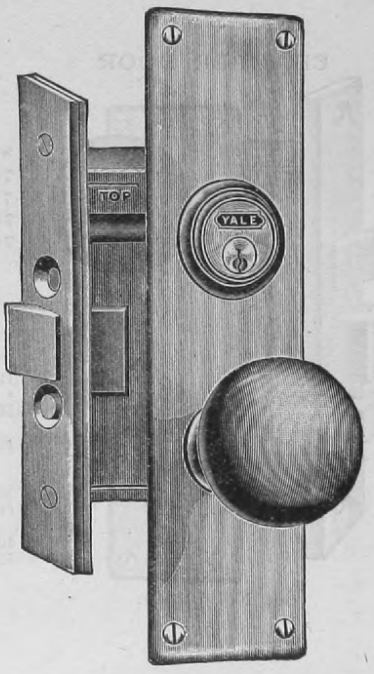
Set No.	Finish	Per Set
701102—	Plain Bronze Metal	$ 9.85
701202—	Antique Copper	10.10
701402—	Light Dull Brass	10.10
701802—	Bower Barff	9.45

KNOBS—Two, 2¼ inches. ⅜ inch Triplex "Swivel" Spindle.

ESCUTCHEONS—Two, 7½x2¼ inches. One Cylinder.

Packed—One Set in a Box, with Screws.

VESTIBULE DOOR SETS



Set No. 701102.

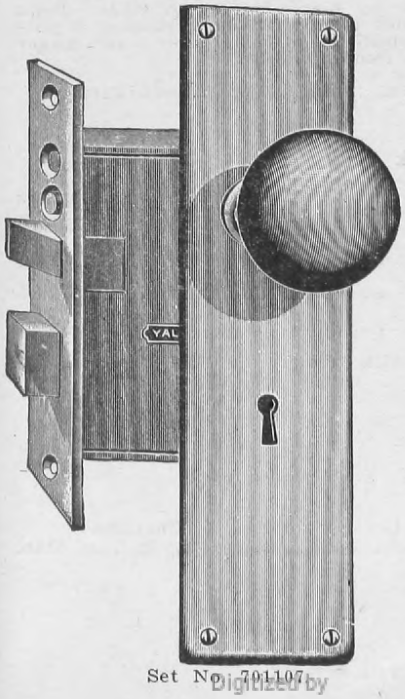
Cylinder Front and Vestibule Door Lock Sets

Composed of Sets No. 701101 and 701102, etc. With Keys to Pass.

Set No. 701105—Plain Bronze Metal	Per Set,	$20.60
Set No. 701205—Antique Copper	Per Set,	21.10
Set No. 701405—Light Dull Brass	Per Set,	21.10
Set No. 701805—Bower Barff	Per Set,	19.80

Packed—One Set in a Box, with Screws.

FRONT DOOR SETS



Set No. 701107.

Bitted Key Front Door Lock Sets

Set No.	Finish	Per Set
701107—	Plain Bronze Metal	$4.95
701207—	Antique Copper	5.05
701407—	Light Dull Brass	5.05
701807—	Bower Barff	4.70

Packed—One Set in a Box, with Screws.

Lock No. 743.

CASE — Japanned Iron, 4¾x3⅝x⅝ inches.

FRONT—Flat Wrought Front, 6¾x1 inches.

BACKSET—2¾ inches. Spacing: 2¾ inches.

KEYS—Two Nickel Plated Solid Steel Keys. One Lever Tumbler, 12 Changes.

EASY SPRING Latch Bolt—Wrought Bronze Metal Front and Strike. Cast Bronze Metal Bolts. Iron Hub for 5/16 inch "Swivel" Spindle.

REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.

OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when Outer Knob is set by Stop; Dead Bolt by Key from outside and by Thumb-Turn from inside. Both Bolts are operated by the same Key and through the same Keyhole.

KNOBS—Two, 2½ and 2¼ inches. 5/16 inch Triplex "Swivel" Spindle.

ESCUTCHEONS—Two. Outside, 10x2¾ inches. Inside, 7x2¼ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

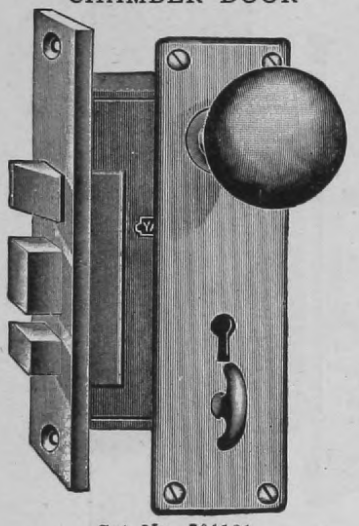
One-Third Size Cuts.

DT DESIGN LOCK SETS

Colonial School—Round Edges.

Wrought Bronze, Brass or Steel

CHAMBER DOOR



Set No. 701121.

Chamber Door Lock Sets

Set No.	Finish	Per Set
701121	—Plain Bronze Metal	$7.05
701221	—Antique Copper	7.35
701421	—Light Dull Brass	7.35
701821	—Bower Barff	6.55

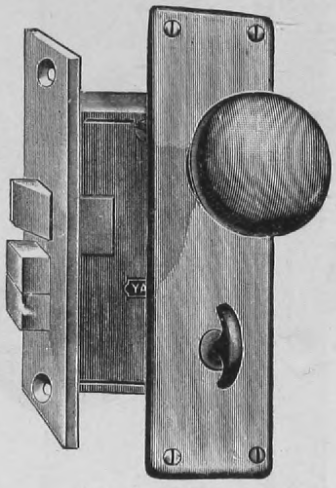
Packed—One Set in a Box, with Screws.

Lock No. 1402.

CASE—Japanned Iron, 5x3½x¾ inches.
FRONT—Flat Cast Front, 7⅛x1 inches.
BACKSET—2¾ inches. Spacing: Outside, 2¾ inches; Inside, 2¾ and 4 inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Tumblers, 54 Changes.
EASY SPRING Latch Bolt—Bronze Metal Front, Bolts and Strike. Bronze Metal Hub; 5/16 inch for Knob, 3/16 inch for Thumb-Turn.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides; Thumb-Bolt by Thumb-Turn from inside only.
KNOBS—Two, 2¼ inches. 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 7½x2¼ inches. One Thumb-Turn.

Packed—One Set in a Box, with Screws.

COMMUNICATING DOOR



Set No. 701123.

Communicating Door Lock Sets

With Lock No. 1524 as described below.

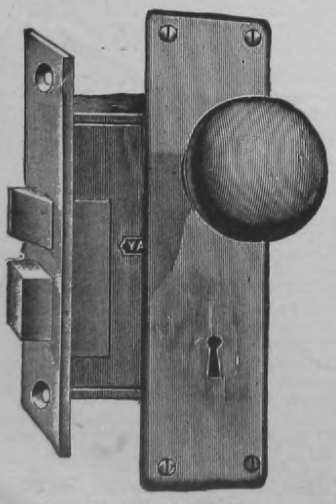
Set No.	Finish	Per Set
701123	—Plain Bronze Metal	$3.85
701223	—Antique Copper	3.85
701423	—Light Dull Brass	3.85
701823	—Bower Barff	3.65

Packed—One Set in a Box, with Screws.

Lock No. 1524.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 6⅛x1 inches.
BACKSET—2¾ inches. Spacing, 2¼ inches.
KEYS—None are required.
EASY SPRING Latch Bolt—Split Dead Bolt and Split Hub for Dead Bolt. Bronze Metal Front, Bolts, Strike and 5/16 inch Hubs for Knobs and Thumb-Turns.
REVERSIBLE—For Doors of either Hand.
OPERATED—Latch Bolt by Knob from both sides. Dead Bolts; One on either side by Thumb-Turn, making it possible to deadlock independently from either side. Lever Escapement action on Dead Bolts.
KNOBS—Two, 2¼ inches.
ESCUTCHEONS—Two, 6x2 inches. Two Thumb-Turns.

INSIDE DOOR SETS



Set No. 701125.

Inside Door Lock Sets

Set No.	Finish	Per Dozen Sets
701125	—Plain Bronze Metal	$51.10
701225	—Antique Copper	51.85
701425	—Light Dull Brass	51.85
701825	—Bower Barff	48.85

Packed—One Set in a Box, with Screws.

Lock No. 1500.

CASE—Japanned Iron, 4¼x3½x⅝ inches.
FRONT—Flat Cast Front, 6x1 inches.
BACKSET—2¾ inches. Spacing, 2¾ inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Lever Tumblers, 54 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front, Bolts, Strike and 5/16 inch Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindles.
ESCUTCHEONS—Two, 7x2¼ inches.

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

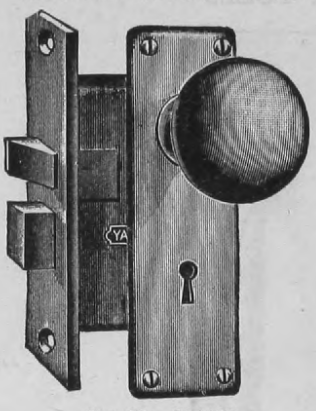
One-Third Size Cuts.

DT DESIGN LOCK SETS

Colonial School—Round Edges

Wrought Bronze Metal and Steel

INSIDE DOOR SETS



Set No. 701127.

Inside Door Lock Sets

With Lock No. 820 as described below.

Set No.	Finish	Per Dozen Sets
701127—	Plain Bronze Metal	$31.55
701227—	Antique Copper	31.90
701427—	Light Dull Brass	31.90
701827—	Bower Barff	29.30

Packed—One Set in a Box, with Screws.

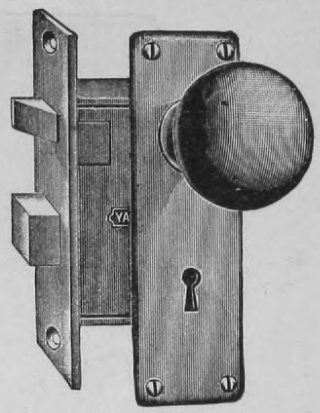
Inside Door Lock Sets

With Lock No. 802 as described below.

Set No.	Finish	Per Dozen Sets
701128—	Plain Bronze Metal	$25.90
701228—	Antique Copper	26.25
701428—	Light Dull Brass	26.25
701828—	Bower Barff	23.65
702028—	Nickel Plated	26.25

Packed—One Set in a Box, with Screws.

INSIDE DOOR SETS



Set No. 701128.

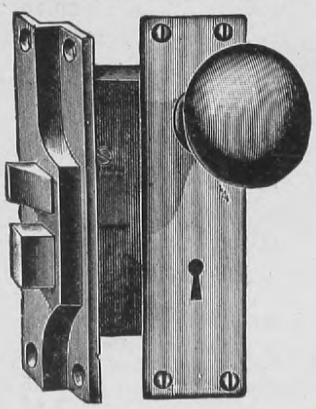
Lock No. 820.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—Flat Cast Front, 5½x1 inches.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. **Three** Wrought Lever-Tumblers, 36 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front and Bolts, Wrought Bronze Metal Strike, 5/16 inch Iron hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches. 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 6x2 inches.

Lock No. 802.

CASE—Japanned Iron, 3⅝x3¼x9/16 inches.
FRONT—Flat Cast Front, 5½x⅞ inches.
BACKSET—2½ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Polished Steel Key. One Cast Lever-Tumbler, 6 Changes.
CAST Bronze Metal Front and Bolts, Bronze Plated Steel Strike, 5/16 inch Iron hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 6x2 inches.

INSIDE DOOR SETS



Set No. 701124¾.

"Rabbeted" Inside Door Lock Sets

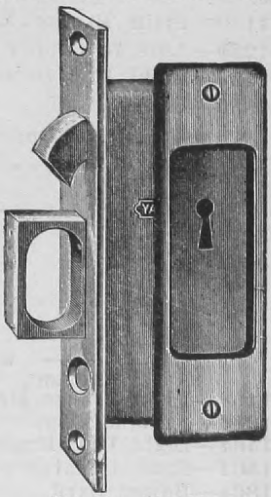
Set No.	Finish	Per Dozen Sets
701124¾—	Plain Bronze Metal	$67.05
701224¾—	Antique Copper	70.05
701424¾—	Light Dull Brass	70.05
701824¾—	Bower Barff	63.20

Packed—One Set in a Box, with Screws.

Lock No. 1621½.

CASE—Japanned Iron, 3½x3¼x11/16 inches.
FRONT—"Rabbeted" Cast Front, 5½x1 inches, ½ inch rabbet.
BACKSET—2¾ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. One Lever-Tumbler, 24 Changes.
EASY SPRING Latch Bolt—Cast Bronze Metal Front, Bolts and Strike, 5/16 inch Iron hub.
NOT REVERSIBLE—Specify Hand of Door.
OPERATED—By Knob and Key from both sides.
KNOBS—Two, 2¼ inches, 5/16 inch Triplex Spindle.
ESCUTCHEONS—Two, 6x2 inches.

SLIDING DOOR SETS



Set No. 701136.
Set No. 701137.

Sliding Door Lock Sets

For Single Doors.

Set No.	Finish	Per Set
701136—	Plain Bronze Metal	$3.00
701236—	Antique Copper	3.15
701436—	Light Dull Brass	3.15
701836—	Bower Barff	2.80

Packed—One Set in a Box, with Screws.

For Double Doors.

Set No.	Finish	Per Set
701137—	Plain Bronze Metal	$4.75
701237—	Antique Copper	4.90
701437—	Light Dull Brass	4.90
701837—	Bower Barff	4.45

Packed—One Set in a Box, with Screws.

Assembled with Locks Nos. 1705 and 1715 as described on page 1093.

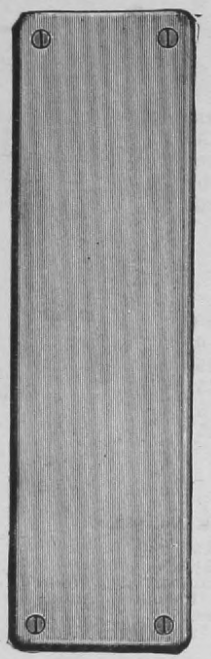
Cup Escutcheons—Two for Single Doors, Four for Double Doors, 6x2 inches. Flat Strike for Single Doors 4x⅞ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

DT DESIGN HARDWARE

PUSH PLATES



No. 701130

Push Plates

Size—10x2¾ inches.

Nos.	Finish	Per Dozen
701130	Plain Bronze Metal	$ 8.85
701230	Antique Copper	10.80
701430	Light Dull Brass	10.80
701830	Bower Barff	6.65

Packed—Half Dozen in a Box, with Screws.

Colonial School—Round Edges.

Wrought Bronze, Brass or Steel

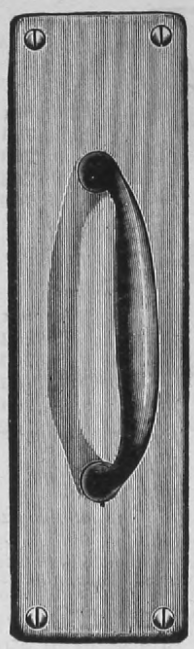
PUSH BUTTONS

No. 701133
Size—4x1¾ inches.

Nos.	Finish	Per Dozen
701133	Plain Bronze Metal	$ 9.90
701233	Antique Copper	11.40
701433	Light Dull Brass	11.40
701833	Bower Barff	9.90

Packed—One-Twelfth Dozen in a Box, with Screws.

DOOR PULLS



No. 701149.

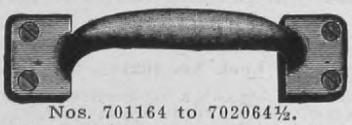
Door Pulls

Size—10x2¾ inches. Grip—4⅞ inches Center to Center.

Nos.	Finish	Per Dozen
701149	Plain Antique Metal	$26.75
701249	Antique Copper	30.70
701449	Light Dull Brass	30.70
701849	Bower Barff	20.00

Packed—One-Sixth Dozen in a Box, with Screws.

BAR SASH LIFTS



Nos. 701164 to 702064½.
Material—Cast Bronze Metal.

Size—4 inches over all.

Nos.	Finish	Per Dozen
701164	Plain Bronze Metal	$2.65
701264	Antique Copper	2.80
701464	Light Dull Brass	2.80
701564	Sanded Statuary Brass	2.95
701864	Bower Barff	1.75
702064	Nickel Plated	2.95

Packed—One Dozen in a Box, with Screws.

Size—5 inches over all.

Nos.	Finish	Per Dozen
701164½	Plain Bronze Metal	$3.65
701264½	Antique Copper	3.85
701464½	Light Dull Brass	3.85
701564½	Sanded Statuary Brass	4.05
701864½	Bower Barff	2.20
702064½	Nickel Plated	4.05

Packed—One Dozen in a Box, with Screws.

FLUSH SASH LIFTS

No. 701144. Size—1½x3 inches.

Nos.	Finish	Per Dozen
701144	Plain Bronze Metal	$1.35
701244	Antique Copper	1.60
701444	Light Dull Brass	1.60
701544	Sanded Statuary Brass	1.60
701844	Bower Barff	1.00
702044	Nickel Plated	1.60

Packed—Two Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

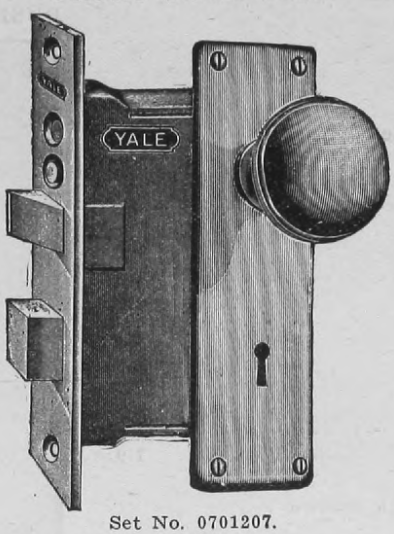
One-Third Size Cuts.

BT DESIGN LOCK SETS

Colonial School—Round Edges.

Wrought Steel

FRONT DOOR SETS



Set No. 0701207.

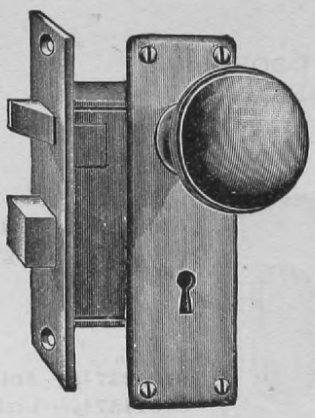
Set No.	Finish	Per Set
0701207	—Antique Copper	$3.00
0701407	—Light Dull Brass	3.00

Packed—One Set in a Box, with Screws.

Lock No. 745.

CASE—Japanned Iron, 5⅛x3⅝x1 1/16 inches.
FRONT—Flat Wrought Front, 7⅜x1 inches.
BACKSET—2¾ in. Spacing: Outside 3¼ in., Inside 1⅞ in.
KEYS—Two Nickel Plated Solid Steel Keys. One Lever-Tumbler, 12 Changes.
EASY SPRING Latch Bolt—Wrought Steel Front and Strike, Cast Bronze Metal Bolts. Iron Hub, for 5/16 inch "Swivel" Spindle.
REVERSIBLE—For Doors 1⅜ to 2¼ inches thick.
OPERATED—Latch Bolt by Knob from both sides, and by Key only from outside when Outer Knob is set by Stop. Dead Bolt by Key from outside and by Thumb Turn from inside. Both bolts are operated by the same key and through the same keyhole.
BEAD KNOBS—Two, 2¼ inches, 5/16 inch "Swivel" Spindle.
ESCUTCHEONS—One, 7½x2¼ inches for outside; one, 6x2 inches for inside.

INSIDE DOOR SETS



Set No. 0701229.

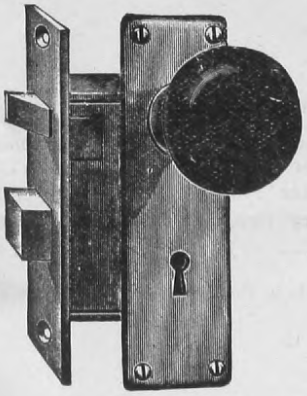
Set No.	Finish	Per Dozen Sets
0701229	—Antique Copper	$9.90
0701429	—Light Dull Brass	9.90
0702029	—Nickel Plated	10.90

Packed—One Set in a Box, with Screws.

Lock No. 808.

CASE—Japanned Iron, 3⅝x3¼x9/16 inches.
FRONT—Flat Wrought Front, 5½x⅞ inches.
BACKSET—2½ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. One Cast Lever-Tumbler, 6 Changes.
BRONZE Plated Steel Front and Iron Bolts, Bronze Plated Steel Strike, 5/16 inch Iron Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
BEAD KNOBS—Two, 2¼ inches. 5/16 inch Spindle.
ESCUTCHEONS—Two, 6x2 inches.

INSIDE DOOR SETS



Set No. 0701229¼.

Inside Door Lock Sets

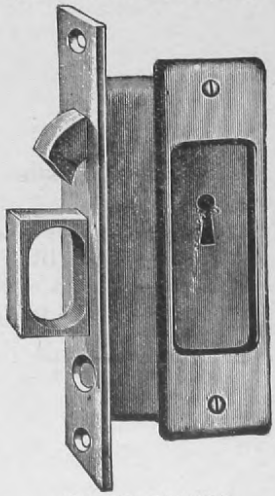
Set No.	Finish	Per Dozen Sets
0701229¼	—Antique Copper	$9.00
0701429¼	—Light Dull Brass	9.00

Packed—One Set in a Box, with Screws.

Lock No. 808.

CASE—Japanned Iron, 3⅝x3¼x9/16 inches.
FRONT—Flat Wrought Front, 5½x⅞ inches.
BACKSET—2½ inches. Spacing: 2¼ inches.
KEYS—One Nickel Plated Solid Steel Key. One Cast Lever-Tumbler, 6 Changes.
BRONZE Plated Steel Front and Iron Bolts, Bronze Plated Steel Strike, 5/16 inch Iron Hub.
REVERSIBLE—For Doors of either hand.
OPERATED—By Knob and Key from both sides.
JET KNOBS—Two, 2¼ inches. 5/16 inch Spindle.
ESCUTCHEONS—Two, 6x2 inches.

SLIDING DOOR SETS



Set No. 0701236.
Set No. 0701237.

Sliding Door Lock Sets

For Single Doors.

Set No.	Finish	Per Set
0701236	—Antique Copper	$1.90
0701436	—Light Dull Brass	1.90

For Double Doors.

Set No.	Finish	Per Set
0701237	—Antique Copper	$3.00
0701437	—Light Dull Brass	3.00

Packed—One Set in a Box, with Screws.

Locks Nos. 1704 and 1714.

LOCKS—Japanned Iron Cases, 5¼x4x⅝ inches. Flat Wrought Fronts, 7⅛x⅞ inches. Backset 2¾ inches. One Bronze Metal Adjustable Extension Key, Changes alike. Bronze Metal Bolts and Pulls, Wrought Steel Fronts and Strikes, Reversible, for Doors 1⅜ to 2½ inches thick. Doors may be closed by pulls in fronts and may be locked by key from either side.
CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors; 6x2 inches. Flat Strike for Single Doors, 4x⅞ inches.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

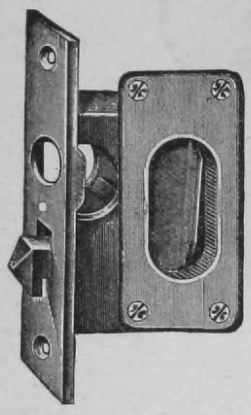
One-Third Size Cuts.

BT DESIGN HARDWARE

Colonial School—Round Edges.

Wrought Steel

SLIDING DOOR LATCHES



Set No. 0701236½.

Sliding Door Latch Sets

For Single Doors.

Set No.	Finish	Per Set
0701236½	—Antique Copper	$1.35
0701436½	—Light Dull Brass	1.35

For Double Doors.

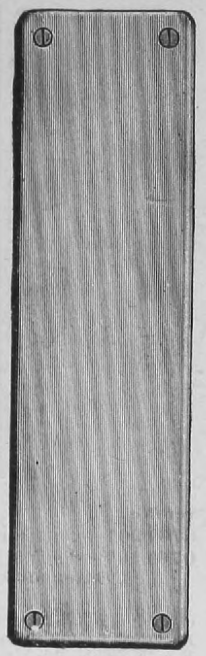
Set No.	Finish	Per Set
0701237½	—Antique Copper	$1.95
0701437½	—Light Dull Brass	1.95

Packed—One Set in a Box, with Screws.

LATCH—Japanned Iron Case, 3¼x3¼x⅝ inches. Flat Cast Front, 5½x1 inches. Backset, 2 inches. Bronze Metal Bolt, Iron Front and Strike. Reversible. Operated by Flush Pull from both sides. Opening in front may be used to close door when it is flush in pocket.

CUP ESCUTCHEONS—Two for Single Doors, Four for Double Doors, 3⅝x1⅞ inches.

PUSH PLATES



No. 0701230.

Push Plates

Size—10x2¾ inches.

Nos.	Finish	Per Dozen
0701230	—Antique Copper	$3.70
0701430	—Light Dull Brass	3.70
0701530	—Sanded Statuary Brass	4.20

Packed—Half Dozen in a Box, with Screws.

Size—12x3 inches.

Nos.	Finish	Per Dozen
0701230½	—Antique Copper	$4.55
0701430½	—Light Dull Brass	4.55
0701530½	—Sanded Statuary Brass	5.00

Packed—Half Dozen in a Box, with Screws.

BAR SASH LIFTS

Nos. 0701264 to 0702064½.

Size—4 inches over all.

Nos.	Finish	Per Dozen
0701264	—Antique Copper	$1.25
0701464	—Light Dull Brass	1.25
0701564	—Sanded Statuary Brass	1.40
0702064	—Nickel Plated	1.40

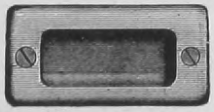
Packed—One Dozen in a Box, with Screws.

Size—5 inches over all.

Nos.	Finish	Per Dozen
0701264½	—Antique Copper	$1.70
0701464½	—Light Dull Brass	1.70
0701564½	—Sanded Statuary Brass	1.80
0702064½	—Nickel Plated	1.80

Packed—One Dozen in a Box, with Screws

FLUSH SASH LIFTS



No. 0701244.

Size—1½x3 inches.

Nos.	Finish	Per Dozen
0701244	—Antique Copper	$0.75
0701444	—Light Dull Brass	.75
0701544	—Sanded Statuary Brass	.90

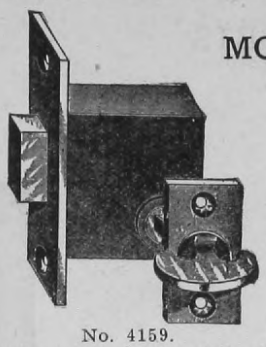
Packed—Two Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

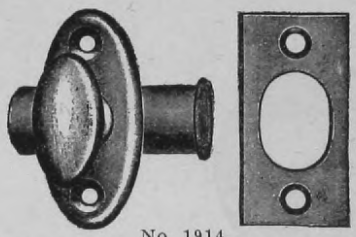
MORTISE WINDOW BOLTS

Reversible.



No. 4159.

Case—Japanned Iron, 1½x1½ inches, ½ inch thick. **Front**—2½x⅝ inch. **Backset**—1⅛ inches. **Operated** by Thumb Piece from one side. **Thumb Piece**—1¼ inches. **Escutcheon**—1½x¾ inch.



No. 1914.

Barrel—1½x$^{9}/_{16}$ inch. Brass Metal Oval Knob and Plate, Wrought Brass Case—Steel Bolt. **Backset,** ⅞ inches.

No. 1914—Light Dull Brass Finish...Per Dozen, $5.00

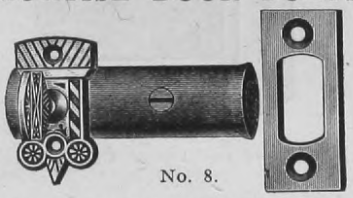
Packed—One Dozen in a Box, with Screws.

Bronze Metal Front, Bolt, Strike, and Escutcheon.

No. 4159—Plain Bronze Metal.....Per Dozen, $12.00
No. 4259—Antique Copper Finish.....Per Dozen, 12.50
No. 4459—Light Dull Brass Finish.....Per Dozen, 12.50
No. 4559—Sanded Statuary Brass Finish.....Per Dozen, 12.50
No. 4859—Bower-Barff Finish .....Per Dozen, 12.50

Packed—One Dozen in a Box, with Screws.

MORTISE DOOR BOLTS

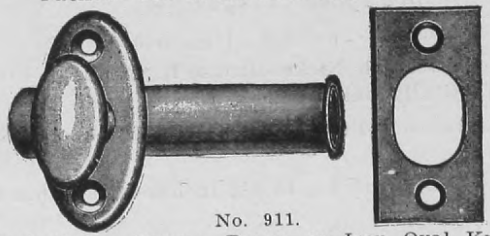


No. 8.

Barrel—2½x¾ inch, ⅜ inch Bolt, with Oblong Strike. **Backset,** 2 inches.

No. 8—Ornamented Iron Amber Bronzed Knob and Escutcheon .....Per Dozen, $1.45

Packed—One Dozen in a Box, with Screws.



No. 911.

Barrel—2½x$^{9}/_{16}$ inch, ½ inch Bolt. Bronze, Brass, or Iron Oval Knob, Escutcheon and Strike. Wrought Brass Case, Steel Bolt. Oblong Strike. **Backset,** 1¾ inches.

No. 911—Plain Bronze Metal.....Per Dozen, $3.65
No. 912—Antique Copper Finish.....Per Dozen, 3.65
No. 914—Light Dull Brass Finish.....Per Dozen, 3.65
No. 915—Sanded Statuary Brass Finish.....Per Dozen, 3.65
No. 918—Bower-Barff Finish .....Per Dozen, 3.65
No. 920—Nickel Plated Finish.....Per Dozen, 3.65

Packed—One Dozen in a Box, with Screws.

No. 381160.

Case—Japanned Iron, 3½x1¼x½ inch. **Face**—2½x$^{13}/_{16}$ inch. **Backset**—2 inches. Brass Hub for $^{3}/_{16}$ inch Spindle. Cast Bronze, Brass, or Iron Face, Bolt, Strike, Thumb-Turn and Escutcheon.

No. 381160—Plain Bronze Metal.....Per Dozen, $10.00
No. 381260—Antique Copper Finish.....Per Dozen, 10.64
No. 381460—Light Dull Brass Finish.....Per Dozen, 10.64
No. 381560—Sanded Statuary Brass Finish.....Per Dozen, 11.30
No. 381860—Bower Barff Finish.....Per Dozen, 8.97
No. 382060—Nickel Plated Finish.....Per Dozen, 11.30

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STORE DOOR LOCK SETS

Reduced Size Cuts

Colonial School.

CAST BRASS METAL

Tri-Plate Sectional Handles

MYSTIC

Half Size Cut.

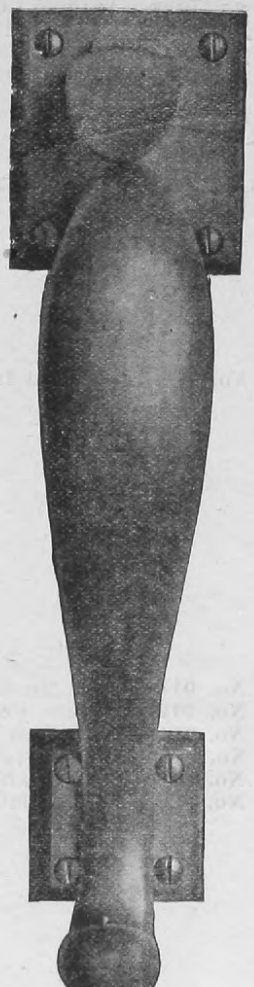
One-third Size Cut.

Half Size Cut.

NEWPORT

Set No. 401413.
Half Size Cut.

Cylinder Plate.....2⅜ in.
Top Plate.....2¾ in.
Bottom Plate.....2⅛ in.
Grip .....6¾ in.
Length over all ...14¾ in.



Set No. 421413.
Half Size Cut.

Cylinder Plate..2½x2½ in.
Top Plate .....2¾x2½ in.
Bottom Plate...1¾x1¾ in.
Grip .....6⅝ in.
Length over all ....14¾ in.

Lock No. 432¼.

CASE—Japanned Iron, 5x3⅝x1 inches.

FRONT—Flat Armored Front, 7x1¼ inches.

BACKSET—2¾ inches. Spacings: $4\frac{11}{16}$ inches.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt. Bronze Metal Cylinders, Front, Bolts and Strike.

REVERSIBLE—For Doors 1¾ to 2¼ inches thick, other thicknesses to order.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, One for each side. Two Cylinders.

Note.

For Store Door Locks with Night Works for Residence Front Doors see pages 1069, 1070 and 1082.

Cylinder Store Door Lock Sets

Set Nos. Design.	Finish.	Lock.	Per Set.
401413—Mystic	Light Dull Brass	No. 432¼	$21.15
421413—Newport	Light Dull Brass	No. 432¼	21.90

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

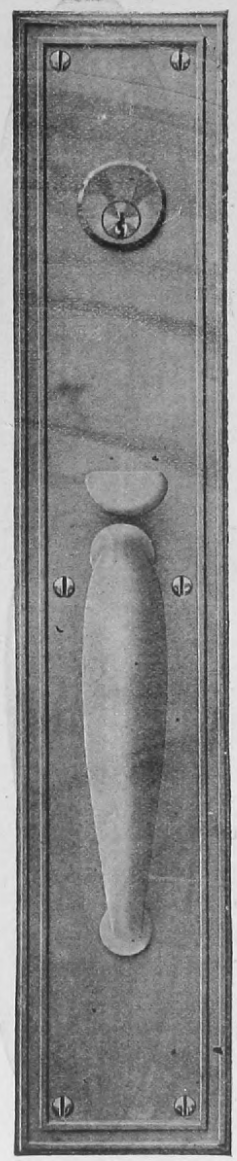
One-Third Size Cuts.

STORE DOOR LOCK SETS

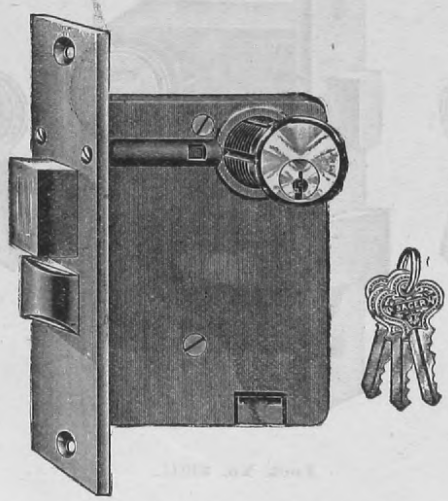
Colonial School.

Cast Brass Metal

MANCHESTER DESIGN



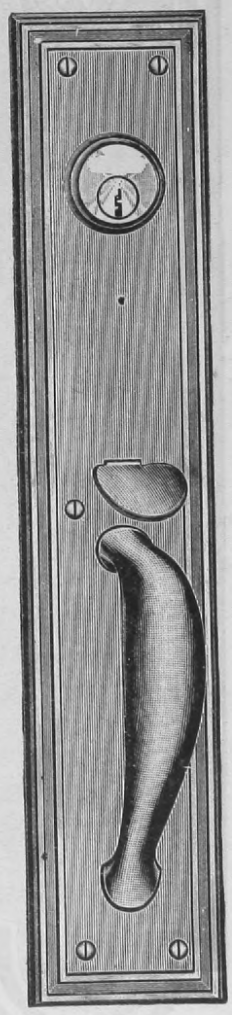
No. 242413—Special.



Lock.

CASE—Japanned Iron, 5x3½x1 inches.
FRONT—Flat 7x1¼ inches.
BACKSET—2½ inches. Spacing: 4⅛ inches.
KEYS—Three, Nickel-Silver. Five Pin Tumblers. Changes Unlimited.
EASY SPRING Latch Bolt. Bronze Metal Cylinder, Front, Bolts and Strike.
REVERSIBLE—For Doors 1¾ to 2¼ inches thick. Other thicknesses to order.
OPERATED—Latch Bolt by Thumb Piece from Both Sides. Dead Bolt by Key from Both Sides.
HANDLES and Plates—Two. One for each side of Door. Two Cylinders.

MANCHESTER DESIGN



No. 242413¼—Special.

Cylinder Store Door Lock Sets

Set Nos.	Plates, inches.	Finish	Per Set
242413—Special	18x3½	Dull Brass, Dark Matt, High Parts Relieved	$18.00
242413¼—Special	15x3	Dull Brass, Dark Matt, High Parts Relieved	16.00

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

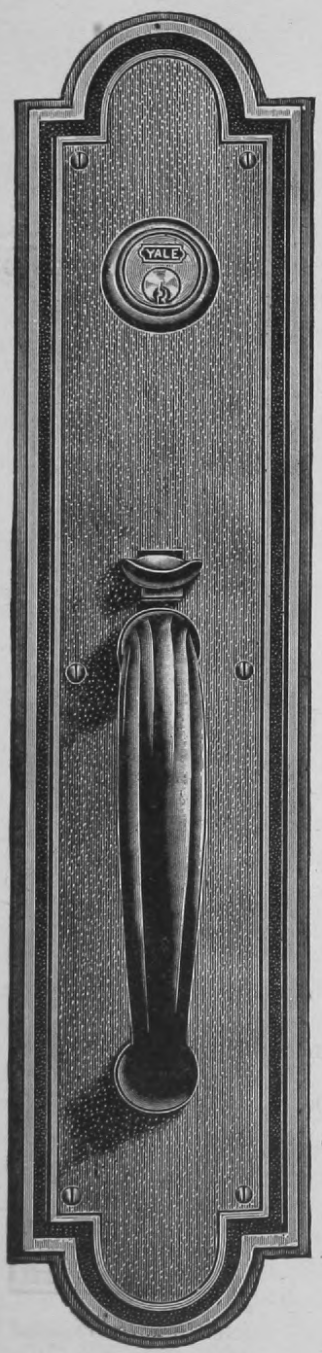
STORE DOOR LOCK SETS

MALAGA

Schools as given below.

Cast Brass Metal

PIEDMONT



Set No. 142413.
Size of Plate—16½x3¼ in.
Spanish Renaissance School.
Cast Brass Metal.

Lock No. 432¼.

CASE—Japanned Iron, 5x3 5/8 x1 inches.

FRONT—Flat Armored Front, 7x1 ¼ inches.

BACKSET—2 ¾ inches. Spacing; 4 11/16 inches.

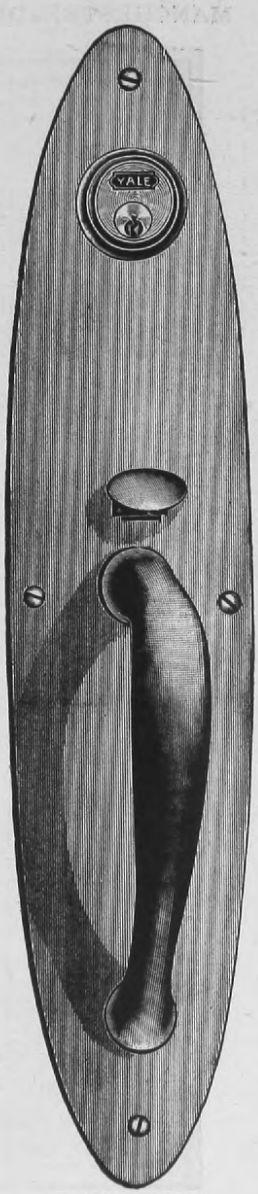
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.

EASY SPRING Latch Bolt—Bronze Metal Cylinders, Front, Bolts and Strike.

REVERSIBLE—For Doors 1 ¾ to 2 ¼ inches thick, other thicknesses to order.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, one for each side. Two Cylinders.



Set No. 341413.
Size of Plate—18x4 in.
Colonial School.
Cast Brass Metal.

Cylinder Store Door Lock Sets

Set Nos.	Design.	Finish.	Lock	Per Set.
142413	Malaga	Dull Brass, Dark Matted Background, High Parts Relieved	No. 432¼	$28.75
341413	Piedmont	Light Dull Brass	No. 432¼	24.00

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

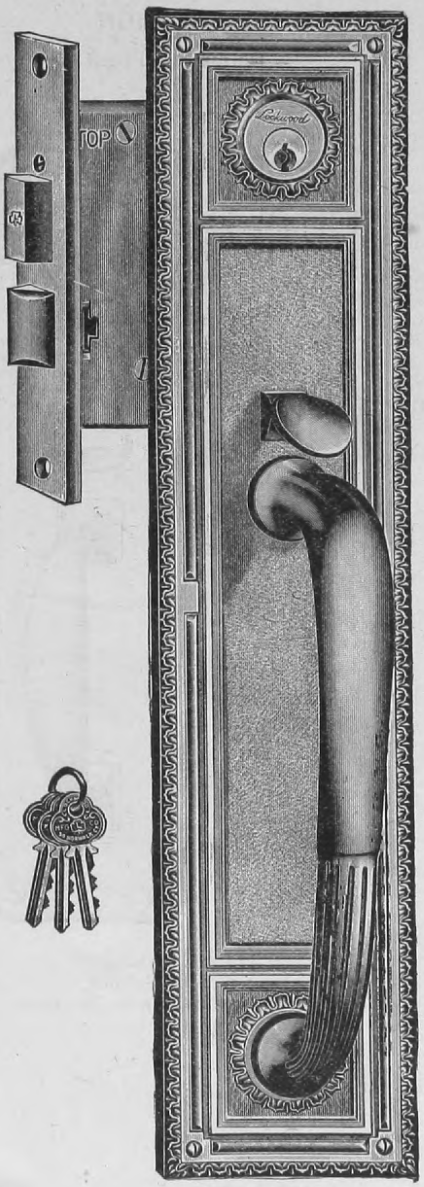
One-Third Size Cuts.

STORE DOOR LOCK SETS

Schools as given below.

JULIUS

Cast Bronze, Brass or Iron



Set No. 282413.
Roman School.
Cast Brass Metal.
Ornamental Pitcher Grip.

Lock No. 8700.

CASE—Japanned Iron, 5x3 ½x1 inches.

FRONT—Flat Cast Front, 7 ⅛x1 ¼ in.

BACKSET—2 ¾ inches. Spacing: 4 ⅛ inches.

KEYS—Three Nickel-Silver Keys, Five Pin Tumblers. Changes practically unlimited.

PLAIN Latch Bolt, Bronze Metal Cylinders, Front, Bolts and Strike.

REVERSIBLE—For Doors 1 ¾ to 2 ¼ inches thick. Other thicknesses to order.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, one for each side. Two Cylinders.

Lock No. 432¼.

CASE—Japanned Iron, 5x3 ⅝x1 inches.

FRONT—Flat Armored Front, 7x1 ¼ in.

BACKSET—2 ¾ inches. Spacing: $4\frac{11}{16}$ inches.

KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers. Changes practically unlimited.

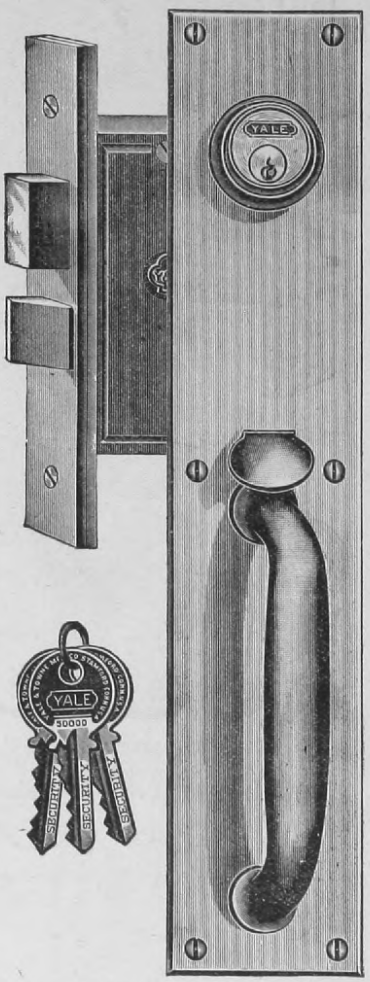
EASY SPRING Latch Bolt—Bronze Metal Cylinders, Front, Bolts and Strike.

REVERSIBLE—For Doors 1 ¾ to 2 ¼ inches thick, other thicknesses to order.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, one for each side. Two Cylinders.

GR DESIGN



Set. No. 361113.
Cast Bronze, Brass or Iron.
Colonial School.

Cylinder Store Door Lock Sets

Set Nos.	Design.	Size of Plates.	Finish.	Lock.	Per Set.
282413.....	Julius,	18x4 inches.....	Dull Brass, Dark Matted Background, High Parts Relieved	No. 8700.....	$34.50
361113.....	G. R. Bevel Edge,	15x3 inches....	Plain Bronze Metal.....	No. 432¼.....	17.10
361413.....	" " "	15x3 inches....	Light Dull Brass.....	No. 432¼.....	17.85
361813.....	" " "	15x3 inches....	Bower Barff.....	No. 432¼.....	16.35

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

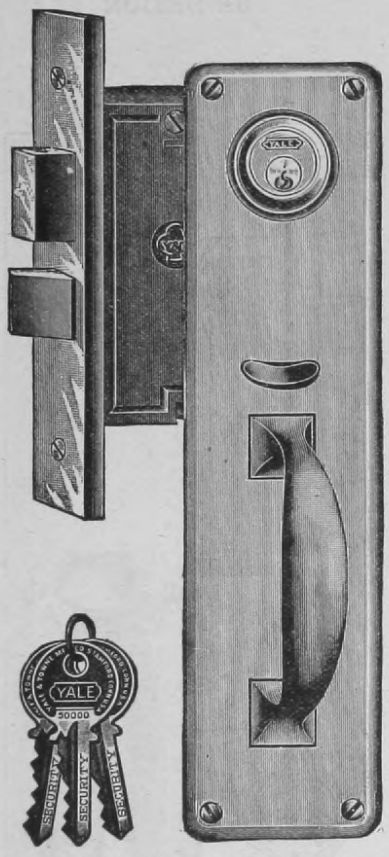
One-Third Size Cuts.

STORE DOOR LOCK SETS

Colonial School.

Rolled Bronze, Brass or Iron

DT DESIGN
Flat Front



Set No. 381213.
Colonial School.
Rolled Bronze, Brass or Iron.

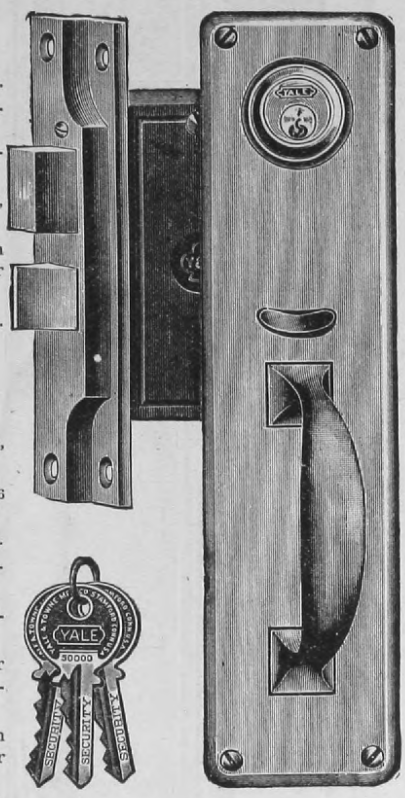
Lock No. 432¼—"Flat Font,"

CASE—Japanned Iron, 5x3⅝x1 inches.
FRONT—Flat Armored Front, 7x1¼ inches.
BACKSET—2¾ inches. Spacing: 4 11/16 inches.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinders, Front, Bolts and Strike.
REVERSIBLE—For Doors 1¾ to 2¼ in. thick, other thicknesses to order.
OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.
HANDLES and Plates—Two, one for each side. Two Cylinders.

Lock No. 432¾—"Rabbeted Front,"

CASE—Japanned Iron, 5x3⅝x1 inches.
FRONT—"Rabbeted" Cast Front, 7x1¼ inches, ½ inch rabbet.
BACKSET—2¾ inches extreme. Spacing: 4 11/16 inches.
KEYS—Three Paracentric Nickel-Bronze Keys. Five Pin Tumblers, Changes practically unlimited.
EASY SPRING Latch Bolt—Bronze Metal Cylinder, Front, Bolts and Strike.
NOT Reversible—Specify hand of door. For Doors 1¾ to 2¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.
HANDLES and Plates—Two, one for each side. Two Cylinders.

DT DESIGN
Rabbeted Front



Set No. 381214.
Colonial School.
Rolled Bronze, Brass or Iron.

Cylinder Store Door Lock Sets

"Flat Front."

Set Nos.	Design.	Size of Plates.	Finish.	Lock.	Per Set.
381213	DT Regular Bevel	12x3 inches	Antique Copper	No. 432¼	$11.50
381413	DT Regular Bevel	12x3 inches	Light Dull Brass	No. 432¼	11.50
381813	DT Regular Bevel	12x3 inches	Bower Barff	No. 432¼	10.40

Packed—One Set in a Box, with Screws.

"Rabbeted Front."

Set Nos.	Design.	Size of Plates.	Finish.	Lock.	Per Set.
381214	DT Regular Bevel	12x3 inches	Antique Copper	No. 432¾	$14.80
381414	DT Regular Bevel	12x3 inches	Light Dull Brass	No. 432¾	14.80
381814	DT Regular Bevel	12x3 inches	Bower Barff	No. 432¾	13.70

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

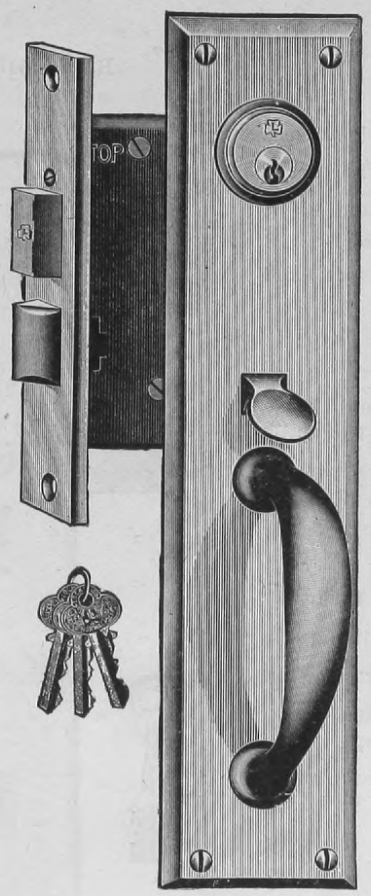
STORE DOOR LOCK SETS

One-Third Size Cuts.

Colonial School.

Wrought Bronze, Brass or Steel

MADISON

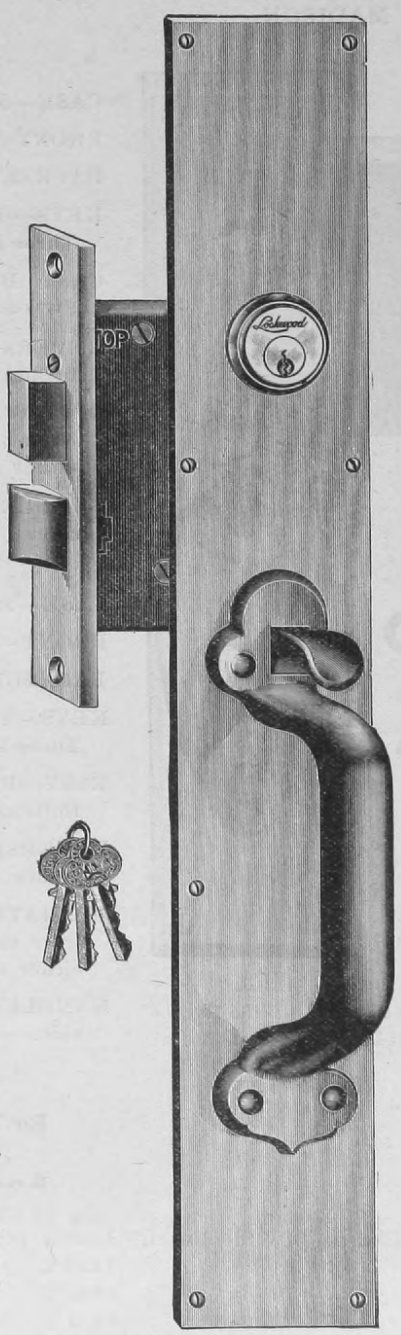


Set No. 741213.
Colonial School.—Wide Bevel.
Wrought Bronze or Brass Metal.

Lock No. 8700.

CASE—Japanned Iron, 5x3 ½x1 inches.
FRONT—Flat Cast Front, 7 ⅛x1 ¼ inches.
BACKSET—2 ¾ inches. Spacing: 4 ⅛ inches.
KEYS—Three Nickel-Silver Keys, Five Pin Tumblers, Changes practically unlimited.
PLAIN Latch Bolt—Bronze Metal Cylinders, Front, Bolts and Strike.
REVERSIBLE—For Doors 1 ¾ to 2 ¼ inches thick, other thicknesses to order.
OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.
HANDLES and Plates—Two, one for each side. Two Cylinders.

SUPERIOR



Set No. 0721713.
Extra Heavy Iron Grip.
Heavy Wrought Steel Plates.

Cylinder Store Door Lock Sets

Set Nos.	Design.	Size of Plates.	Finish.	Lock.	Per Set.
741213.	Madison,	14 ½x3 ¼ inches.	Antique Copper	No. 8700	$14.38
741413.	"	14 ½x3 ¼ "	Light Dull Brass	No. 8700	14.38
741813.	"	14 ½x3 ¼ "	Bower Barff	No. 8700	12.75
0721713.	Superior, **Designed** for Mill, Garage and other Heavy Doors	20 x3 ½ "	Dead Black, Japanned	No. 8700	12.75

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

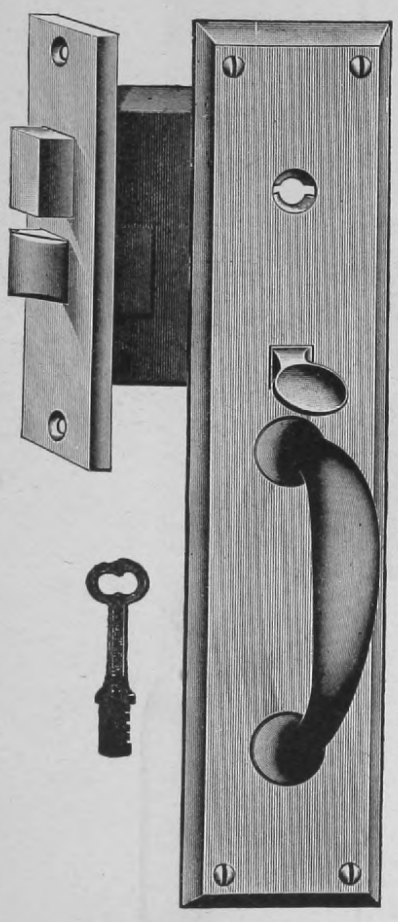
One-Third Size Cuts.

STORE DOOR LOCK SETS

Schools as given below.

Wrought Bronze, Brass or Iron

MADISON



Set No. 741215.
Colonial School.—Wide Bevel.
Wrought Bronze or Brass Metal.

Lock No. 2318.

CASE—Japanned Iron, 4¾ x 3¼ x ¾ inches.

FRONT—Flat Cast Front, 6¾ x 1⅛ inches.

BACKSET—2 inches. Spacing: 2⅞ in.

KEYS—Two Nickel Plated Flat Steel Keys. **Three** Lever Tumblers, 48 Changes.

CAST Bronze Metal Front, Bolts and Strike.

REVERSIBLE—For Doors 1½ to 2¼ inches thick.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, one for each side.

Lock No. 406.

CASE—Japanned Iron, 4½ x 3 x ⅝ inches.

FRONT—Flat Cast Front, 6½ x 1 inches.

BACKSET—2⅛ inches. Spacing: 3 5/16 in.

KEYS—Two Nickel Plated Flat Steel Keys. **Three** Lever Tumblers, 12 Changes.

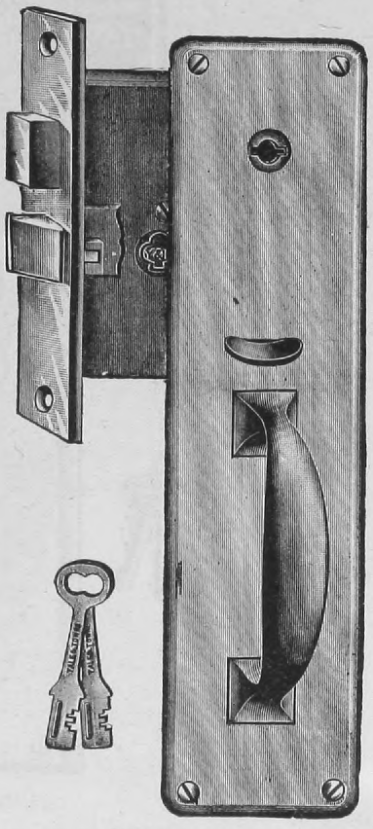
EASY SPRING LATCH Bolt—Iron Front, Bolts and Strike.

REVERSIBLE—For Doors 1½ to 2¼ inches thick.

OPERATED—Latch Bolt by Thumb Piece from both sides; Dead Bolt by Key from either side.

HANDLES and Plates—Two, one for each side.

BT-DESIGN



Set No. 0701215½.
Colonial School.—Round Edges.
Wrought Steel.

Bit Key Store Door Lock Sets

Wrought Bronze, Brass or Steel.

Set Nos.	Design.	Size of Plate.	Finish.	Lock.	Per Set
741215.	Madison—"Wide Bevel,"	14x3¼ inches	Antique Copper	No. 2318	$8.75
0741215.	" " "	14x3¼ "	" "	No. 2317	4.63
741415.	" " "	14x3¼ "	Light Dull Brass	No. 2318	8.75
0741415.	" " "	14x3¼ "	" " "	No. 2317	4.63
741815.	" " "	14x3¼ "	Bower Barff	No. 2318	7.38
0741815.	" " "	14x3¼ "	" "	No. 2317	4.38

Packed—One Set in a Box, with Screws.

Note—The 0 prefix indicates Wrought Steel.

"Wrought Steel."

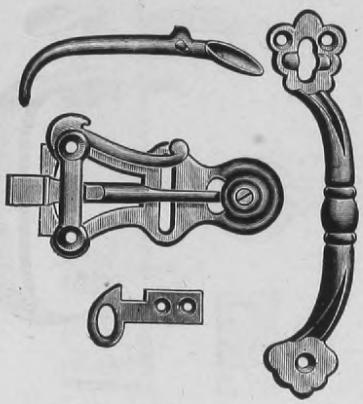
Set Nos.	Design.	Size of Plate.	Finish.	Lock.	Per Set.
0701215½.	B T-Round Edge,	12x3 inches	Antique Copper	No. 406	$3.40
0701415½.	" " "	12x3 "	Light Dull Brass	No. 406	3.40

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THUMB LATCHES

One-Third Size Cuts.



No. 130.

Pittsburgh Pattern, with Roggins Drop.
Cast Iron, with Screws.

No. 130—Japanned.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.

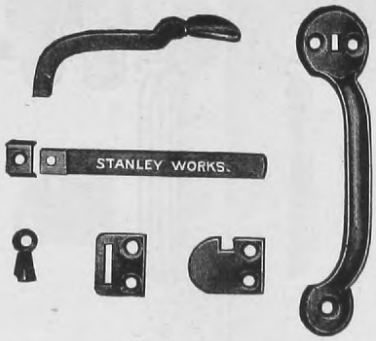
No. 63.

Ornamental Design, Cast Iron.
Packed with Screws.

No. 63—Amber Bronzed.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.

WROUGHT STEEL THUMB LATCHES



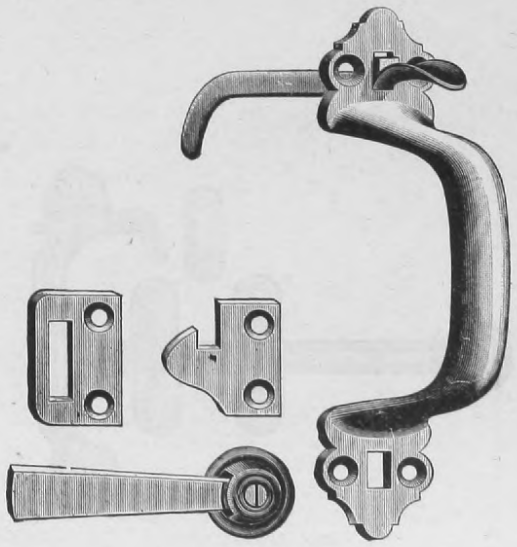
No. 1250J.

Wrought Steel, with Screws.
Japanned Finish.

No. 1250J—Size,	**1**	**2**	**3**	**4**
Handle, inches.	5½	6¾	7⅝	8⅞
Per Dozen	$1.90	2.30	3.50	6.00

Packed—Each in a Separate Carton, with Screws.

HEAVY THUMB LATCHES



No. 26.

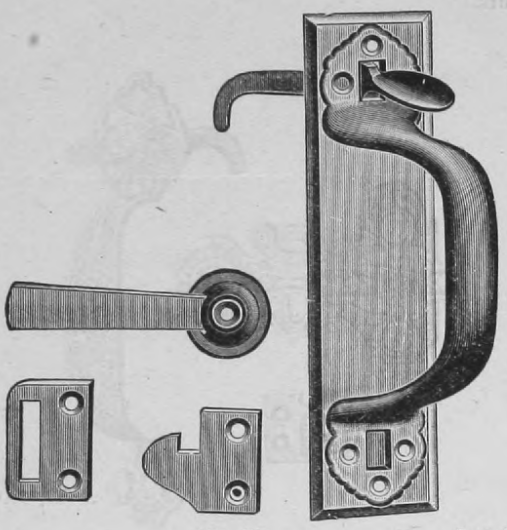
Heavy Thumb Latches without Plate.
Cast Iron.
Latch 4 inches, Thumb Piece 5½ inches.

No. 26—Japanned.....Per Dozen, $.....

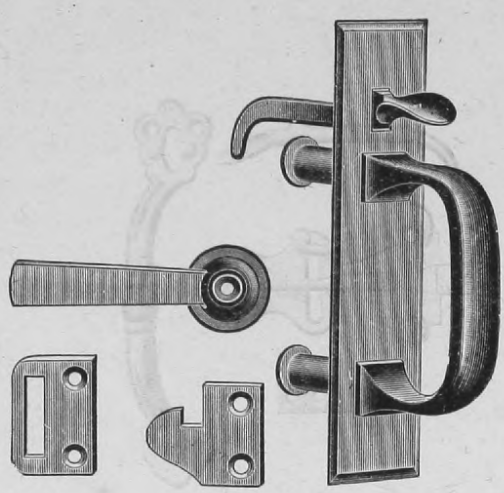
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HEAVY THUMB LATCHES



No. 16.



No. 6.

One-Third Size Cuts.

Cast Iron, With Plate, Japanned, For Store, School and Warehouse Doors. Reversible, For either Right or Left Hand Doors.

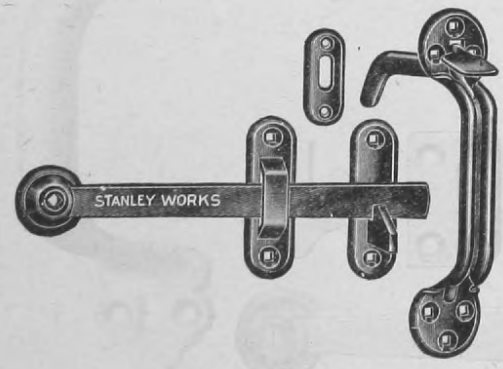
No. 16—Plate 8 x2 inches, Latch 4 inches, Thumb Piece 5½ inches.....Per Dozen, $2.80
No. 6—Plate 7⅝x1⅞ inches, Latch 4 inches, Thumb Piece 5½ inches. **With** Nuts.....Per Dozen, 3.85

Extra Heavy.

No. 7—Plate 10x2½ inches, **Steel** Latch 6 inches, Thumb Piece 5½ inches. **With** Nuts.....Per Dozen, 14.00

Packed—Half Dozen in a Box.

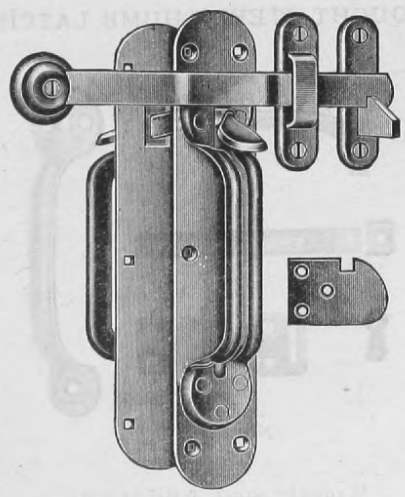
EXTRA HEAVY THUMB LATCHES



No. 1252J

Wrought Steel, Japanned.
Extra Heavy, All Steel, For Doors up to 3 inches thick.
Latch Bar ¼x1x12 inches. Handle 10¾ inches over all.

One-Sixth Size Cuts.



No. 1264J

Wrought Steel, Japanned.
Duplex Latch—Two Plates and Handles.
For Doors from 1¾ to 2¼ inches thick.
Plates, 14½x2¾ inches. Latch, 12 inches long.

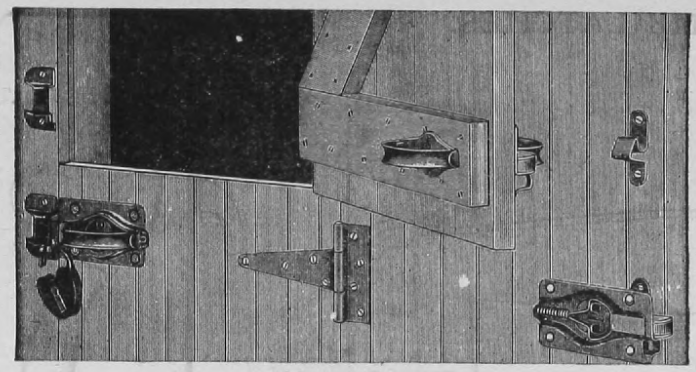
For Mill, Factory, Store, Barn, Garage and School House Doors

No. 1252J—Wrought Steel.....Per Dozen, $17.50 | **No. 1264J**—Wrought Steel.....Per Dozen, $30.00

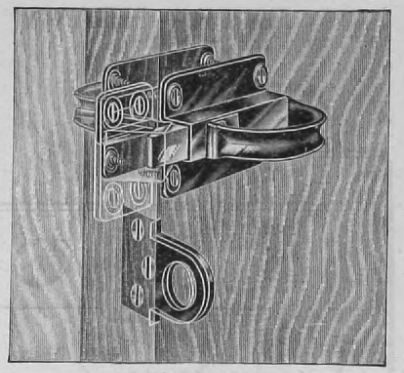
Packed—One Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BARN DOOR LATCHES



Whitcomb.



No. 1240J.

Whitcomb

A Strong, Durable, Convenient Latch made entirely of Steel, easily adjusted to a door of any thickness, will not catch a harness. Two large Handles make it easy to hold the door, or to open it from either side. Two catches are furnished with each latch so that the door or gate can be held open or closed.

Whitcomb Steel Barn Door Latches, Japanned Plate, 2¾x5 inches.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.

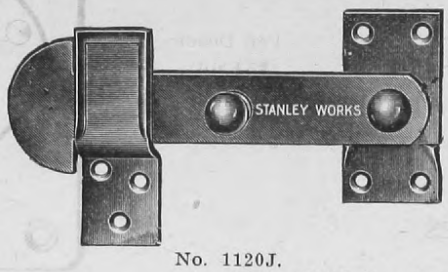
No. 1240J

Heavy Wrought Steel Japanned Handles, Plates and Strikes, Tinned Steel Bolt and Sherardized Spring. The Bolt which works automatically is operated from either side of door by two handles which are connected by ¼ inch Bar. Latch fits door from ¾ to 1¾ inches thick. One pair Safety Padlock Eyes furnished with each Latch.

No. 1240J—Wrought Steel Latches.....Per Dozen, $.....

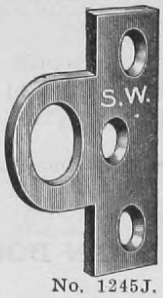
Packed—One Quarter Dozen in a Carton, with Screws.

BARN DOOR LATCHES



No. 1120J.

PADLOCK EYES



No. 1245J.

No. 1120J For Swinging and Sliding Doors

Extra Heavy and Strong, Self-latching on Sliding Doors and Reversible. Will not catch on harness for it can be swung over and out of the way. **Dimensions.** Bar 1⅛x6¾ inches. Swivel Plate 3x1½ inches, Catch Plate 3½x1¼ inches.

No. 1120J—Wrought Steel, Japanned.....Per Dozen, $.....

Packed—Half Dozen in a Box, with Screws.

No. 1245J Padlock Eyes

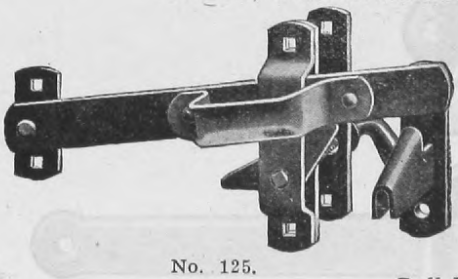
Heavy Wrought Steel for use on Barn, Warehouse and Garage Doors.

No. 1245J-1—Size of Hole, ½x7/16 inches.....Per Dozen Pairs, $.....

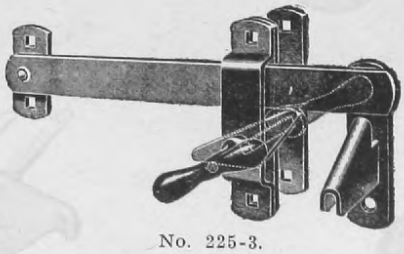
No. 1245J-2—Size of Hole, ¾x⅝ inches.....Per Dozen Pairs, ...

Packed—One Dozen Pairs in a Box, with Screws.

BARN, WAREHOUSE AND FIRE DOOR LATCHES



No. 125.



No. 225-3.

Bull Dog Steel Latches.

Designed especially for All **Heavy** Swinging Doors and constructed entirely of Steel. Reversible, for right or left hand and operated from both sides of door; Screw adjustment on spindle to suit doors up to three inches thick.

No. 125—Dimensions of Latch Bar, 5/16x1½x14 inches, Japanned.....Per Dozen, $12.00

Packed—Half Dozen in a Box.

Underwriters

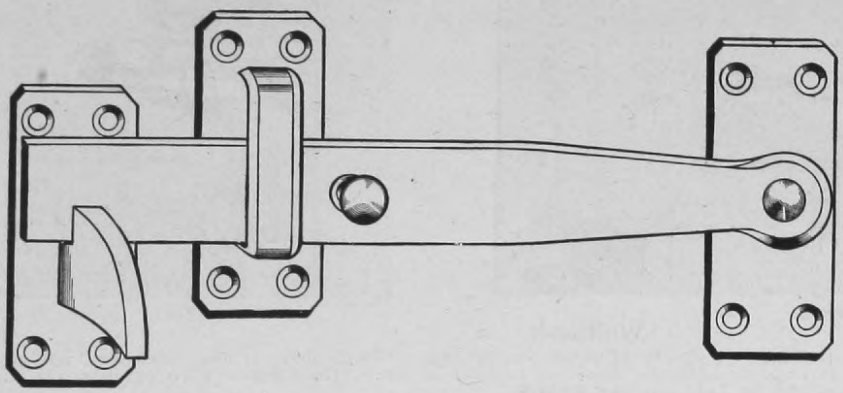
Underwriters' Extra Heavy Fire Door Steel Latch. Suitable for all **Heavy** Swinging Doors and constructed entirely of Steel except the handle which is malleable iron. Reversible for right or left hand and operated from both sides of door. Adjustable for doors from 1¾ to 2⅝ inches thick.

No. 225-3—Dimensions of Latch Bar, 5/16x1½x14 inches, Japanned.....Per Dozen, $12.00

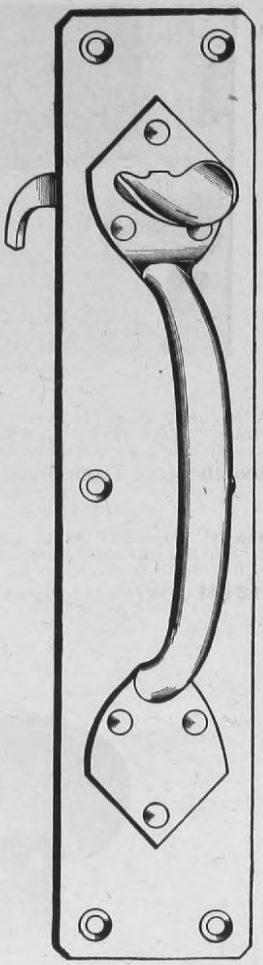
Packed—One Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EXTRA HEAVY THUMB LATCHES



Nos. 20 and 21.



Handle and Plate
For Nos. 20 and 21.

Brewer Extra Heavy All Wrought Thumb Latches

For Factory, Garage, and other heavy Doors.

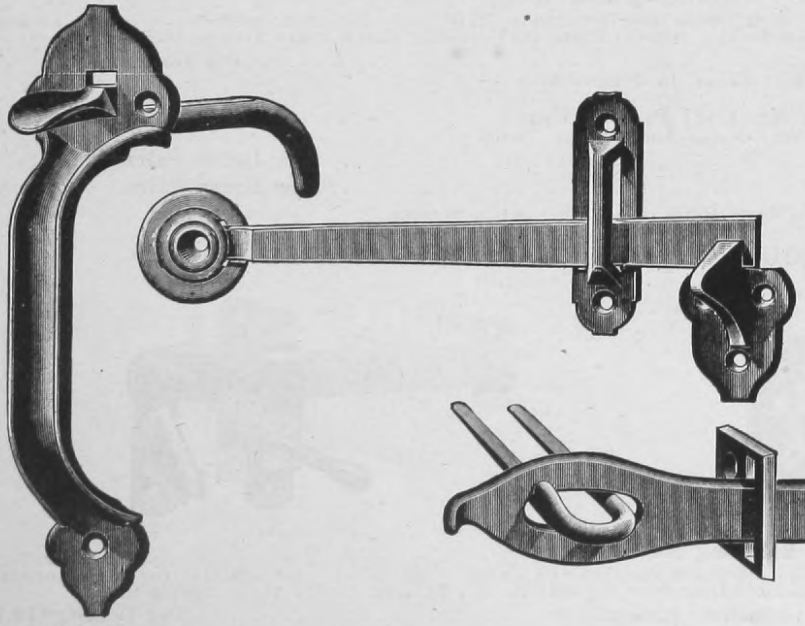
Thumb Piece for Any thickness of Doors.

Japanned Finish.

Nos.	Latch	Plate	Handle	Per Dozen
20—	5/16x1 1/4 x12 1/2 in.	3/16x2x11 1/2 in.	Oval 1/2x1 in.	$51.00
21—	3/8 x1 1/2 x12 1/2 in.	3/16x3x15 in.	Round 3/4 in.	90.00

Packed—One-Sixth Dozen in a Box, with Screws.

BARN DOOR THUMB LATCHES.



No. 5.

No. 9.

Heavy Cast Handle with "Wrought Latch."
Handle 10 inches, Latch Bar 9½ inches.

No. 5—Japanned.....Per Dozen, $.....
Packed—Half Dozen in a Box.

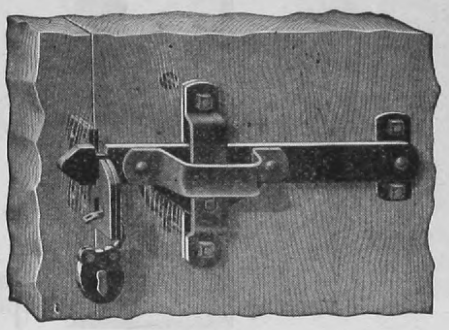
Heavy Cast Handle and "Hasp Latch" with Staple Catch.
Handle 8½ inches, Hasp Latch 11 inches long.

No. 9—Japanned.....Per Dozen, $.....
Packed—Half Dozen in a Box.

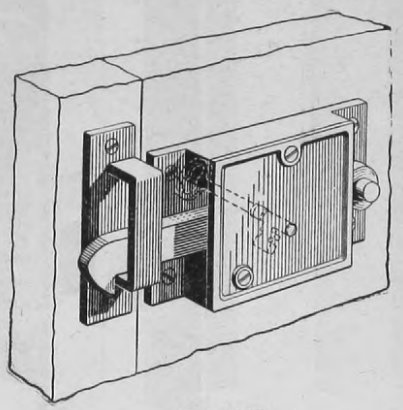
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SLIDING DOOR LATCHES AND LOCKS

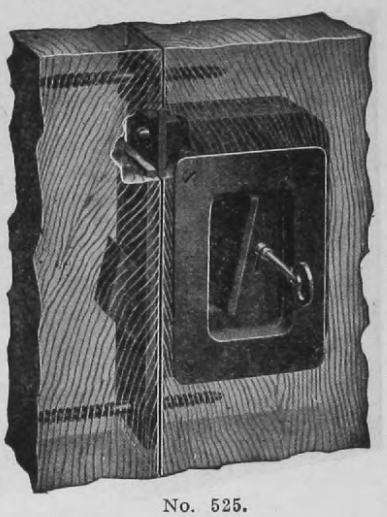
Reduced Size Cuts.



No. 152.



No. 6901.



No. 525.

Monarch Sliding Door Latches

Monarch Steel Latches. Designed especially for all heavy **Sliding** Doors and constructed entirely of Steel. Reversible for right or left hand and operated from both sides of door. Adjustable for doors from 1¾ to 2⅝ inches thick.

No. 152—Dimensions of Latch Bar, 5/16x1½x14 inches, Japanned .....Per Dozen, $11.70

Packed—One-twelfth Dozen in a Box.

Garage Sliding Door Locks

Heavy Cast Iron Case with Long Hook Bolt, Japanned. Operated from outside by Key, from inside by hand. Two Tinned Malleable Iron Keys, One Key Plate. **Reversible.**

No. 6901—3¼x5½ in. For Doors up to 2¼ in. thick.....Per Dozen, $20.00

Packed—One-Twelfth Dozen in a Box, with Screws.

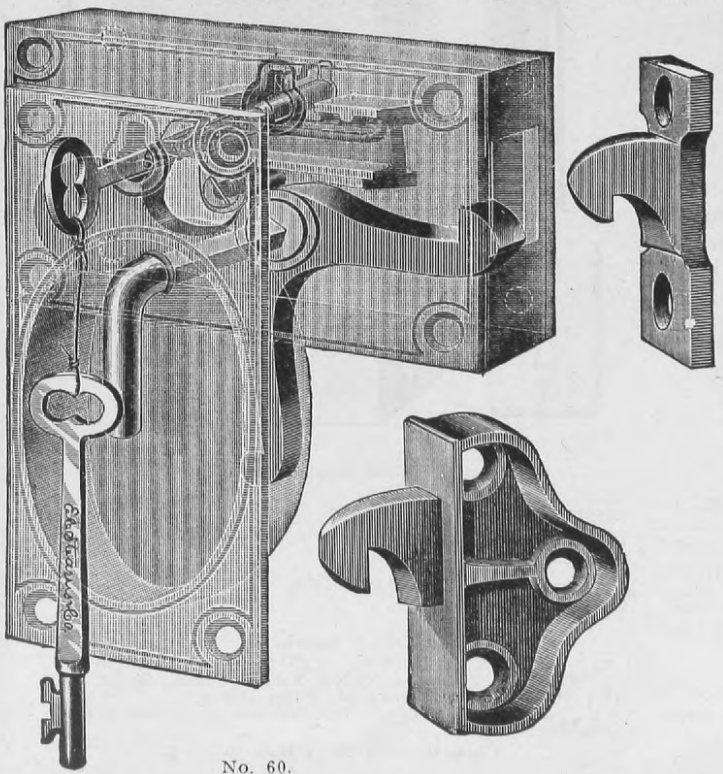
Faultless Sliding Door Locks

For Garages, Stables, Warehouses and Factories.

Faultless Sliding Door Locks. Suitable for Single or Double Doors. Constructed of Steel and Malleable Iron, For doors 1¾ inches thick or thicker. Lock, Latch and Flush Pull combined. Operated from both sides of door. Latch is released and door is opened by one movement. Latch is Malleable, Cups and Keeper are Steel.

No. 525—Case 4¾x3¾x⅞ inches. Rustless Dead Black Finish .....Per Dozen, $30.00

Packed—One-twelfth Dozen in a Box, with Screws and templet for setting Lock.



No. 60.

SLIDING BARN DOOR LOCK SETS

No.	Finish	Per Dozen Sets
60	Japanned Iron	$18.00

Lock.

CASE—Japanned Iron, 2⅞x4¾ inches, ⅞ inch thick.

BACKSET—2¼ inches.

CATCH—Two styles of Catch furnished with each Lock, One for attaching to Face and One for Side of Door Casing.

LATCH BOLT—Self acting when closing.

KEYS—Two Solid Steel Keys.

REVERSIBLE—For Doors ⅞ to 2 inches thick.

OPERATED—By Lever Handle and Key from either side.

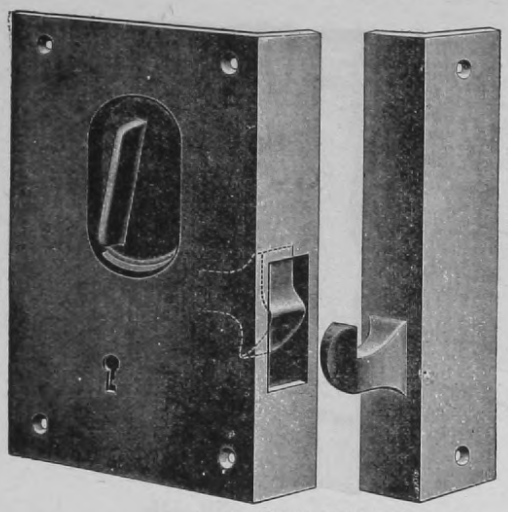
ESCUTCHEON—Japanned Iron, 4¾x2⅞ inches.

Packed—One-Twelfth Dozen Sets in a Box.

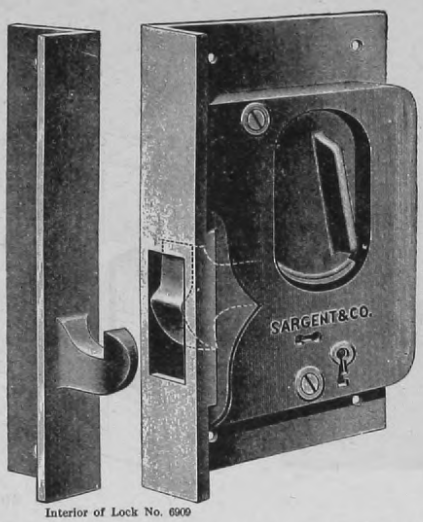
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

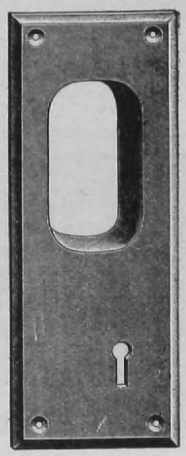
SLIDING BARN DOOR LOCKS



Exterior of Lock No. 6909



Interior of Lock No. 6909



Cup Escutcheon No. 426
For Outside of Door

Two Keys
No. 403

The Cut shows a left hand Lock, the hand being determined from the inside of the door.

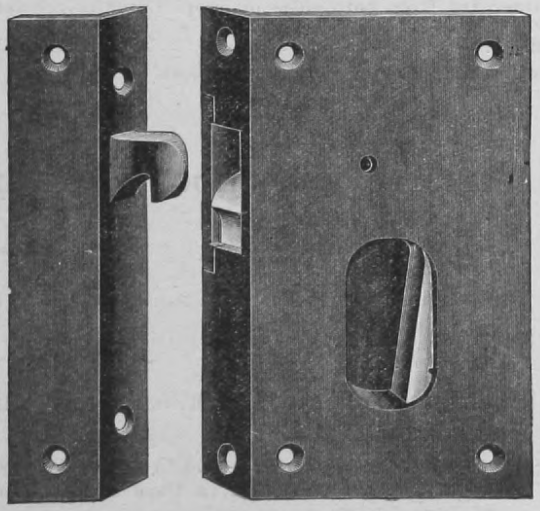
Sliding Door Lock Sets For Barns, Stables and Garages

No. 6909—Japanned Iron Case and Escutcheon.....Per Dozen Sets, $.....

CASE—Japanned Iron 7⅜x4¼x⅞ inches. Size of Front, 7⅜x1 inch.
BACKSET—2½ inches.
KEYS—Two, Nickel Plated Steel. 3 Tumblers and 200 Changes.
NOT REVERSIBLE—Always specify hand wanted.
OPERATED—By Flush Lever and Dead Locked by Key from both sides.
ESCUTCHEON—One Japanned Iron, 6⅞x2½ inches.
PROTECTION FOR HORSES—The Latch Bolt is Flush with the face, The Strike Catch is to be Set Back beyond the jamb of the door, thus preventing injury to horses or vehicles passing through.

Packed—One-Twelfth Dozen Sets in a Box, with Screws.

SLIDING STABLE DOOR LOCKS



No. 6904.

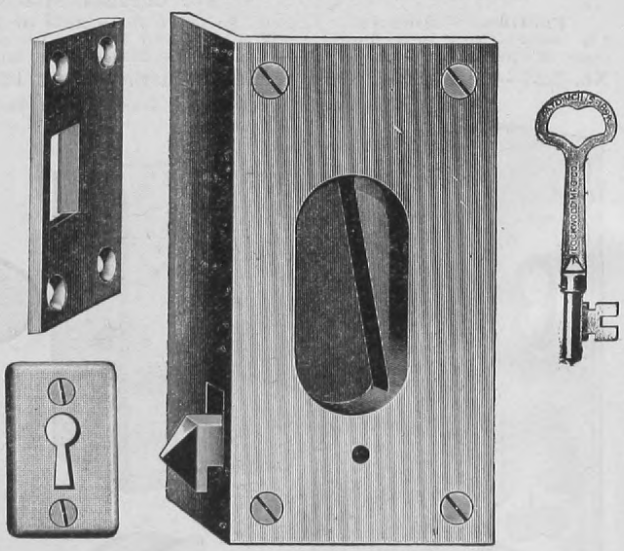
For Barns, Freight Elevators, Garages, Etc.

No.	Finish	Per Dozen Sets
6904—	Japanned Iron	$27.00

CASE—Japanned Iron, 7½x4¼x⅞ in. Size of Front, 7½x1 in.
BACKSET—2½ inches.
TWO Nickel Plated Steel Keys, Polished Flush Handle and self acting Latch Bolt.
REVERSIBLE and for Doors 1⅜ to 3½ inches thick.
OPERATED by Flush Handle from inside and by Key from outside.
ESCUTCHEON—Japanned Iron, 4½x2⅜ inches.
PROTECTION for Horses—The Latch Bolt is flush with the Front of Lock, the Strike Catch is to be **Set Back** beyond the Jamb of Door, thus preventing injury to horses passing through.

Packed—One-Twelfth Dozen Sets in a Box, with Screws.

ELEVATOR SLIDING DOOR LOCKS



Nos. 4139 to 4839.

Cast Bronze Metal.

Nos.	Finish	Each
4139—	Plain Bronze Metal	$3.60
4239—	Antique Copper	3.80
4439—	Light Dull Brass	3.80
4539—	Sanded Statuary Brass	3.90
4839—	Bower-Barff	3.60

Latch.

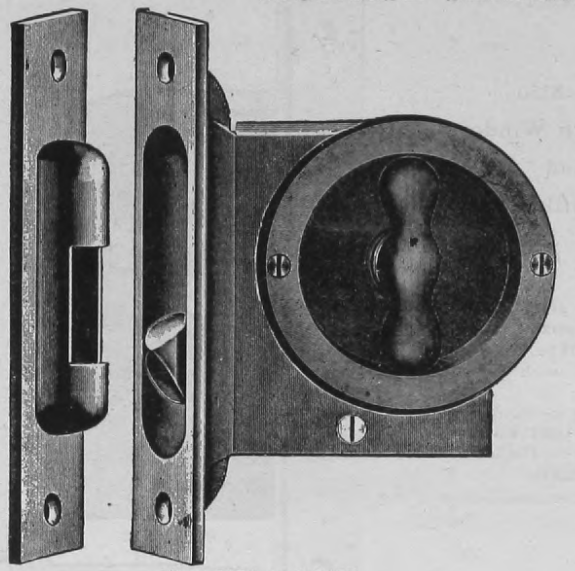
CASE—5⅛x2¾x⅞ inches. FRONT—5⅛x⅞ inches.
BACKSET—1¼ inches. ONE Nickel Plated Steel Key.
REVERSIBLE for Doors of either Hand.
OPERATED by Key from outside and by Flush Handle from inside.

Packed—One in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

MORTISE SLIDING STABLE DOOR LATCHES



Nos. 5474 and 5475.

Sliding Stable Door Latches

Nos.	Finish	Per Set
5474	—Japanned Iron Front and Escutcheon	$ 4.25
5475	—Brass Front and Escutcheon, Dull Brass Finish	10.25

Latch.

CASE—4x4x¾ in. RECESSED Front, 1⅜ in. BACKSET—3 inches.

REVERSIBLE and for Doors 2 inches thick and over.

OPERATED—by Flush Tee Handle from both sides of Door. Brass Bolt and Hub for ⅜ inch Spindle.

ESCUTCHEONS—Two, 4½ inches diameter. **No** Key.

DESIGNED for Box Stalls, Stable Doors and Fire Engine Houses. The Convex Strike, Concave Front and Recessed Bolt afford the greatest protection available to Horse or Harness.

Packed—One Set in a Box, with Screws.

Sliding Stable Door Locks

Brass Bolt—Three Tumblers.

Nos.	Finish	Per Set.
5935	—Japanned Iron Front and Escutcheon	$ 5.13
5936	—Brass Front and Escutcheon, Light Dull Brass Finish	12.00

Lock.

CASE—5x4x¾ inches. RECESSED Front, 1⅜ inches.

BACKSET—3 inches. SPACING—3⅛ inches.

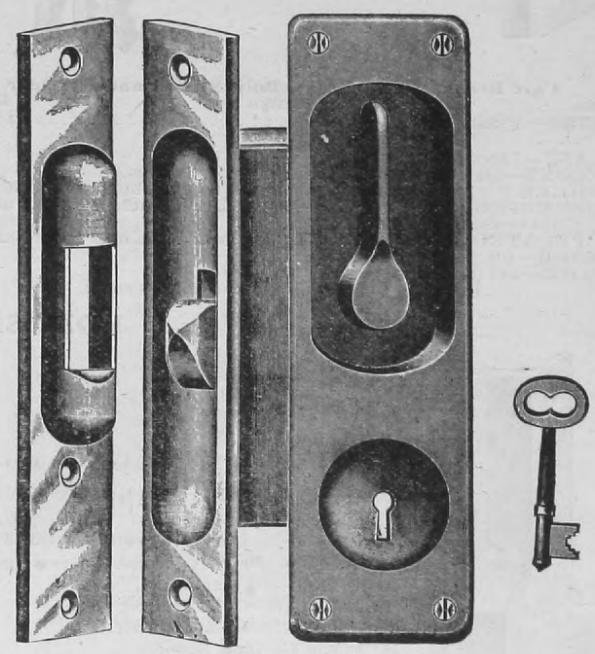
REVERSIBLE and for Doors 2 inches thick and over.

OPERATED from both sides by Lever Handle, Locked by Key from either side and when locked by Key the Handle will not operate the Bolt. Hub for ⅜ inch Spindle.

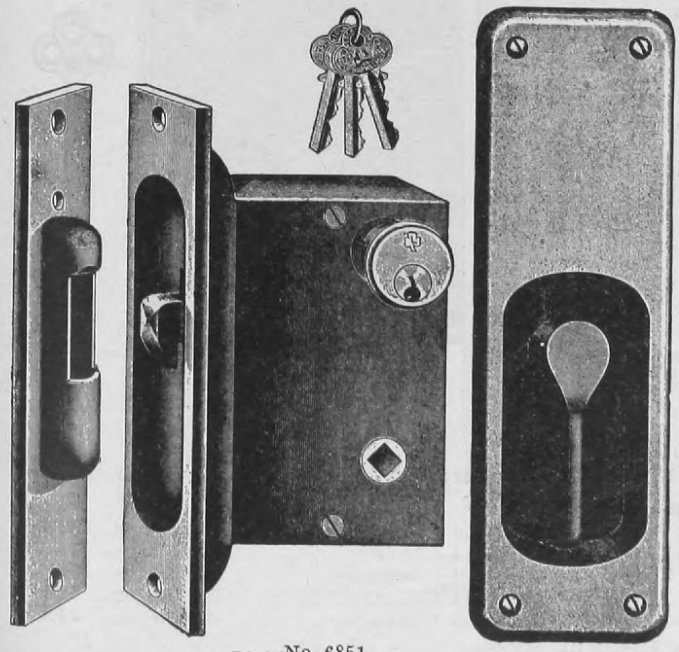
ESCUTCHEONS—Two, 9⅝x2⅞ inches. **Two** Nickel Plated Steel Keys.

CONCAVED Front, Convex Strike and Recessed Bolt. **No** injury to Horses or Harness while passing through Door. **Can be** Master-Keyed.

Packed—One Set in a Box, with Screws.



Nos. 5935 and 5936.



No. 6851.

Cylinder Sliding Door Lock Sets

Extra Heavy, For All Heavy Sliding Doors.

One Cylinder—Five Pin Tumblers.

No.	Finish	Per Set
6851	—Brass Front, Bolt and Escutcheon, Light Dull Brass Finish	$17.90

Lock.

CASE—5⅜x4x¾ inches. RECESSED Front, 1⅜ inches.

BACKSET—3 inches. SPACING—3¼ inches.

REVERSIBLE and for Doors 2 inches thick and over.

OPERATED from both sides by Lever, and when locked by Key the Lever Handle will **Not** operate Bolt.

HUB for ⅜ inch Spindle.

ESCUTCHEONS—Two, 9½x3 inches.

THREE Corrugated Keys. Changes unlimited.

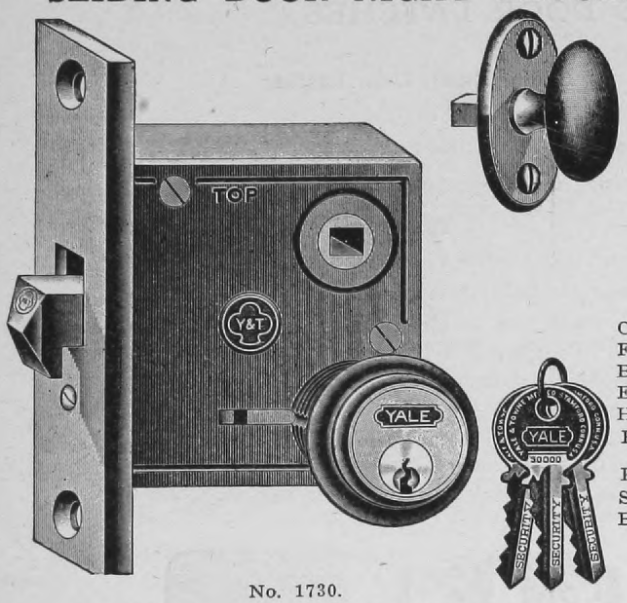
CONCAVED Front, Convex Strike and Recessed Bolt.

Packed—One Set in a Box with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

SLIDING DOOR NIGHT LATCHES



No. 1730.

Cast Bronze Metal Front, Bolt, Strike, and Cylinder.

No.	Finish	Each
1730—Plain Bronze Metal		$9.90

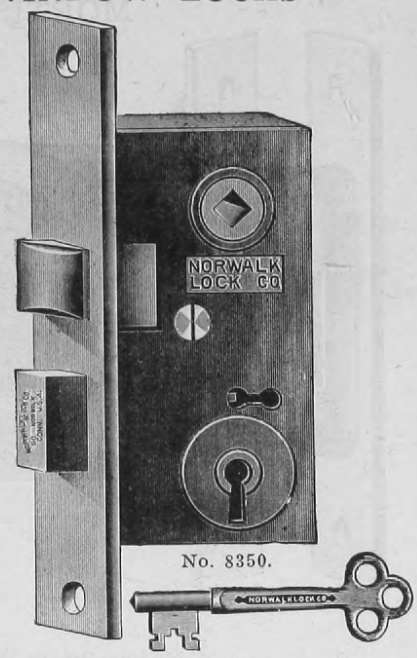
Latch.

CASE—Japanned Iron, 3¼x3½x¾ inches.
FRONT—5¼x1 inch. BACKSET—2¾ inches.
THREE Nickel-Bronze Paracentric Keys, Changes unlimited.
REVERSIBLE and for Doors 1¼ to 2⅛ inches thick, other thicknesses to order.
OPERATED by Key from outside and by Knob from inside.
KNOB—1½x⅞ inch.
ROSE—2x1⅛ inches, 5/16 inch Spindle.
Packed—One in a Box, with Screws.

FRENCH WINDOW LOCKS

No. 8350
For French Windows
and
Narrow Stile Doors

CASE—Japanned Iron.
FRONT—Cast Bronze, 6¼x1⅛ in.
BOLTS—Cast Bronze.
EASY SPRING—Latch Bolt.
HUB—5/16 inch.
REVERSIBLE—For Doors or Windows of either hand.
KEY—One, Nickel Plated Steel.
SPACING—2¾ inches.
BACKSET—As specified below.

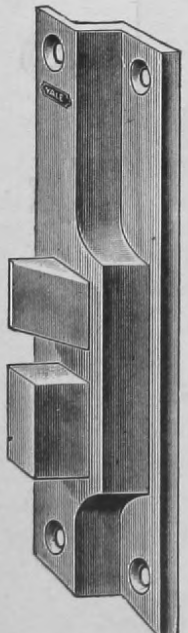


No. 8350.

Nos.	Case, in.	Backset, in.	Tumblers	Changes	Per Doz.
8350—4¼x2¼	1½	1	12	$19.20
8351—4¼x2¼	1½	3	36	21.60
8360—4¼x2¼	1¾	1	12	19.20
8361—4¼x2¼	1¾	3	36	21.60
8364—4¼x2¼	2	1	12	19.20
8365—4¼x2¼	2	3	36	21.60

Packed—Half Dozen in a Box, with Screws.

MORTISE KNOB LOCKS



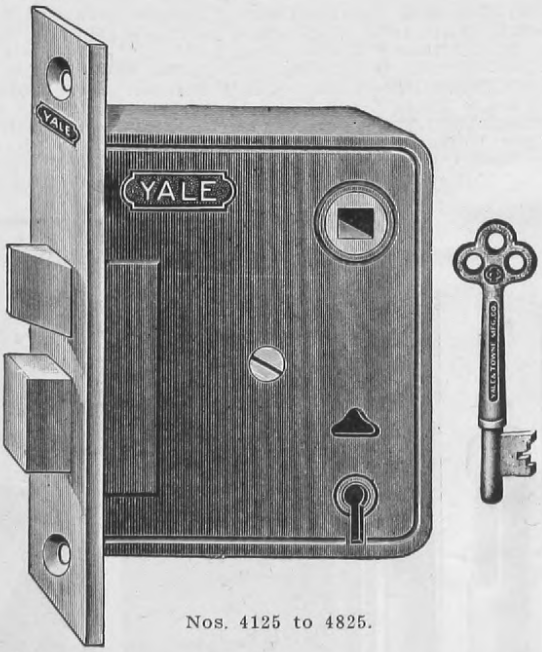
No. 1501½.

No. 1501½—**Not Reversible.**

CASE—Japanned Iron, 4¼x3½x⅝ inches.
FRONT—6x1 inch.
RABBET—½ inch. **Specify** Hand wanted.
BACKSET—From extreme outer edge, 2¾ inches.
SPACING—2¾ inches.
TUMBLERS—Cold Rolled Steel.
EASY SPRING Latch Bolt.
HUB for 5/16 inch Spindle.
ONE Nickel Plated Steel Key, **Can be** Master-Keyed.

Nos. 4125 to 4825—**Reversible.**

CASE—Japanned Iron, 4¼x3½x⅝ inches.
FRONT, 6x1 inch.
BACKSET—2¾ inches.
SPACING—2¾ inches.
TUMBLERS—Cold Rolled Steel.
EASY SPRING Latch Bolt.
HUB for 5/16 inch Spindle.
ONE Nickel Plated Steel Key, **Can be** Master-Keyed.



Nos. 4125 to 4825.

Brass Front, Bolts and Strike.

No. 1501½—4¼x3½ inches, **Rabbeted**, Light Dull Brass Finish, One Tumbler, 24 Changes....Per Dozen, $57.45

Bronze Metal Fronts, Bolts and Strikes.

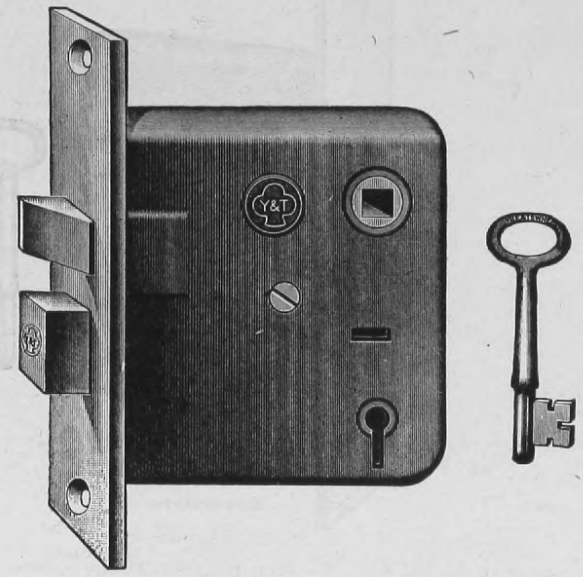
No. 4125—4¼x3½ inches, Plain Bronze Metal,	Three Tumblers, 54 Changes.....Per Dozen,	$34.65
No. 4225—4¼x3½ inches, Antique Copper Finish,	Three Tumblers, 54 Changes.....Per Dozen,	36.65
No. 4425—4¼x3½ inches, Light Dull Brass Finish,	Three Tumblers, 54 Changes.....Per Dozen,	36.65
No. 4525—4¼x3½ inches, Sanded Statuary Brass Finish,	Three Tumblers, 54 Changes.....Per Dozen,	36.65
No. 4825—4¼x3½ inches, Bower-Barff Finish,	Three Tumblers, 54 Changes.....Per Dozen,	34.65

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MORTISE KNOB LOCKS

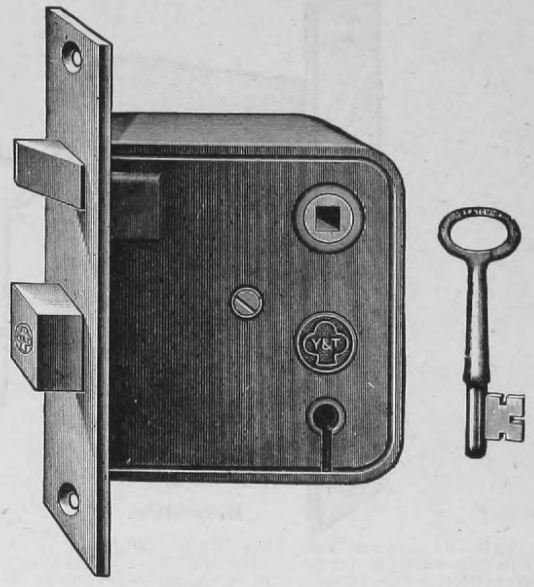
Half Size Cuts.



Nos. 3127 to 3827.

Reversible.

CASE—Japanned Iron, 3½x3⅝x½ inches.
FRONT—5½x1 inch.
BACKSET—2¾ inches.
SPACING—2¼ inches.
EASY SPRING Latch Bolt—Hub for 5/16 inch Spindle. Japanned Key Plates. One Nickel Plated Steel Key, Wrought Steel Tumblers. **Can be** Master-Keyed.



Nos. 2128 to 01829

Reversible.

CASE—Iron Japanned, 3⅝x3¼x⅝ inches.
FRONT—5½x⅞ inches.
BACKSET—2½ inches.
SPACING—2¼ inches.
HUB for 5/16 inch Spindle Japanned Key Plates. One Nickel Plated Steel Key, Cast Lever Tumblers.

Cast Bronze Metal Fronts, Bolts and Wrought Bronze Metal Strikes.

No. 3127—3½x3⅝ inches, Plain Bronze Metal,	Three Tumblers, 36 Changes	Per Dozen, $14.10
No. 3227—3½x3⅝ inches, Antique Copper Finish,	Three Tumblers, 36 Changes	Per Dozen, 15.40
No. 3427—3½x3⅝ inches, Light Dull Brass Finish,	Three Tumblers, 36 Changes	Per Dozen, 15.40
No. 3527—3½x3⅝ inches, Sanded Statuary Brass Finish,	Three Tumblers, 36 Changes	Per Dozen, 15.40
No. 3827—3½x3⅝ inches, Bower-Barff Finish,	Three Tumblers, 36 Changes	Per Dozen, 14.10

Packed—Half Dozen in a Box, with Screws.

Cast Bronze Metal Fronts and Bolts, Bronze Plated Steel Strikes.

No. 2128—3⅝x3¼ inches, Plain Bronze Metal,	One Tumbler, 6 Changes	Per Dozen, $7.85
No. 2228—3⅝x3¼ inches, Antique Copper Finish,	One Tumbler, 6 Changes	Per Dozen, 9.15
No. 2428—3⅝x3¼ inches, Light Dull Brass Finish,	One Tumbler, 6 Changes	Per Dozen, 9.15
No. 2528—3⅝x3¼ inches, Sanded Statuary Brass Finish,	One Tumbler, 6 Changes	Per Dozen, 9.15
No. 2828—3⅝x3¼ inches, Bower-Barff Finish,	One Tumbler, 6 Changes	Per Dozen, 7.85

Packed—Half Dozen in a Box, with Screws.

"Bronze Plated" Steel Front and Iron Bolts, Bronze Plated Steel Strikes.

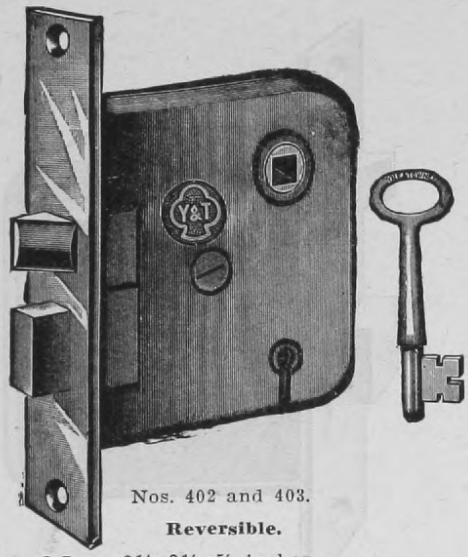
No. 01129–3⅝x3¼ inches, Plain Bronze Plated,	One Tumbler, 6 Changes	Per Dozen, $5.55
No. 01229–3⅝x3¼ inches, Antique Copper Finish,	One Tumbler, 6 Changes	Per Dozen, 6.20
No. 01429–3⅝x3¼ inches, Light Dull Brass Finish,	One Tumbler, 6 Changes	Per Dozen, 6.20
No. 01529–3⅝x3¼ inches, Sanded Statuary Brass Finish,	One Tumbler, 6 Changes	Per Dozen, 6.20
No. 01829–3⅝x3¼ inches, Bower-Barff Finish,	One Tumbler, 6 Changes	Per Dozen, 7.85

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

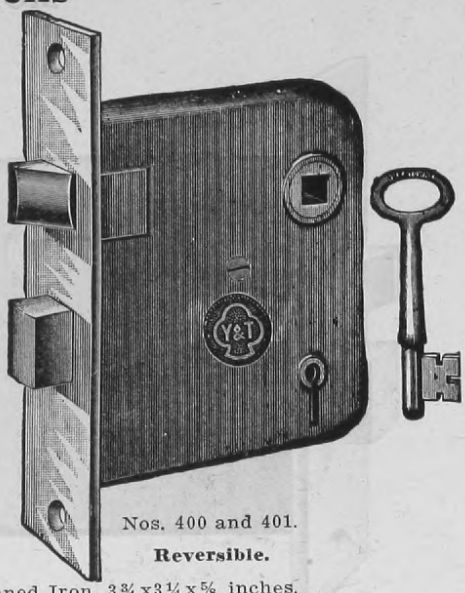
MORTISE KNOB LOCKS



Nos. 402 and 403.

Reversible.

CASE—Japanned Iron, 3½x3¼x⅝ inches.
FRONT—5⅜x⅞ inches. BACKSET—2¾ inches.
SPACING—2⅜₁₆ inches. TUMBLERS—Wrought Steel.
HUB for 5/16 inch Spindle Two Japanned Iron Key Plates.



Nos. 400 and 401.

Reversible.

CASE—Japanned Iron, 3¾x3¼x⅝ inches.
FRONT—5⅝x⅞ inches. BACKSET—2⅜ inches.
SPACING—2⅜₁₆ inches. TUMBLERS—Wrought Steel.
HUB for 5/16 inch Spindle. Two Japanned Iron Key Plates.

Brass Fronts and Bolts, Bronze Plated Steel Strikes.

No. 402—3½x3¼ inches, One Tumbler, 24 Changes, **One** Nickel Plated Steel Key.....Per Dozen, $6.00
No. 403—3½x3¼ inches, One Tumbler, 24 Changes, **Two** Nickel Plated Steel Keys.....Per Dozen, 8.70

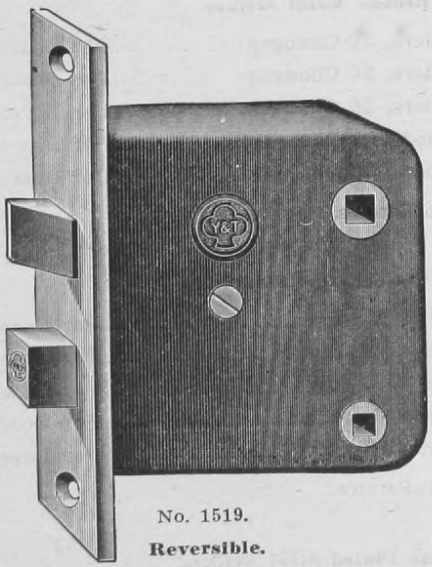
Packed—Half Dozen in a Box, with Screws.

Steel Fronts and Strikes, Iron Bolts

No. 400—3¾x3¼ inches, One Tumbler, 12 Changes, One **Tinned** Malleable Iron Key.....Per Dozen, $3.00
No. 401—3¾x3¼ inches, One Tumbler, 12 Changes, One **Nickel** Plated Steel Key.....Per Dozen, 5.00

Packed—Half Dozen in a Box, with Screws.

COMMUNICATING DOOR LOCKS

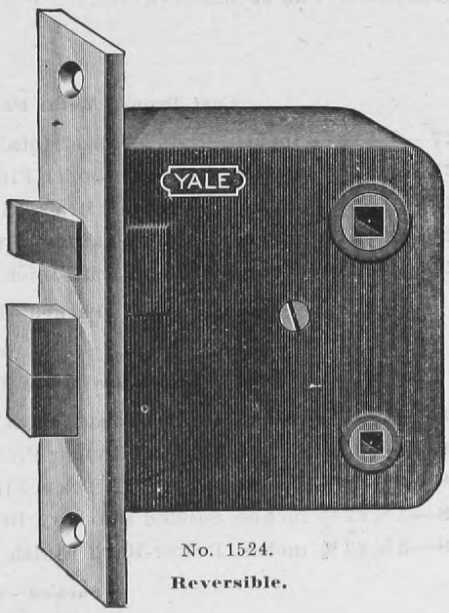


No. 1519.

Reversible.

Easy Spring Latch Bolt.

CASE—Japanned Iron, 3½x3⅜x9/16 inches.
FRONT—5⅜x1 inch. BACKSET—2¾ inches.
SPACING—2¼ inches.
EASY SPRING Latch Bolt.
HUBS—5/16 inch for Knob, 3/16 inch for Thumb-Turn.
OPERATED—Latch Bolt by Knob from both sides. Dead Bolt by Thumb-Turn from **One** side only



No. 1524.

Reversible.

CASE—Japanned Iron, 3¾x3½x⅝ inches.
FRONT—5½x1 inch. BACKSET—2¾ inches.
SPACING—2¼ inches.
HUBS—5/16 inch for Knob, 3/16 inch for Thumb-Turns.
OPERATED—Latch Bolt by Knob from both sides. Dead Bolts may be deadlocked independently by Thumb-Turn from either side.

Brass Front, Bolts and Strike.

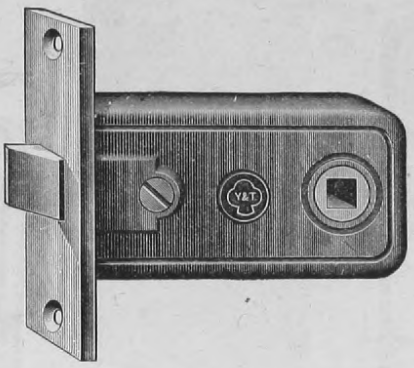
No. 1519—3½x3⅜ inches, Light Dull Brass Finish, Two Bolts .....Per Dozen, $17.15
No. 1524—3¾x3½ inches, Light Dull Brass Finish, Three Bolts .....Per Dozen, 29.70

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

MORTISE KNOB LATCHES

Half Size Cuts.



Nos. 413 to 814.

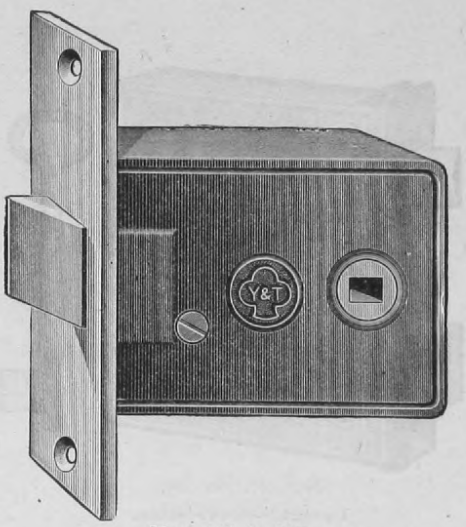
Reversible.

CASE—Japanned Iron, 1¾ x 3⅜ x 1 1/16 inches.
FRONT—3½ x ⅞ inches.
BACKSET—2¾ inches.
HUB for 5/16 inch Spindle.
EASY SPRING Latch Bolt.

Bronze Metal Fronts, Bolts, and Strikes.

Nos.	Finishes	Per Dozen
413	—Brass, Polished and Lacquered	$8.65
114	—Plain Bronze Metal	8.65
214	—Antique Copper	9.95
414	—Light Dull Brass	9.95
514	—Sanded Statuary Brass	9.95
814	—Bower-Barff	8.65

Packed—Half Dozen in a Box, with Screws.



Nos. 115 to 815.

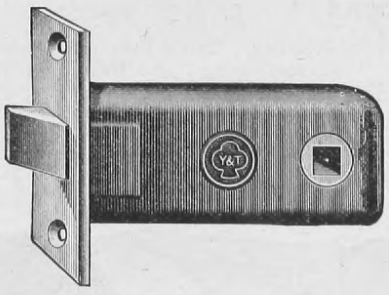
Reversible.

CASE—Japanned Iron, 2½ x 3½ x 1 1/16 inches.
FRONT—4¾ x 1⅛ inches.
BACKSET—2¾ inches.
HUB for 5/16 inch Spindle.
EASY SPRING Latch Bolt.

Bronze Metal Fronts, Bolts, and Strikes.

Nos	Finishes	Per Dozen
115	—Plain Bronze Metal	$23.75
215	—Antique Copper	25.05
415	—Light Dull Brass	25.05
515	—Sanded Statuary Brass	25.05
815	—Bower-Barff	23.75

Packed—Half Dozen in a Box, with Screws.



Nos. 410 and 412.

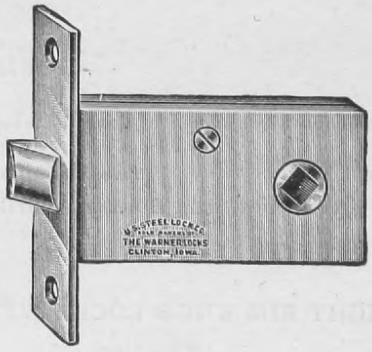
Reversible.

CASE—Japanned Iron, 1¼ x 3⅛ x ½ inches.
FRONT—2¾ x ¾ inch.
BACKSET—2½ inches.
HUB for 5/16 inch Spindle.

Iron or Brass Fronts and Bolts, Steel Strikes.

Nos.	Finishes	Per Dozen
410	—Iron, Amber Bronzed	$2.00
412	—Brass, Polished and Lacquered	4.30

Packed—Half Dozen in a Box, with Screws.



Nos. 3099 and 3099C.

Reversible.

CASE—Cold Rolled Steel, 1½ x 3 x ½ inches.
FRONT—3⅛ x ⅞ inch.
BACKSET—2½ inches.
HUB for 5/16 inch Spindle.

Wrought Steel Fronts and Strikes, Iron Bolts.

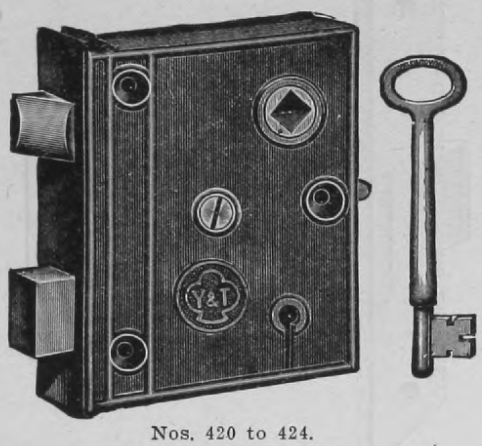
Nos.	Finishes	Per Dozen
3099	—Plain Bronze Plated	$3.00
3099C	—Antique Copper	3.50

Packed— One Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Half Size Cuts.

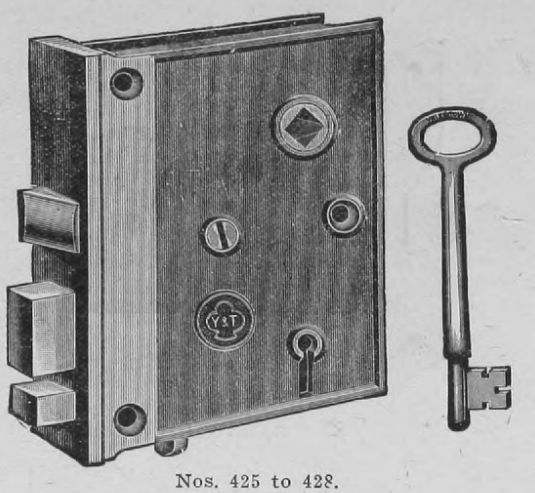
RIM KNOB LOCKS



Nos. 420 to 424.

Upright—Reversible.

CASE—Japanned Iron, 4x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Latch Bolt may be set by Stop
KEY PLATE—Japanned Iron, 1⅝x1⅛ inches.



Nos. 425 to 428.

Upright—Reversible.

CASE—Japanned Iron, 4¼x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Slide Bolt operated by Thumb Piece from inside.
KEY PLATE—Japanned Iron, 1⅝x1⅛ inches.

"Two Bolts," One Tumbler, Four Changes, with Stop.

No. 420—4x3¼ inches, Iron Bolts and Strike, One Malleable Iron Key.....Per Dozen, $2.90
No. 421—4x3¼ inches, Iron Bolts and Strike, One Nickel Plated Steel Key.....Per Dozen, 3.70
No. 422—4x3¼ inches, Iron Bolts and Strike, **Two** Nickel Plated Steel Keys.....Per Dozen, 4.75
No. 424—4x3¼ inches, **Brass** Bolts, Iron Strike, One Nickel Plated Steel Key.....Per Dozen, 5.60

Packed—Half Dozen in a Box.

"Three Bolts," One Tumbler, Four Changes.

No. 425—4x3¼ inches, Iron Bolts and Strike, One Malleable Iron Key.....Per Dozen, $3.70
No. 426—4x3¼ inches, Iron Bolts and Strike, One Nickel Plated Steel Key.....Per Dozen, 4.55
No. 427—4x3¼ inches, Iron Bolts and Strike, **Two** Nickel Plated Steel Keys.....Per Dozen, 5.80
No. 428—4x3¼ inches, **Brass** Bolts, Iron Strike, One Nickel Plated Steel Key.....Per Dozen, 6.85

Packed—Half Dozen in a Box.

HORIZONTAL RIM KNOB LOCKS

CASE—Heavy Japanned Iron, 3¼x4x¾ inches.
BACKSET—To Knob 3¼ inches, to Keyhole 2 inches.
HUB for 5/16 inch Spindles. Latch Bolt may be set by Stop.
KEY PLATE—Japanned Iron, 1⅝x1 inches. Iron Tumbler.

Two Bolts, One Tumbler, Four Changes, with Stop.

No. 420½—3¼x4 inches, Iron Bolts and Strike, One Tinned Malleable Iron Key.....Per Dozen, $3.00

Packed—Half Dozen in a Box, with Screws.

UPRIGHT RIM KNOB LOCKS WITH KNOBS

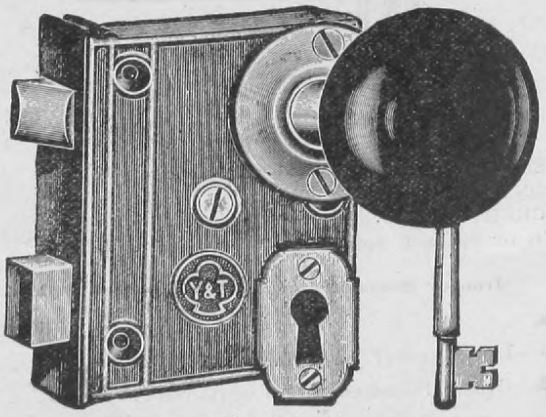
With Stop.

CASE—Japanned Iron, 4x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Latch Bolt may be set by Stop.
KEY PLATE—Japanned Iron Key Plate, 1⅝x1⅛ inches.

Two Iron Bolts, One Tumbler, Four Changes.

No. 420x203—4x3¼ inches. With Jet Knobs. One Tinned Malleable Iron Key.....Per Dozen Sets, $4.95

Packed—Each Set in a Separate Box, with Screws.

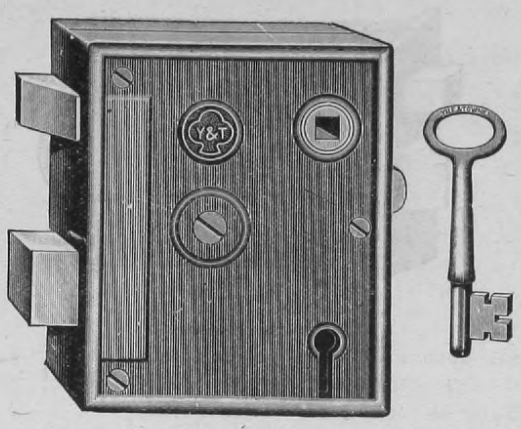


No. 420x203.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

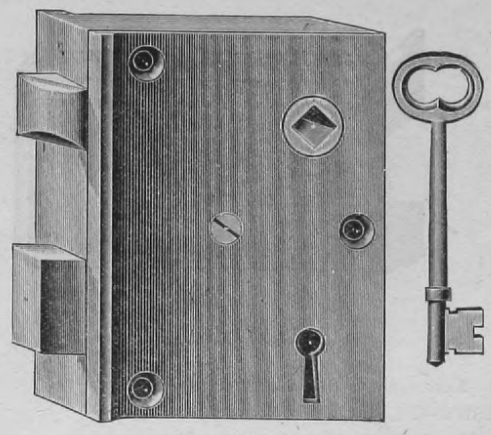
RIM KNOB LOCKS



Nos. 995 and 996.

Upright—Reversible

CASE—Black Enameled Steel, 3¾ x3⅛x⅝ inches.
BACKSET—2½ inches.
SPACING—2¼ inches.
HUB for 5/16 inch Spindle, Japanned Iron Key Plates.



No. 4061.

"Bronze Metal," Upright, Reversible.

CASE—All Bronze, 4x3x⅝ inches.
BACKSET—2¼ inches.
HUB for 5/16 inch Spindle
EASY SPRING Latch Bolt. Bronze Metal Strike and Key Plate.
REVERSE—By removing Cap.

One Tumbler, Three Changes, with Stop.

No. 995—3¾ x3⅛ inches, Iron Bolts and Strike, One Tinned Malleable Key .....Per Dozen, $3.70

One Tumbler, Six Changes, with Stop.

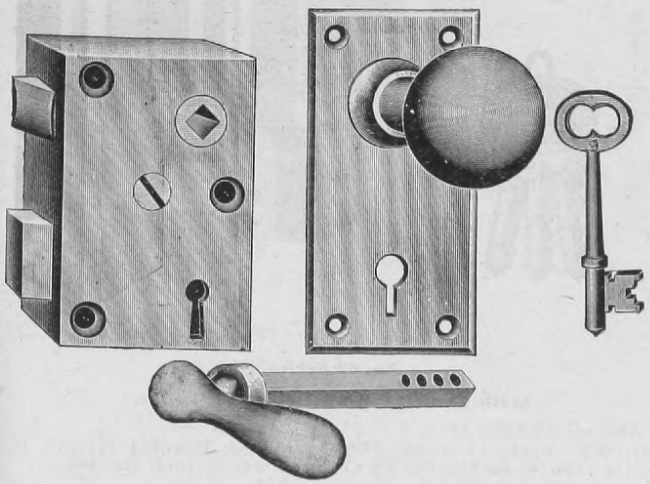
No. 996—3¾ x3⅛ inches, Iron Bolt, Iron Strike, One Nickel Plated Key .....Per Dozen, $4.55

Ship and House Locks, "Bronze Metal," One Tumbler, Eighteen Changes.

No. 4061—4x3 inches. All Bronze Highly Polished, One Bronze Metal Key .....Per Dozen, $35.80

Packed—Half Dozen in a Box, with Screws.

SHIP LOCKS



No. 4070.

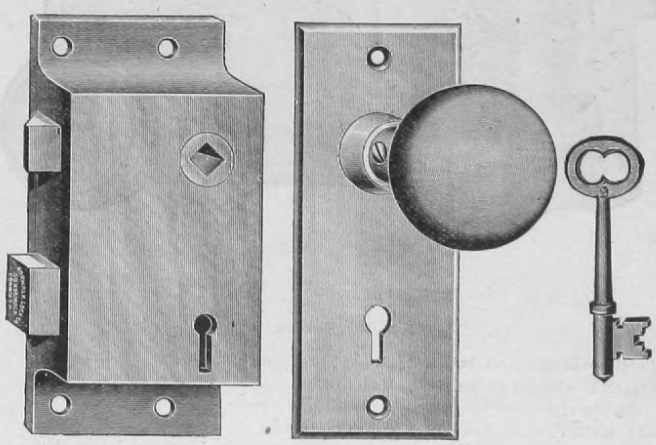
Bronze Metal, Upright, Reversible.

CASE—All Bronze 3x2x9/16 inches.
BACKSET—1 7/16 inches.
HUB for 5/16 inch Spindle. Reverse by removing Cap.
TRIM—1⅞ inch Lever Handle on one side and 1¾ inch Knob on opposite side. One Escutcheon, 3½x1¾ inches.
ONE Bronze Metal Key.
THREE Tumblers, 24 Changes.

For use on Ships, Yachts, Etc.

No. 4070—All Bronze Metal, Highly Polished.... .....Per Dozen, $61.60

Packed—One Set in a Box, with Screws.



No. 4071.

Bronze Metal, Upright, "Not" Reversible.

CASE—All Bronze, 4¼x2x9/16 inches.
BACKSET—1 7/16 inches.
HUB for 5/16 inch Spindle, **Not** Reversible.
TRIM—One Pair 1¾ inch Knobs and One Escutcheon, 4¼x1¾ inches.
ONE Bronze Metal Key.
THREE Tumblers, 24 Changes.

On Thin Doors and Light Work.

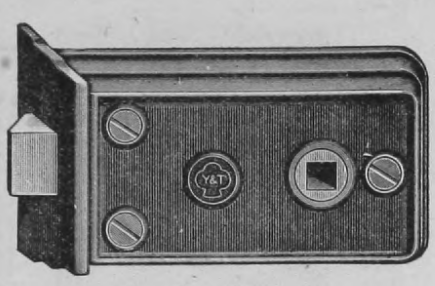
No. 4071—All Bronze Metal, Highly Polished.... .....Per Dozen, $68.40

Packed—One Set in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Half Size Cuts.

RIM KNOB LATCHES



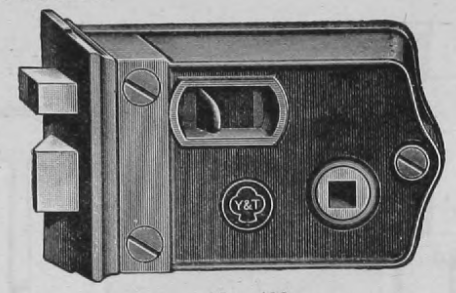
No. 432.

Reversible.

CASE—Japanned Iron, 2⅜x3¾x¾ inches.
BACKSET—2⅝ inches.
HUB—For 5/16 inch Spindle. Iron Bolts.
OPERATED—By Knob from both sides.

No. 432—Rim Knob Latches.....Per Dozen, $2.75

Packed—Half Dozen in a Box, with Screws.



No. 433.

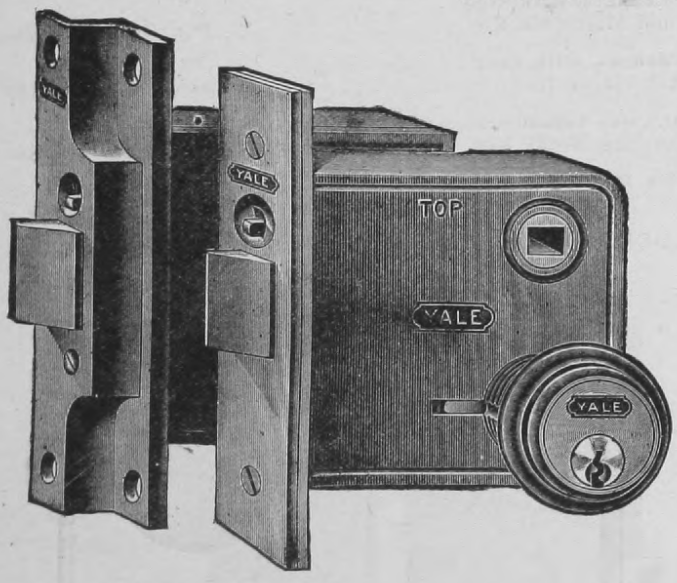
Reversible.

CASE—Japanned Iron, 2½x3⅝x⅝ inches.
BACKSET—2⅝ inches.
HUB for 5/16 inch Spindle. Iron Bolts.
OPERATED—Latch Bolt by Knob from both sides, Slide Bolt, by Thumb Slide from inside.

No. 433—Rim Knob Latches.....Per Dozen, $3.30

Packed—Half Dozen in a Box, with Screws.

MORTISE NIGHT LATCHES



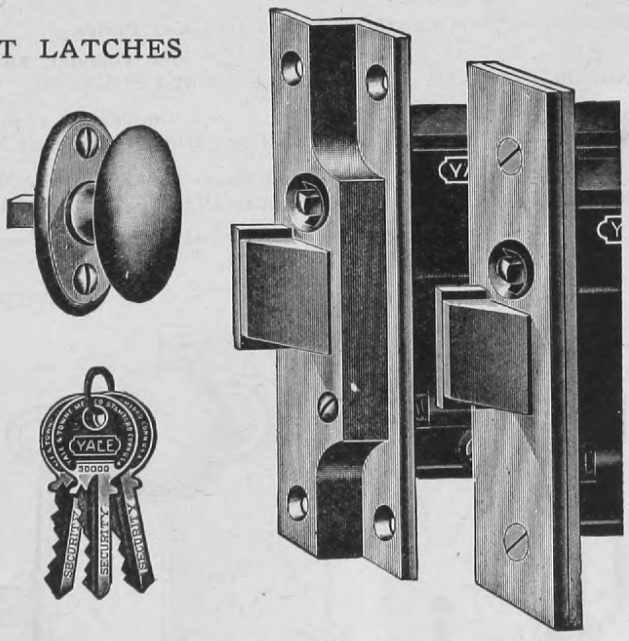
No. 66½. No. 66.

No. 66 Series.

CASE—Japanned Iron, 3¼x3½x1 3/16 inches.
FRONT—Flat, Armored, 5x1 inch.
Rabbeted, 5x1⅛ inch, ½ inch Rabbet.
BACKSET—2¾ inches. 5/16 inch Hub.
KEYS—Three Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes Unlimited. **One** Cylinder.
REVERSIBLE—Flat Front for Door of Either Hand.
Rabbeted—**Not** Reversible. **Specify** Hand.
STRIKE—Center of opening to end of lip—Flat, 1⅛ inch.
Rabbeted, 1 inch.
OPERATED—By Key from outside and by Knob from inside.
EASY SPRING Latch Bolt—Bolt may be set by Stop.
KNOB—1¾x1 5/16 inch, 5/16 inch Spindle, Rose, 2x1⅛ inches.
FOR DOORS 1¼ to 2⅛ inches thick—**Can be** Master-Keyed.
Bronze Metal Front, Bolt, Strike, Cylinder, Knob and Escutcheon.

No. 66 —Flat Front.....Per Dozen, $ 74.10
No. 66½—Rabbeted Front.....Per Dozen, 104.90

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 62½. No. 62.

No. 62 Series.

With Dead Locking Device on Front.

CASE—Japanned Iron, 3½x3⅝x1 3/16 inches.
FRONT—Flat, Armored, 5½x1⅛ inches, Beveled ⅛ inch in 2¼ inches; Rabbeted, 5½x1⅛ inches; ½ inch Rabbet.
BACKSET—2¾ inches. 5/16 inch Hub.
KEYS—Three Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes Unlimited. **One** Cylinder.
NOT REVERSIBLE—Specify Hand.
STRIKE—Center of opening to end of lip—Flat, 1⅛ inch. Rabbeted, 1 inch. Nickel-Bronze.
OPERATED—By Key from outside and by Knob from inside. When Door is Closed the slide automatically deadlocks the bolt and makes it proof against end pressure.
EASY SPRING Latch Bolt—Bolt may be set by Stop.
KNOB—1¾x1 5/16 inch, 5/16 inch Spindle, Rose, 2x1⅛ inches.
FOR DOORS 1¼ to 2⅛ inches thick—**Can be** Master-Keyed.
Bronze Metal Front, Bolt, Strike, Cylinder, Knob and Escutcheon.

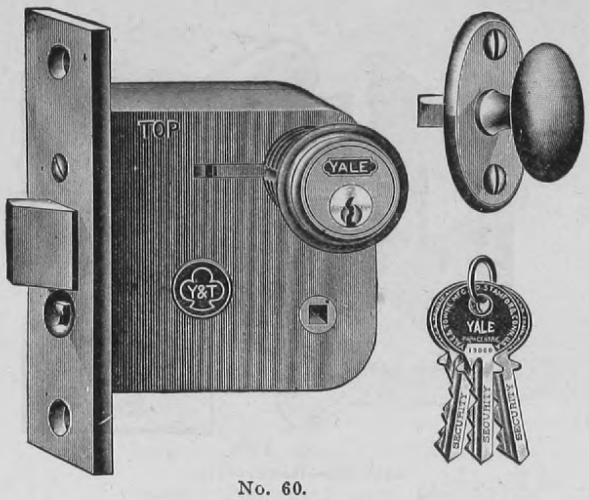
No. 62 —Flat Front.....Per Dozen, $ 83.35
No. 62½—Rabbeted Front.....Per Dozen, 114.15

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

MORTISE NIGHT LATCHES

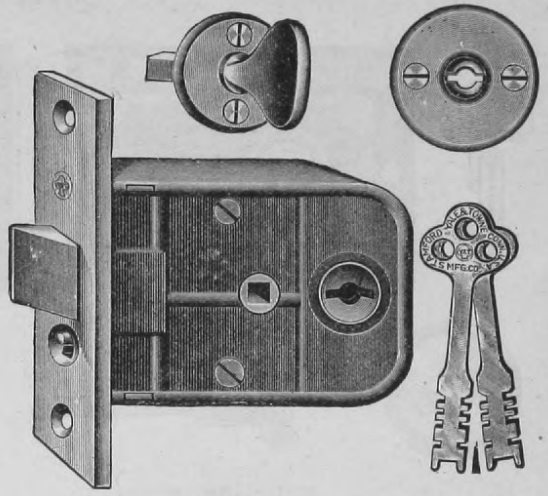
Half Size Cuts.



No. 60.
Reversible.

CASE—Japanned Iron, 2⅞x3⅛x11/16 inches.
FRONT—4½x⅞ inches.
BACKSET—2½ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. Four Pin-Tumblers, 1500 Changes. For Doors 1⅛ to 1¾ inches thick.
OPERATED—By Key from outside and by Knob from inside.
EASY SPRING Latch Bolt may be set by Stop.
KNOB—1½x¾ inch; 5/16 inch Spindle; Rose, 2x1⅛ inches. **Can be** Master-Keyed.

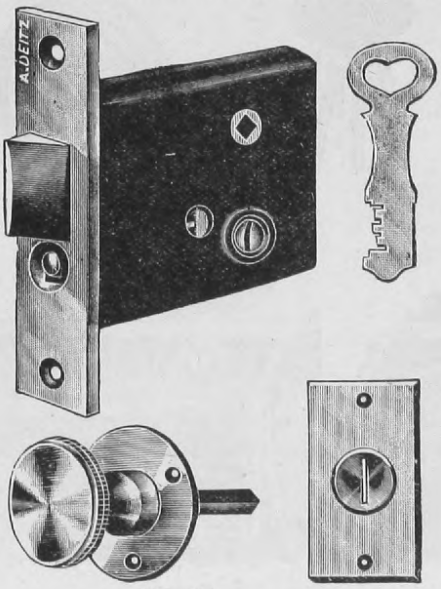
No. 60—Bronze Metal Front, Bolt, Strike, Cylinder, Knob, and Escutcheon.....Per Dozen, $71.75
Packed—One-Twelfth Dozen in a Box, with Screws.



No. 59.
Reversible.

CASE—Brass Plated Steel, 2¼x3⅜x⅝ inches.
FRONT—Flat Wrought Front, 4x⅞ inches.
BACKSET—2¾ inches.
KEYS—**Two** Nickel Plated Flat Steel Keys, Warded, 12 Changes. For Doors 1¼ to 2¼ inches thick.
OPERATED—By Key from outside, and by Thumb-Turn from inside. Latch Bolt may be set by Stop. Thumb Piece, 1 inch; 3/16 inch Spindle; Rose, 1¼ inches. Round Key Plate, 1½ inches.

No. 59—Bronze Metal Front, Bolt, Strike, Key Plate, Thumb Piece, and Escutcheon...Per Dozen, $21.90
Packed—One-Twelfth Dozen in a Box, with Screws.

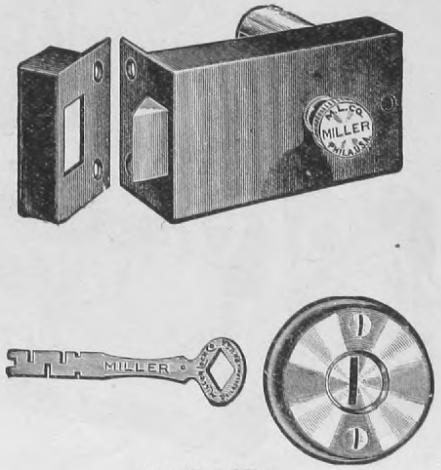


No. 302.
Reversible.

CASE—Japanned Iron, 2½x3x⅝ inches.
FRONT—4x⅞ inches.
BACKSET—2¼ inches.
KEYS—**Three** Flat Steel Keys. For Doors 1⅜ to 3¼ inches thick.
OPERATED—By Key from outside, and by Knob from inside; Latch Bolt may be set by Stop.
KNOB—1¼ inches; Rose, 1½ inches. Key Plate, 2¼x1¼ inches.

No. 302—Bronze Metal Front, Bolt, Strike, Key Plate, Knob and Rose.....Per Dozen, $36.00
Packed—One-Twelfth Dozen in a Box, with Screws.

RIM NIGHT LATCHES



No. 378-I.B.
Reversible.

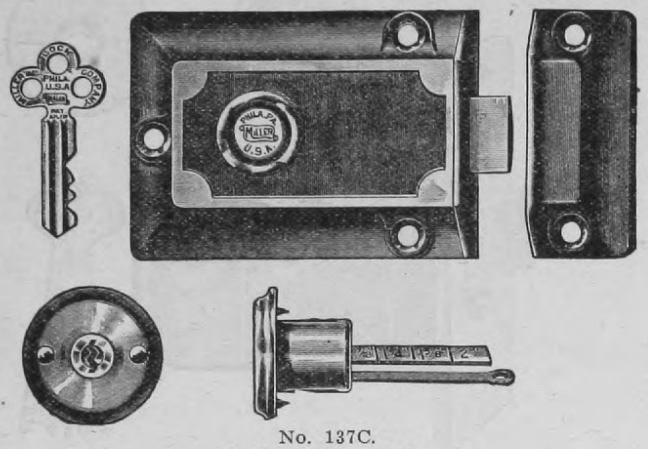
CASE—Black Enameled Steel, 1⅞x3x¾ inches.
BACKSET—2 1/16 inches. CYLINDER—¾ inch Diameter.
KEYS—**Two** Nickel Plated Steel Keys, 36 Changes. For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside; Latch Bolt may be Set by turn of Knob. With **Regular** and **Reverse** Bevel Strike. Round Key Plate, 1½ inches.

No. 378-I.B.—Bronze Metal Knob and Key Plate, Brass Plated Iron Bolt.....Per Dozen, $10.53
Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

RIM NIGHT LATCHES



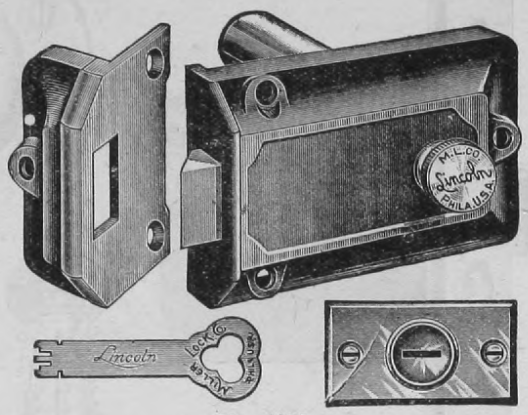
No. 137C.

Miller—Reversible.

CASE—Iron, Extra Heavy with Polished Coppered edges and sides; 2½x3½x¾ inches.
BACKSET—1⅞ inches.
KEYS—Two Nickel Plated Corrugated Steel Keys, 24 Changes.
REVERSIBLE—For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside and by Knob from inside.
LATCH BOLT—May be set by turn of Knob. With 12 **Regular** and 3 **Reverse Bevel** Strikes in each dozen.
KEY PLATE—1½ inches in diameter.

No. 137C—Bronze Metal Knob and Escutcheon, Bronze Plated Iron Bolt.....Per Dozen, $16.62

Packed—One-Twelfth Dozen in a Box, with Screws.



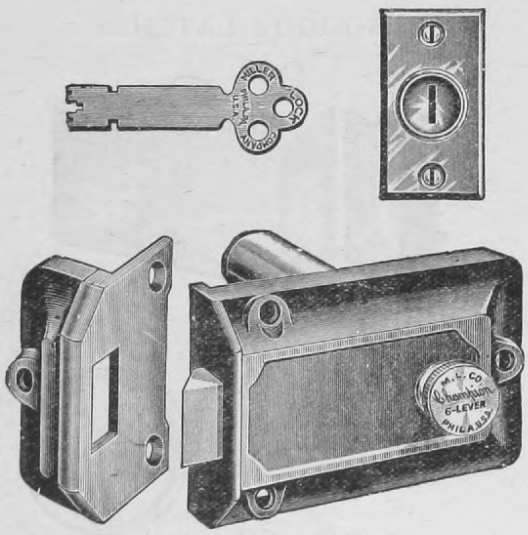
No. 4978.

Lincoln—Reversible.

CASE—Japanned Iron, 2⅜x3⅝x¾ inches.
BACKSET—1¾ inches.
KEYS—Three N. P. Flat Steel Keys, Five Levers, 48 Changes.
REVERSIBLE—For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside.
LATCH BOLT—May be set by short turn of Knob. With 12 **Regular** and 2 **Reverse Bevel** Strikes, in each dozen.
KEY PLATE—2x1⅛ inches.

No. 4978—Bronze Metal Bolt, Knob and Escutcheon .....Per Dozen, $19.95

Packed—One-Twelfth Dozen in a Box.



Nos. 32 and 72.

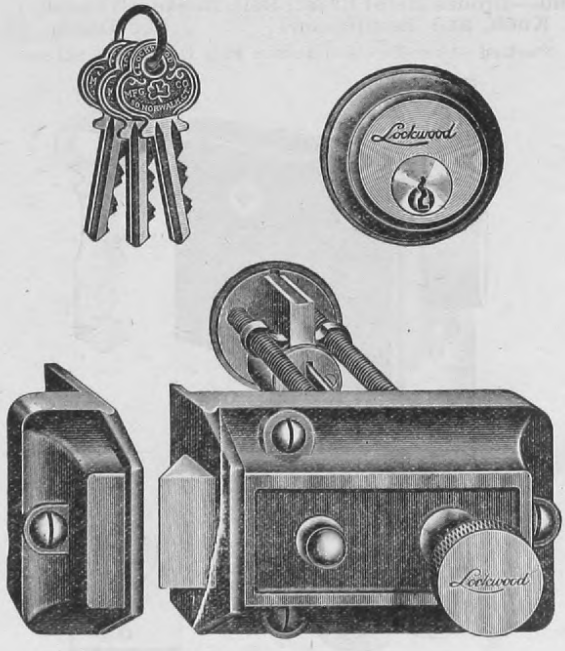
Champion—Reversible.

CASE—2⅜x3⅝x¾ inches.
BACKSET—1$^{15}/_{16}$ inches.
KEYS—Three N. P. Reversible Flat Steel Keys, Seven Levers, 300 Changes.
REVERSIBLE—For Doors 1 to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside.
LATCH BOLT—May be set by short turn of Knob. With **Regular** and **Reverse** Bevel Strike.
KEY PLATE—2x1⅛ inches.

Bronze Metal Bolts, Knobs and Escutcheons.

No. 32—Japanned Iron Case.....Per Dozen, $26.60
No. 72—Bronze Metal Case.....Per Doezn, 39.91

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 5910.

Lockwood—Reversible.

CASE—Japanned Iron, 2⅜x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—Three Nickel-Silver Keys. Five Pin Tumblers, Changes unlimited.
REVERSIBLE—For Doors 1¼ to 3 inches thick.
OPERATED—By Key from outside and by turn of Knob from inside.
LATCH BOLT—May be set by Stop.

Bronze Metal Bolt, Knob and Cylinder.

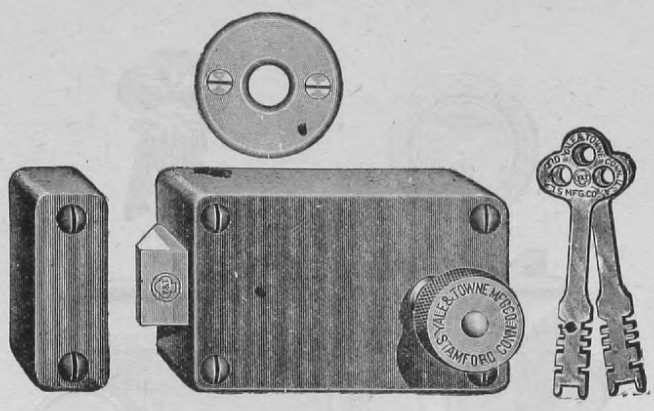
No. 5910—Japanned Case, with both Regular and Reverse Bevel Strikes.....Per Dozen, $25.00

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



No. 26.

Reversible.

CASE—Japanned Iron, 2x3¼x¾ inches.

BACKSET—2½ inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 6 Changes.

REVERSIBLE—For Doors ⅞ to 1¾ inches thick.

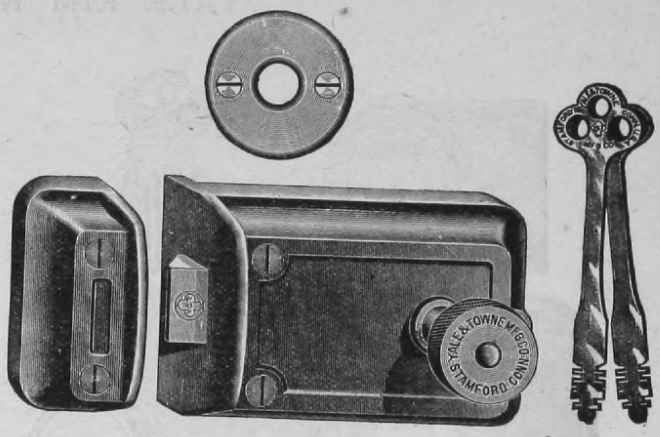
OPERATED—By Key from outside, and by Knob from inside.

LATCH BOLT—May be held back by an extra turn of Knob.

ROUND Key Plate—1½ inches.

No. 26—Nickel Plated Steel Knob and Key Plate, Bronze Plated Iron Bolt.....Per Dozen, $6.45

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 29X.

Reversible.

CASE—Japanned Iron, 2¼x3¼x⅞ inches.

BACKSET—2 inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 12 Changes.

REVERSIBLE—For Doors ⅞ to 2 inches thick.

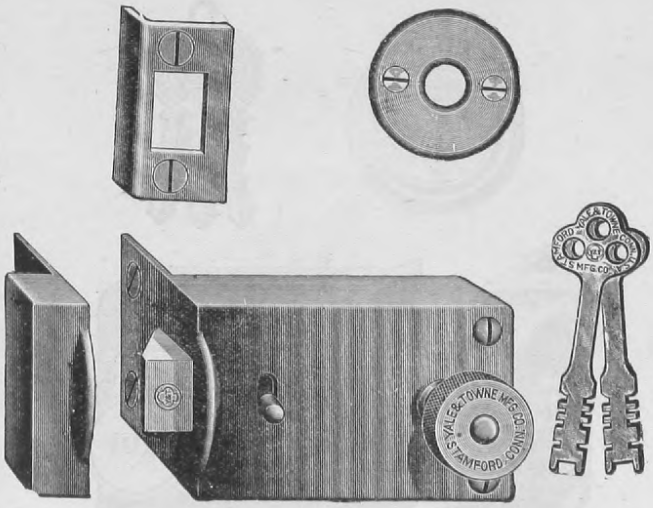
OPERATED—By Key from outside and by Knob from inside.

LATCH BOLT—May be held back by an extra turn of knob.

ROUND Key Plate—1½ inches.

No. 29X—Bronze Plated Steel Turn-Knob, Key Plate and Bolt, Brass Tube.....Per Dozen, $9.35

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 28.

Reversible.

CASE—Japanned Steel, 2x3¼x⅝ inches.

BACKSET—2½ inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 12 Changes.

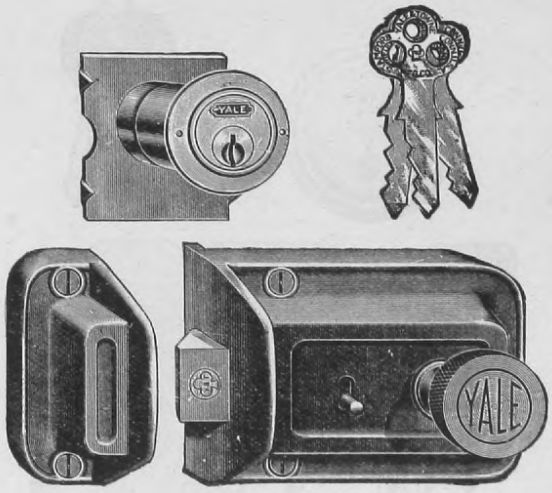
REVERSIBLE—For Doors ⅞ to 1¾ inches thick.

OPERATED—By Key from outside and by Knob from inside. Latch Bolt may be held back by Stop.

LATCH BOLT—Bronze Metal; Knob, Bronze Plated.

No. 28—Japanned Steel Case with **both** Regular and Reverse Bevel Strikes.....Per Dozen, $11.00

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 33.

Reversible.

CASE—Japanned Iron, 2¼x3x⅞ inches.

BACKSET—2 inches.

KEYS—**Three** Nickel Plated Flat Steel Keys. Tubular Cylinder, **Four** Pin-Tumblers, 1500 Changes. For Doors ⅞ to 1½ inches thick.

OPERATED—By Key from outside and by Knob from inside. Latch Bolt may be held back by Stop.

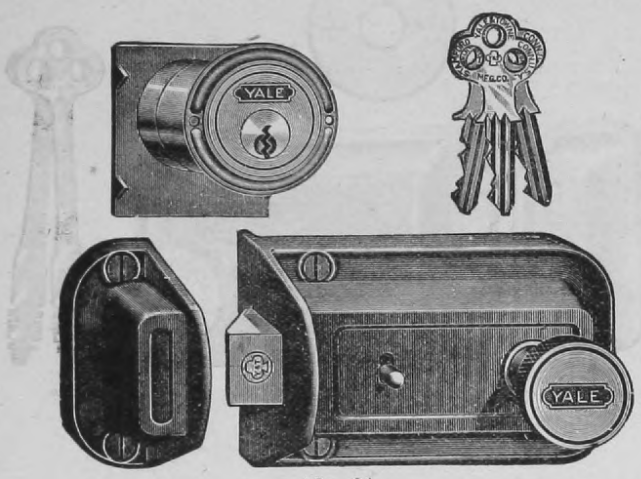
No. 33—Bronze Metal Cylinder Turn Knob and Stop, Bronze Plated Iron Bolt...Per Dozen, $19.00

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



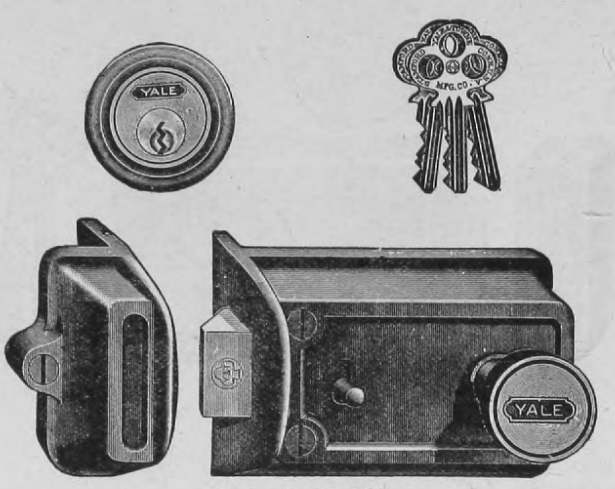
No. 34.

Reversible.

CASE—Japanned Iron, 2¼x3½x⅞ inches.
BACKSET—2⅜ inches.
KEYS—**Three** corrugated Nickel-Bronze Keys, Tubular Cylinder, **Four** Pin-Tumblers, 1500 Changes. For Doors up to 1½ inches thick.
OPERATED by Key from outside and by Thumb Knob from inside. Latch Bolt may be held back by Stop.

No. 34—Bronze Metal Cylinder Tube, Turn Knob and Stop, Bronze Plated Iron Bolt.....Per Dozen, $22.90

Packed—One-Twelfth Dozen in a Box, with Screws.



Nos. 37 and 37R.

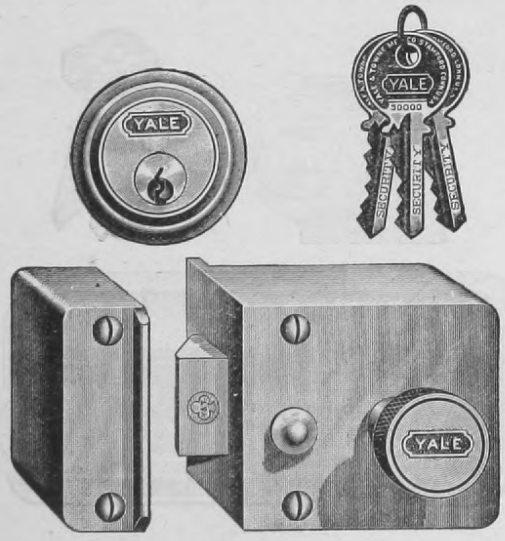
Reversible.

CASE—Japanned Iron, 2x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Corrugated Keys. **Four** Pin-Tumblers, 1500 Changes. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 37 —With Regular Bevel Strike..Per Dozen, $25.05
No. 37R—With Reverse Bevel Strike..Per Dozen, 25.05

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 05042½.

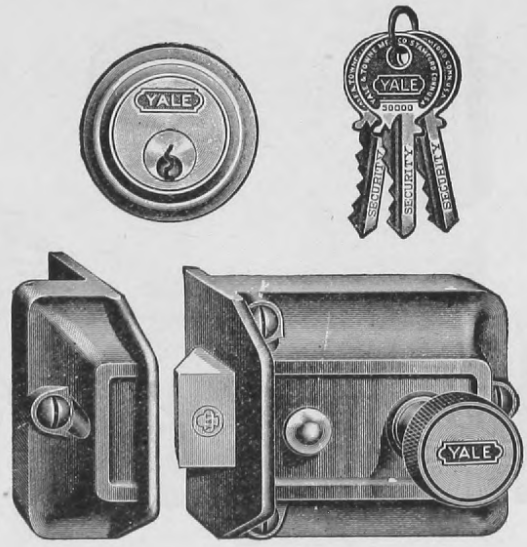
Reversible.

CASE—Buffed Bronze Metal, 2⅜x2⅝x⅞ inches.
BACKSET—1⅝ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick, other thicknesses to order.
OPERATED by Key from outside, and by Knob from inside. Latch Bolt may be held by Stop. **Can be** Master-Keyed.

Bronze Metal Outside and Inside Parts.

No. 05042½—Bronze Metal Case, Strike, Bolt, Knobs and Cylinder.....Per Dozen, $78.00

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 042½R.

Reversible.

CASE—Japanned Iron, 2⅜x2¾x1 inches.
BACKSET—1⅝ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers. Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside and by Knob from inside. Latch Bolt may be held by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knobs and Cylinder.

No. 042½R—Japanned Iron Case with **both** Regular and Reverse Bevel Strikes..Per Dozen, $30.90

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE RIM NIGHT LATCHES

Half Size Cuts.

No. 42.

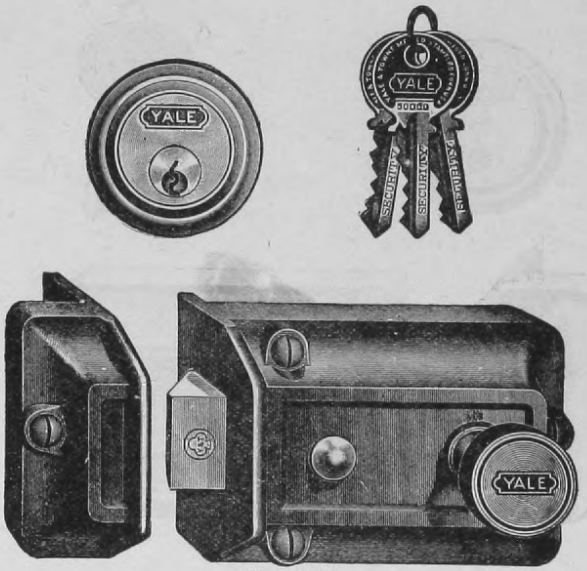
Reversible.

The Best and Most Popular Night Latch in the World.
CASE—Antique **Copper** Plated, 2⅜x3½x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder, Buffed.

No. 42—Antique Copper Finish Iron Case, with Regular Bevel Strike.....Per Dozen, $33.20

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 042R.

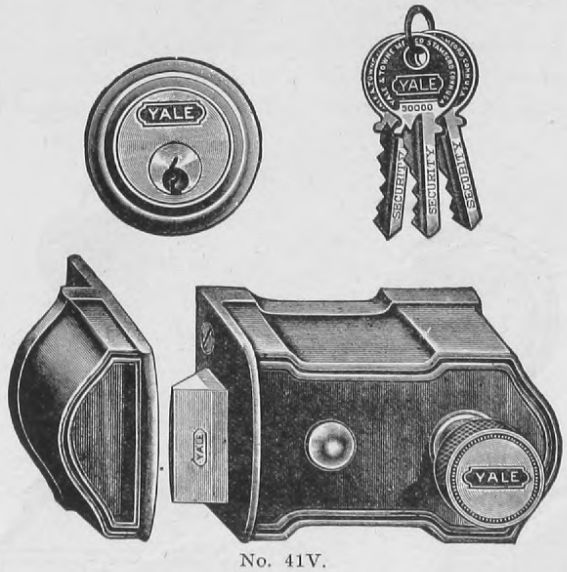
Reversible.

CASE—Japanned Iron, 2½x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Knob from inside. Latch Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

No. 042R—With both Regular and Reverse Bevel Strikes .....Per Dozen, $30.90

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 41V.

Reversible.

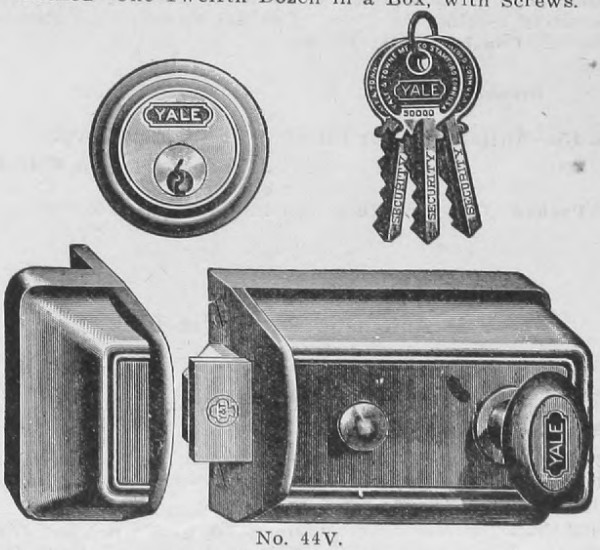
Yale Ornamental Night Latch.

CASE—Iron, Dull Brass Finish, 2⅛x3 7/16x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside and by Turn-Knob from inside. Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Turn Knob and Cylinder.

No. 41V—With Regular Bevel Strike..Per Dozen, $35.75

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 44V.

Reversible.

Yale "Automatic Deadlocking" Night Latch.

CASE—Iron, Dull Brass Finish, 2⅜x3½x1¼ inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn Knob from inside. Bolt may be held back by Stop. When Door is closed the protector on back of Bolt is held retracted and operates to positively deadlock the bolt against end pressure. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

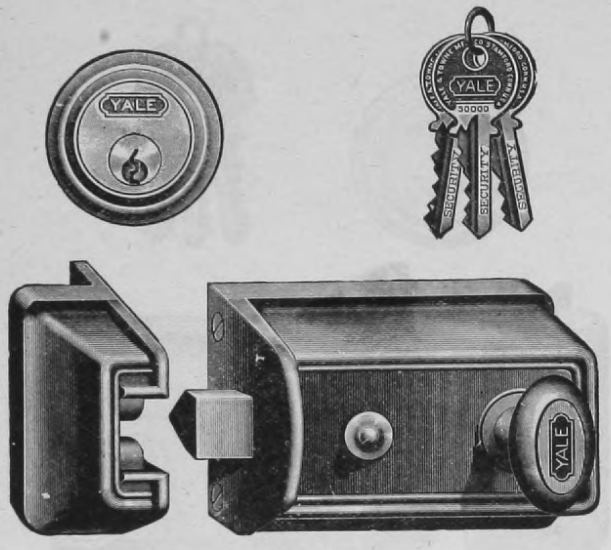
No. 44V —With Regular Bevel Strike. Dozen, $40.40
No. 44VRB—With **Reverse** Bevel Strike Dozen, 40.40

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



No. 45.

Reversible.

Yale "Deadlocking" Night Latch

CASE—Iron, Antique Copper Finish, 2⅜x3½x1¼ inches.

BACKSET—2⅜ inches.

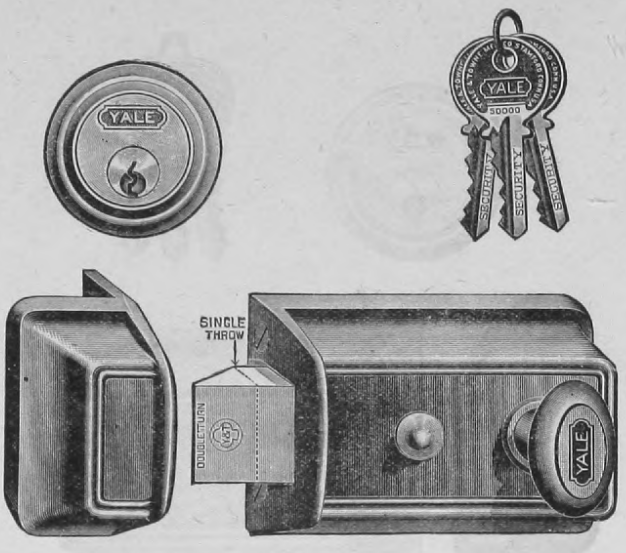
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Knob from inside. Triangular Latch Bolt may be held back by Stop. When Door is closed the two pivoted hooks in Strike are forced apart by the Bolt and automatically close over it, thus securely locking the Door. **Can not be** furnished Reverse Bevel. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

No. 45—Antique Copper Finish, with Regular Bevel Strike.....Per Dozen, $40.40

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 46.

Reversible.

Yale "Double Throw" Deadlocking Night Latch

CASE—Iron, Antique Copper Finish, 2⅜x3½x1 inches.

BACKSET—2⅜ inches.

KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop. Bolt may be given a Second Throw by Key or Knob which Deadlocks the Bolt, making it proof against end pressure. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 46—With Regular Bevel Strike...Per Dozen, $42.10

Packed—One-Twelfth Dozen in a Box, with Screws.

Yale Automatic Rim Night Lock

Reversible.

CASE—Iron, Antique Copper Finish, 3½x3x1¼ inches.

BACKSET—2⅜ inches.

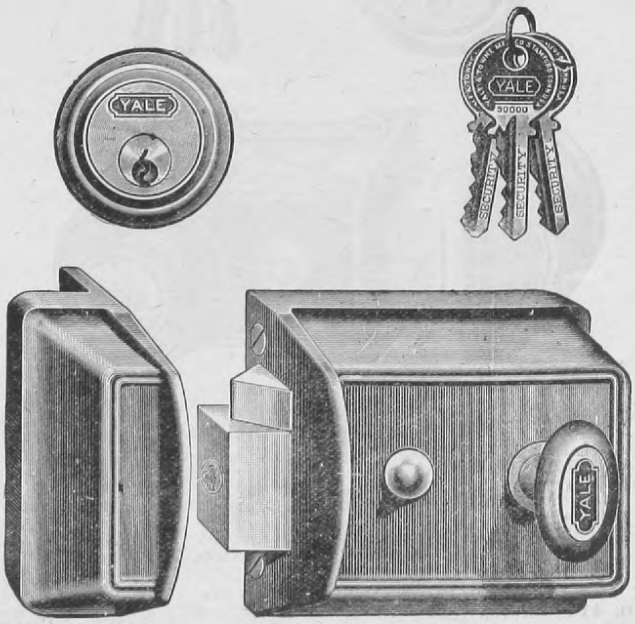
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Turn Knob from inside. When unlocked by Key or Knob both Dead Bolt and Trigger Bolt are withdrawn and held back in Case; when Stop on Case is pushed down the Trigger Bolt is released and thrown out; when Door is closed the Trigger Bolt automatically releases the Dead Bolt which is also thrown out and Locked. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 90—Antique Copper Finish Iron Case, with Regular Bevel Strike.....Per Dozen, $55.55

Packed—One-Twelfth Dozen in a Box, with Screws.

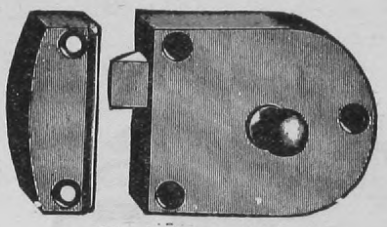


No. 90.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

Half Size Cuts.

SECRET OFFICE GATE LATCHES



Nos. 4050 to 4850.

Single Acting. Reversible.

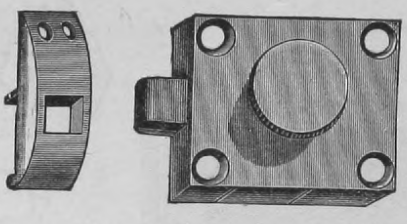
With Both Regular and Reverse Bevel Strike.

CASE—2x2½x¾ inches. Bronze Metal Knob.

OPERATED—By pressure of finger to underside of Latch. The Knob has no effect on the Latch Bolt.

Nos.	Finish	Per Dozen
4050	Japanned	$12.00
4150	Plain Bronze Metal	18.00
4250	Antique Copper	20.00
4450	Light Dull Brass	20.00
4850	Bower-Barff	18.00

Packed—Half Dozen in a Box, with Screws.



Nos. 4050½ to 4850½.

Double Acting. Reversible.

For Gates or Doors to Swing both ways.

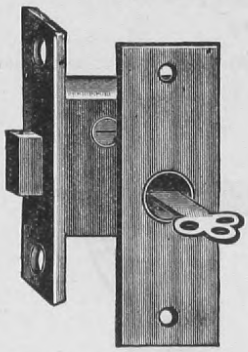
CASE—1⅞x2¼x¾ inches. Bronze Metal Knob.

OPERATED—By pressure of finger to underside of Latch. The Knob has no effect on the Latch Bolt.

Nos.	Finish	Per Dozen
4050½	Japanned	$12.00
4150½	Plain Bronze Metal	18.00
4250½	Antique Copper	20.00
4450½	Light Dull Brass	20.00
4850½	Bower-Barff	18.00

Packed—Half Dozen in a Box, with Screws.

MORTISE DEAD LOCKS



Nos. 4141¼ to 4841¼.

Reversible.

CASE—Japanned Iron, 1½x1¾x9/16 inches.

FRONT—2⅞x11/16 inch.

BACKSET—1¼ inches.

KEYS—Two Nickel Plated Steel Keys. **Three** Brass Tumblers, 36 Changes.

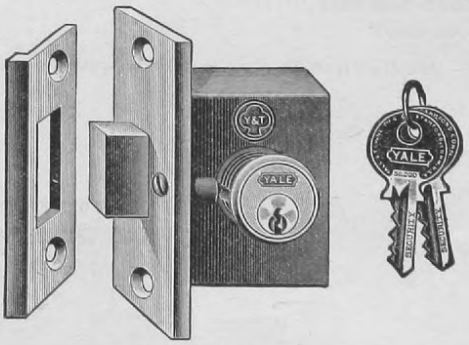
OPERATED—By Key from one side only. One Key Plate, 3 1/16x1⅛ inches. **Three** Tumblers, 36 Changes.

BRONZE Metal Front, Bolt, Strike and Escutcheon.

Nos.	Finish	Per Dozen
4141¼	Plain Bronze Metal	$18.00
4241¼	Antique Copper	19.00
4441¼	Light Dull Brass	19.00
4541¼	Sanded Statuary Brass	19.00
4841¼	Bower-Barff	19.00

Packed—One Dozen in a Box, with Screws.

YALE CYLINDER DEAD LOCKS



No. 301.

For Limousine and Coupe Car Doors, Etc.

CASE—Iron, Copper Plated, 1⅞x1⅜x9/16 inches.

BACKSET—13/16 inch.

BEVELED FRONT—3x⅞ inch. **Not** Reversible, specify hand when ordering. Regular Bevel ¼ to 2¼ inches.

ANGLE STRIKE—3x¾ inches. Diameter of Cylinder ⅞ inch.

OPERATED—By Key from one side only.

KEYS—**Two** Nickel-Bronze Paracentric Keys. Four Pin Tumblers, 1500 Changes, Throw of Bolt ⅜ inch. **Can be** Master-Keyed. **Thickness** of Door must be specified.

No. 301—Cast Bronze Metal Front, Bolt, Cylinder and Strike.....Per Dozen, $50.00

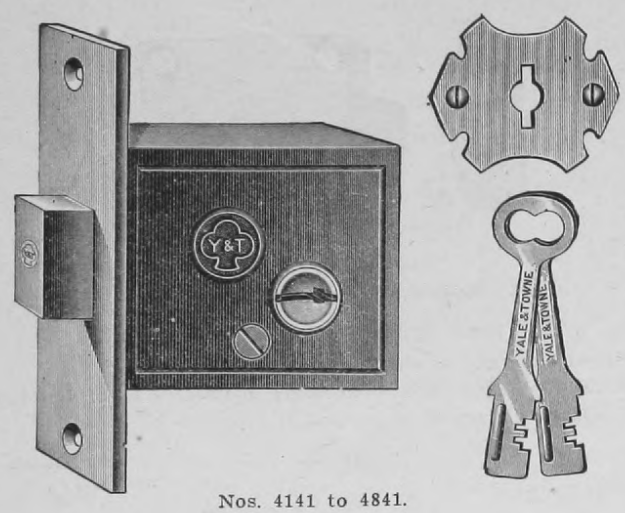
Packed—One-Twelfth Dozen in a Box, with Screws.

Note.—For Yale Motor Car Locks See Pages 1185 to 1187.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE MORTISE DEAD LOCKS



Nos. 4141 to 4841.

Reversible.

CASE—Japanned Iron, 2⅜x3x1 1/16 inches. FRONT, 4½x1⅛ inches. BACKSET, 2⅛ inches. THREE Lever Tumblers. Cold Rolled Steel. TWO Nickel Plated Flat Steel Keys. OPERATED by Key from either side. Two Key Plates, 1⅝x2 inches. THREE Lever Tumblers, 24 changes.

Nos. Finishes.	Per Dozen.
4141—Plain Bronze Metal	$35.65
4241—Antique Copper	36.95
4441—Light Dull Brass	36.95
4541—Sanded Statuary Brass	36.95
4841—Bower-Barff	35.65

Packed—One-Twelfth Dozen in a Box, with Screws.

Nos. 9141½ to 9841½.

With "Two" Cylinders.

CASE—Japanned Iron, 2½x3⅝x1 3/16 inches. ARMORED FRONT, 4x1 inches. BACKSET, 2¾ inches. THREE Nickel-Bronze Paracentric Keys. FIVE Pin Tumblers, changes unlimited. For doors, 1½ to 1⅞ inches thick, other thicknesses to order. FURNISHED with Two Cylinders and OPERATED by Key from both sides. CAN BE Master-Keyed.

Cast Bronze Metal Front, Bolt, Strike, and Cylinders.

Nos. Finishes.	Each
9141½—Plain Bronze Metal	$ 9.85
9241½—Antique Copper	10.45
9441½—Light Dull Brass	10.45
9541½—Sanded Statuary Brass	10.45
9841½—Bower-Barff	9.85

Packed—One in a Box, with Screws.

Nos. 9141 to 9841.

With "One" Cylinder and Thumb Turn.

CASE—Japanned Iron 2½x3⅝x1 3/16 inches. Thickness of Door must be given. ARMORED FRONT, 4x1 inches. BACKSET, 2¾ inches. THREE Nickel-Bronze Paracentric Keys. Five Pin Tumblers, changes unlimited. For doors 1¼ to 2⅛ inches thick, other thicknesses to order. OPERATED by Key from outside and by Thumb-Turn from inside. ESCUTCHEON, 2x1⅛ inches. No. 15, Thumb-Turn, 1⅜ inches. CAN BE Master-Keyed.

Cast Bronze Metal Front, Bolt, Strike, Thumb Turn, and Cylinder.

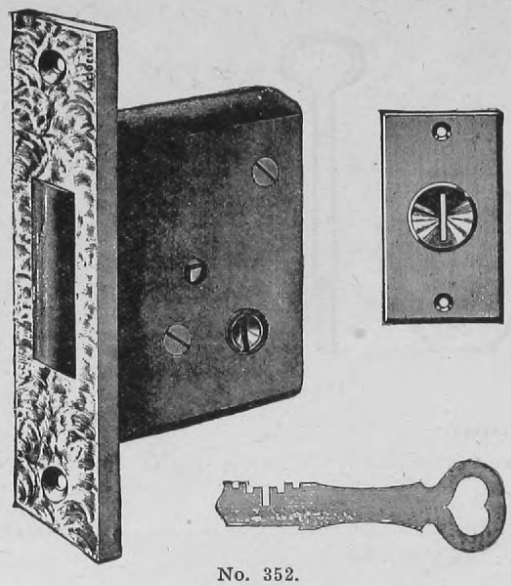
Nos. Finishes.	Each
9141—Plain Bronze Metal	$7.50
9241—Antique Copper	8.15
9441—Light Dull Brass	8.15
9541—Sanded Statuary Brass	8.15
9841—Bower-Barff	7.50

Packed—One in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

MORTISE DEAD LOCKS



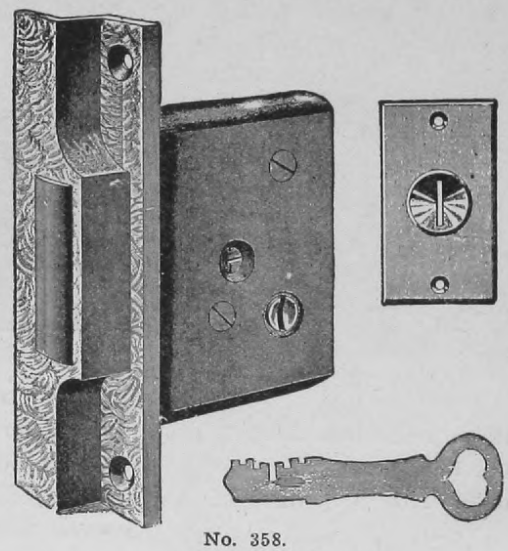
No. 352.

Reversible.

CASE—Japanned Iron, 3⅜x2⅜x1³⁄₁₆ inches.
FRONT—5⅜x1⅛ inches.
BACKSET—1⅝ inches.
KEYS—**Three** Flat Steel Keys. **Four** Wrought Steel Tumblers, 200 Changes.
OPERATED by Key from either side. Two Key Plates, 2⅛x1¼ inches.
HEAVY BRONZE METAL Front, Bolt, Strike and Key Plates.

No. 352—Heavy Mortise Dead Locks.....
.....Per Dozen, $36.00

Packed—One-Twelfth Dozen in a Box, with Screws.



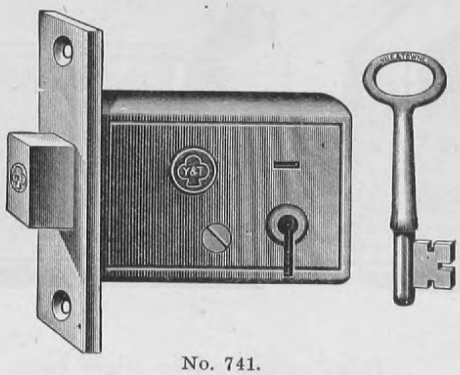
No. 358.

Reversible.

CASE—Japanned Iron, 3⅜x2⅜x1³⁄₁₆ inches.
FRONT—5⅜x1⅜ inches. Rabbet, ½ inch.
BACKSET—2⅛ inches, extreme.
KEYS—**Three** Flat Steel Keys. **Four** Wrought Steel Tumblers, 200 Changes.
OPERATED by Key from either side. Two Key Plates, 2⅛x1¼ inches.
HEAVY BRONZE METAL Front, Bolt, Strike and Key Plates.

No. 358—Heavy Mortise Dead Locks.....
.....Per Dozen, $42.00

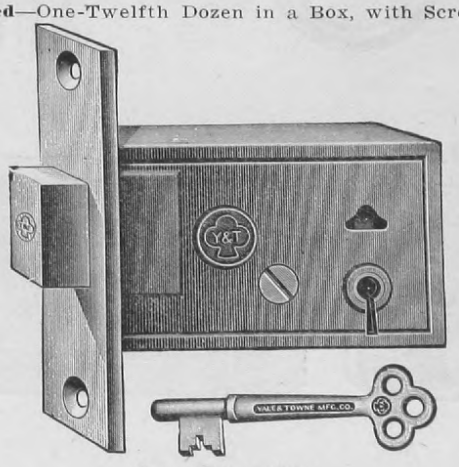
Packed—One-Twelfth Dozen in a Box, with Screws.



No. 741.

Reversible.

CASE—Japanned Iron, 1⅞x2¾x9⁄16 inches.
FRONT—3¼x⅝ inches.
BACKSET—2⅛ inches. **Tumblers,** Cold Rolled Steel.
KEY—**One** Nickel Plated Steel Key.
OPERATED by Key from either side. Two Key Plates, 1⅝x1⅛ inches.



Nos. 8141 to 8841.

Reversible.

CASE—Japanned Iron, 2⅛x3½x11⁄16 inches.
FRONT—4⅛x1 inches.
BACKSET—2¾ inches.
KEY—**One** Nickel Plated Steel Key. **Three** Tumblers, 54 Changes.
OPERATED by Key from either side. Two Key Plates, 1¾x1⅛ inches.

No. 741—Brass Front, Bolt and Strike, Japanned Key Plates, One Tumbler, 12 Changes.....Per Dozen, **$11.70**

Bronze Metal Front, Bolts, Strikes, and Key Plates.

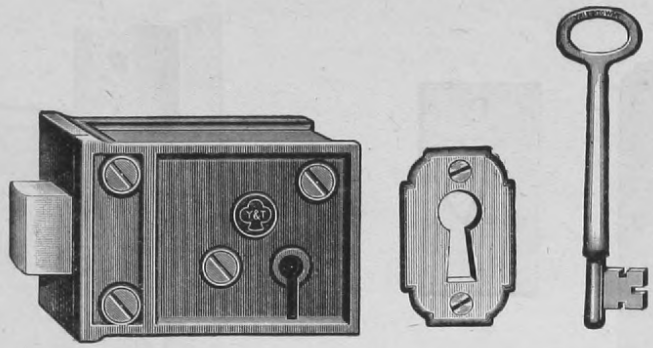
No. 8141—Plain Bronze Metal, Three Tumblers, 54 Changes.....Per Dozen, $18.15
No. 8241—Antique Copper Finish, Three Tumblers, 54 Changes.....Per Dozen, 19.45
No. 8441—Light Dull Brass Finish, Three Tumblers, 54 Changes.....Per Dozen, 19.47
No. 8841—Bower-Barff Finish, Three Tumblers, 54 Changes.....Per Dozen, 18.15

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RIM DEAD LOCKS

Half Size Cuts.



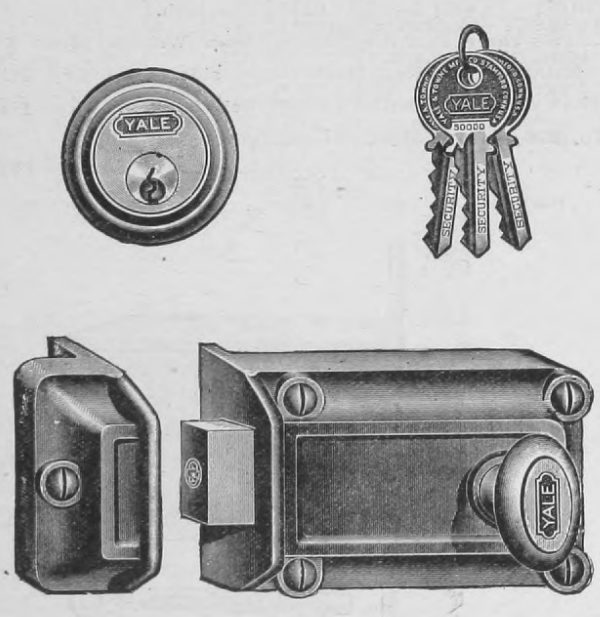
No. 0358.

Horizontal—Reversible.

CASE—Japanned Iron, 2x2¾x5⅝ inches. BACKSET—2⅛ inches. **One** Tinned Malleable Iron Key, One Tumbler, 4 Changes, One Key Plate. OPERATED by Key from both sides.

No. 0358—Iron Bolt, One Tumbler, 4 Changes ..... Per Dozen, $2.50

Packed—Half Dozen in a Box, with Screws.



No. 2.

Yale Rim Dead Locks

Horizontal—Reversible.

CASE—Japanned Iron, 2⅜x3⅝x⅞ inches.

BACKSET—2⅜ inches.

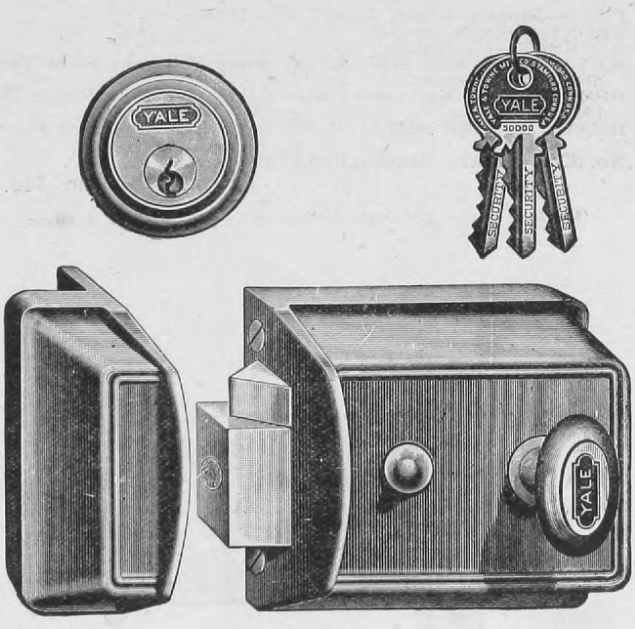
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors 1 to 2½ inches thick, other thicknesses to order.

OPERATED by Key from outside, and by Turn-Knob from inside.

Bronze Metal Bolt, Turn-Knob, and Cylinder.

No. 2—Rim Dead Locks ..... Per Dozen, $40.75

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 90.

Yale Automatic Rim Night Lock

Reversible.

CASE—Iron, Antique Copper Finish, 3½x3x1¼ inches.

BACKSET—2⅜ inches.

KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside only, and by Turn-Knob from inside. When unlocked by Key or Knob both Dead Bolt and Trigger Bolt are withdrawn and held back in Case; when Stop on Case is pushed down the Trigger Bolt is released and thrown out; when Door is closed the Trigger Bolt automatically releases the Dead Bolt which is also thrown out and locked. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

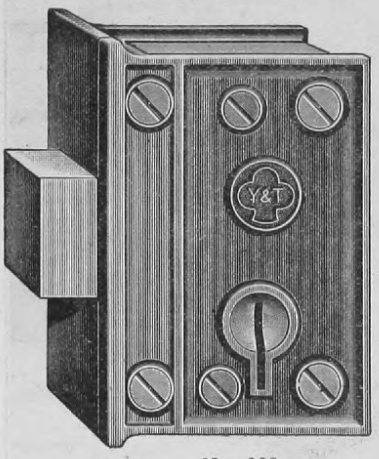
No. 90—Antique Copper Finish Iron Case, with Regular Bevel Strike ..... Per Dozen, $55.55

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

STORE DOOR RIM DEAD LOCKS



No. 388.

Upright—Reversible.

CASE—Japanned Iron, 4x2⅝x⅞ inches.
BACKSET—1⅝ inches. Rim Strike.
KEYS—**Two** Nickel Plated Steel Folding Keys. **One** Tumbler, 12 Changes. For Doors of ordinary thickness.
OPERATED by Key from both sides. Key Plate, 3x1¾ inches.

Iron Bolt, Japanned Iron Strike, and Key Plate.

No. 388—Rim Dead Locks.....Per Dozen, $11.55

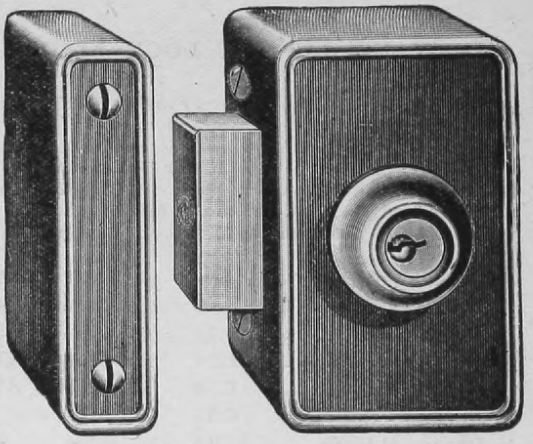
Upright—Reversible.

CASE—Japanned Iron, 5x3⅛x1 inches.
BACKSET—2 inches. Rim Strike.
KEYS—**Two** Nickel Plated Steel Folding Keys. **One** Tumbler, 12 Changes. For all Doors of ordinary thickness.
OPERATED by Key from both sides. Key Plate, 3x1¾ inches.

Iron Bolt, Japanned Iron Strike, and Key Plate.

No. 391—Rim Dead Locks.....Per Dozen, $12.55

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 3.

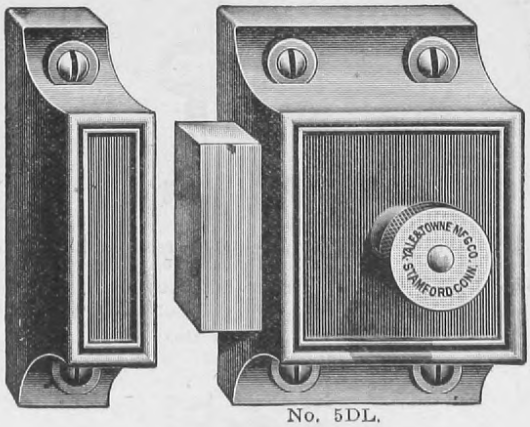
Heavy—Upright—Reversible.

CASE—Iron, **Antique Copper** Finish, 4x2½x1 inches.
BACKSET—1¼ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 3 inches thick.
OPERATED by Key from both sides. **Can be** Master-Keyed.

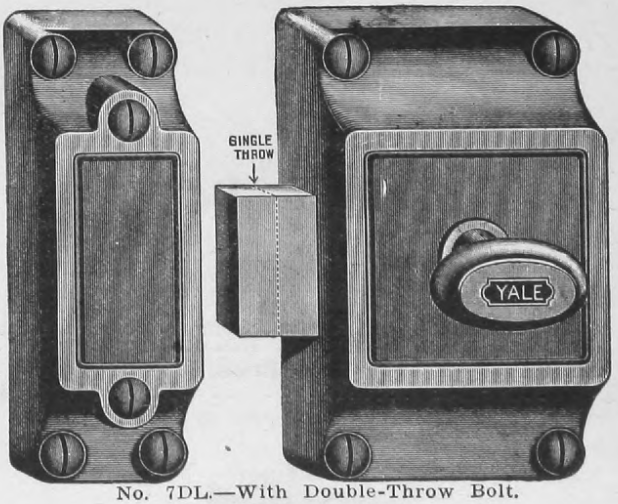
Bronze Metal Cylinder and Bolt.

No. 3—Rim Dead Locks.....Per Dozen, $70.20

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 5DL.



No. 7DL.—With Double-Throw Bolt.

"Heavy" Cylinder Rim Dead Locks—"Reversible."

CASE—Iron, Antique Copper Finish, 4x2½x1 inches.
BACKSET—1¼ inches. Rim Strike.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. **For** Doors 1⅛ to 3 inches thick.
OPERATED—From outside by Key, from inside by Knob. **Can be** Master-Keyed.

Bronze Metal Cylinder, Knob and Bolt.

No. 5DL—Rim Dead Locks .....Per Dozen, $53.60
Packed—One-twelfth Dozen in a Box, with Screws.

CASE—Iron, Antique Copper Finish, 4½x2¾x1⅜ inches.
BACKSET—1⅜ inches. Rim Strike.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. **For** Doors ⅞ to 2½ inches thick.
OPERATED—From outside by Key, from inside by Knob. A second turn of Key or Knob accomplishes the double-throw.

Bronze Metal Cylinder and Knob. Steel Bolt.

No. 7DL—Rim Dead Locks.....Per Dozen, $70.20
Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

YALE CABINET LOCK ASSORTMENT

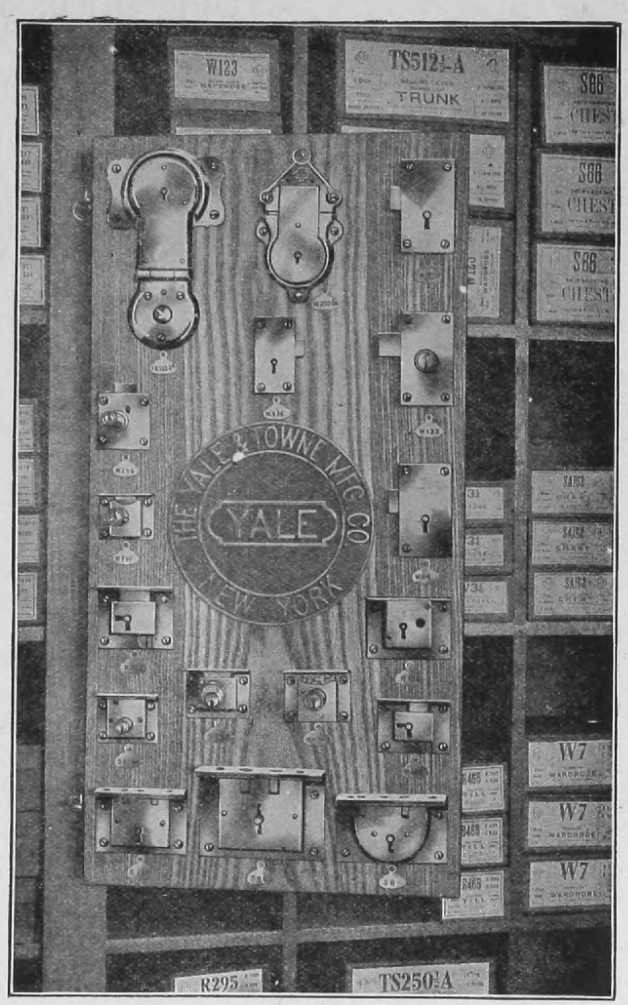
YALE CABINET LOCK ASSORTMENT

The Board is of Mahogany Finish, 24-12 inches, and is very substantial and handsome in appearance; as shown in the illustration, it is intended to be attached to an upright of the shelving. Furnished with heavy brass screw eyes and square hooks to swing on. Locks are attached to board with screws, numbers are stamped on brass number plates. Supplied with the following assortment for stock, including locks on board.

Quantity	Nos.	Per Doz.	Quantity	Nos.	Per Doz.
1/6 Dozen,	W123	$15.46	1/2 Dozen,	R475	$ 3.60
1/4 Dozen,	W44	7.72	1/6 Dozen	5551	29.28
1/2 Dozen,	W7	1.74	1/4 Dozen	SA162	15.04
1/2 Dozen,	W3 1/4	1.56	1/4 Dozen,	S117	9.60
1/4 Dozen,	R359	6.68	1/4 Dozen,	S8	6.56
1/4 Dozen,	RA300	10.04	1/4 Dozen,	S86	14.30
1/2 Dozen,	R465	1.70	1/4 Dozen,	TS250 1/2 A.	3.86
1/4 Dozen,	R108	7.72	1/4 Dozen,	TS512 1/2 A.	4.64
1/3 Dozen,	R295C	5.80			

No. 15—Yale Cabinet Lock "Sample Board" and Assortment for Stock, consisting of 5 1/6 Dozen Drawer, Wardrobe, Chest, and Locker Locks, as above ..... Each, $40.50

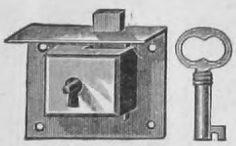
Packed—Each Assortment in a separate case ready for shipment.



No. 15.

YALE DRAWER LOCKS

Half Size Cuts.

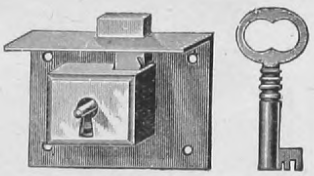


No. RA460.

Back Spring; **Drop,** 1/2 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. RA460—1 1/8 x 1 1/2 inch, **Brass,** 12 Keyed ..... Per Dozen, $1.80

Packed—One Dozen in a Box.

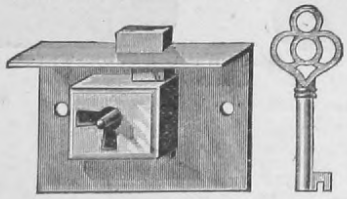


No. RA462.

One Ward, Back Spring; **Drop,** 5/8 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. RA462—1 3/8 x 1 7/8 inch, **Brass,** 12 Keyed .... Per Dozen, $2.40

Packed—One Dozen in a Box.

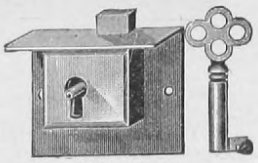


No. R466.

Back Spring; **Drop,** 5/8 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys

No. R466—1 1/2 x 2 1/4 inch, **Iron,** 12 Keyed ..... Per Dozen, $1.62

Packed—One Dozen in a Box.



No. R465.

Back Spring; **Drop,** 3/4 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

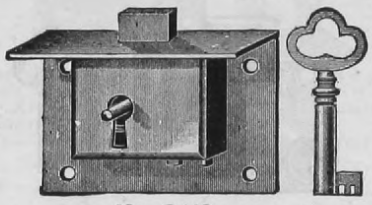
No. R465—1 3/4 x 2 1/4 inch, **Iron,** 12 Keyed ..... Per Dozen, $1.70

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE DRAWER LOCKS

Half Size Cuts.

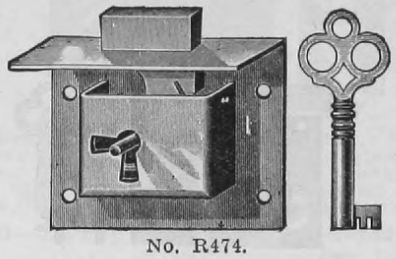


No. R467.

One Ward, Back Spring; Drop, 11/16 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. R467—1¾x2⅜ inch, **Iron**, 12 Keyed,.....
.....Per Dozen, $1.70

Packed—One Dozen in a Box.



No. R474.

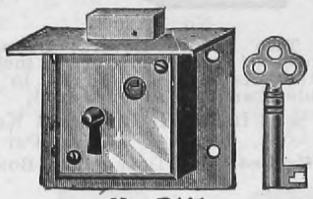
Broad Bolt, One Ward, Back Spring; **Drop**, 1 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. R474—2x2½ inch, **Iron**, 12 Keyed .....
.....Per Dozen, $2.72

Packed—One Dozen in a Box.

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.

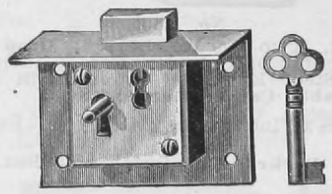


No. R101.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅝ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 60 Changes available.

No. R101—1½x2 inch, **Iron**, 12 Keyed .....
.....Per Dozen, $7.12

Packed—One Dozen in a Box.



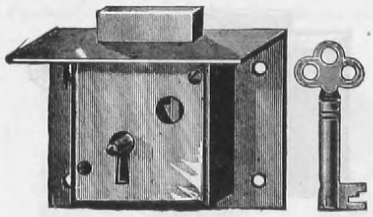
No. R104.

Broad **Brass** Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅝ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 60 Changes available, **Can be** Master-Keyed.

No. R104—1⅝x2⅛ inch, **Iron**, 12 Keyed.....
.....Per Dozen, $7.72

Packed—One Dozen in a Box.

SECURE LEVER



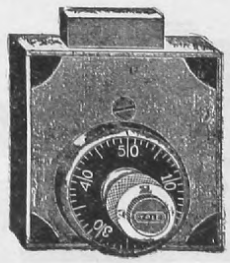
No. R108.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅞ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 4000 changes available, **Can be** Master-Keyed.

No. R108—1¾x2½ inch, **Iron**, 12 Keyed,.....
.....Per Dozen, $7.72

Packed—One Dozen in a Box,

COMBINATION



No. 0200.

All Brass, Broad Bolt, **Three** Tumblers, 500 combinations. Throw of Bolt, 5/16 inch, 1 5/16 inch Dial. Combination easily changed without removing Lock; **Drop,** 1 11/32 inch from edge of Lock to center of Dial. Applied by boring hole for Cylinder. Made regular for ⅞ inch wood. **Other** thicknesses to order.

Combination Drawer and Locker Lock

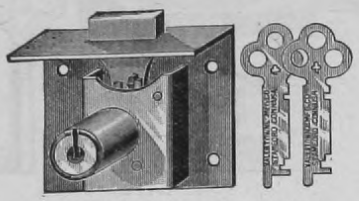
No. 0200—2x2 inch, **All Brass.** Dial Brass with Black Face and White Markings..Per Dozen, $31.15

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.



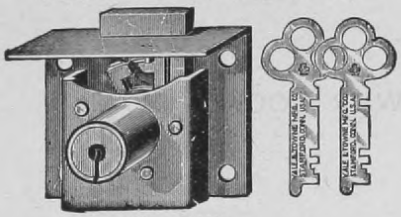
Nos. R294½ and RA294½.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop** ½ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 60 Changes available, **Can be** Master-Keyed.

No. R294½—1⅛x1½ inch, **All Steel,** 24 Keyed . . . . . Per Dozen, $6.28

No. RA294½—1⅛x1½ inch, **All Brass,** 24 Keyed . . . . . Per Dozen, 9.40

Packed—One Dozen in a Box.

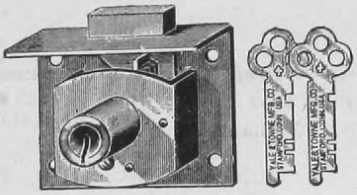


No. R300.

Broad Bolt, Two Secure Levers; **Drop** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

No. R300—1⅝x2 inch, **Iron,** 24 Keyed . . Per Dozen, $8.40

Packed—One Dozen in a Box.

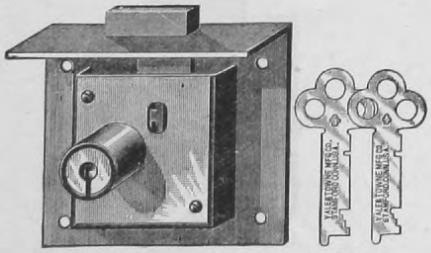


No. RA395.

Broad Bolt, Screwed Box, Three Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 620 Changes available, **Can be** Master-Keyed.

No. RA395—1¾x2 inch, **Brass,** 24 Keyed . . . . . Per Dozen, $10.98

Packed—One Dozen in a Box.



Nos. RA316 and RA316MK.

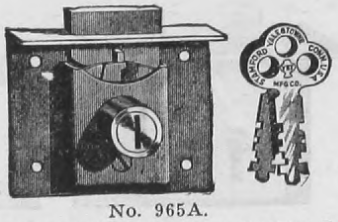
Broad Bolt, Screwed Box, Three Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Key Changes available, and 1290 Master-Key Changes.

No. RA316—2¼x2½ inch, **All Brass,** 24 Keyed . . . . . Per Dozen, $23.24

No. RA316MK—Master-Keyed . . . . . Per Dozen, 26.13

Master Keys "Extra" . . . . . Each, .75

Packed—One Dozen in a Box.



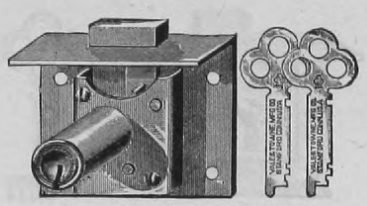
No. 965A.

Broad Bolt, Screwed Box, Two Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys.

All Keyed Alike.

No. 965A—1⅝x2 inch, **All Brass,** 24 Keyed . . . . . Per Dozen $14.97

Packed—One Dozen in a Box.



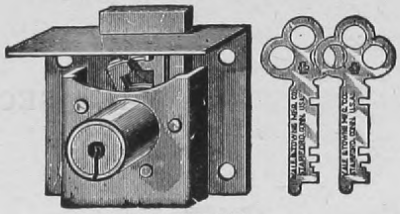
Nos. R295C and RA295C.

Broad Bolt, Two Secure Levers; **Drop,** ¾ inch from Selvedge to center of Concaved Cylinder, for ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

No. R295C—1½x1¾ inch, **Iron,** 24 Keyed . . . . . Per Dozen, $5.80

No. RA295C—1½x1¾ inch, **All Brass,** 24 Keyed . . . . . Per Dozen, 7.34

Packed—One Dozen in a Box.



No. RA300.

Broad Bolt, Two Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

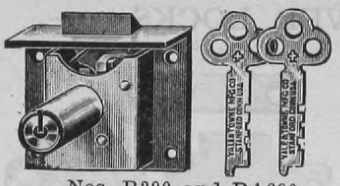
No. RA300—1⅝x2 inch, **All Brass,** 24 Keyed . . . . . Per Dozen, $10.04

Packed—One Dozen in a Box.

Note—Nos. RA316MK. and WA102MK., page 1176, are Master-Keyed in Sets alike with Keys to pass. **Order** locks in Quantity desired and as many Master-Keys as are wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS



Nos. R290 and RA290.

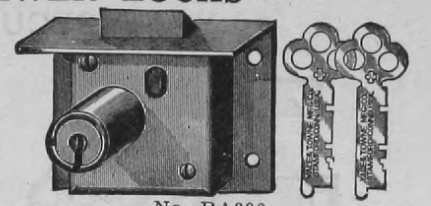
Broad Cast Brass Spring **Latch** Bolt. **Two** Secure Levers; **Drop,** ¾ inch from Selvedge to center of Cylinder. For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen, 60 Changes Available.

No. R290—1½x1¾ inch, **Iron,** 24 Keyed..... Per Dozen, $9.40

No. RA290—1½x1¾ inch, **All Brass,** 24 Keyed.. Per Dozen, 12.54

Packed—One Dozen in a Box.

Half Size Cuts.



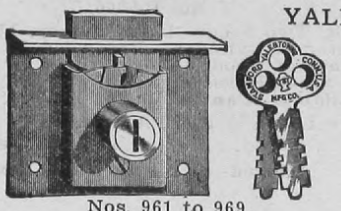
No. RA390.

Broad Bronze Metal Spring **Latch** Bolt. Screwed Box, **Three** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For ⅞ inch wood. Cut for both Drawer and Cupboard. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Changes Available, **Can be** Master-Keyed.

No. RA390—1¾x2¼ inch, **Brass,** 24 Keyed.... Per Dozen, $17.60

Packed—One Dozen in a Box.

YALE STANDARD DRAWER LOCKS



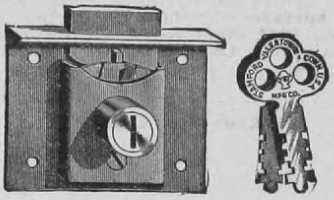
Nos. 961 to 969.

Broad Bolt, Screwed Box, **Two** Secure Levers. **Drop,** ⅞ inch from Selvedge to center of Cylinder, Nickel Plated Flat Steel Keys, all different in a dozen, 12 Changes only Available.

All Brass, 1⅝x2 inch, 24 Keyed.

	Per Dozen
No. 961—For ½ inch Wood	$12.08
No. 962—For ⅝ inch Wood	14.97
No. 963—For ¾ inch Wood	12.08
No. 965—For ⅞ inch Wood	12.08
No. 966—For 1 inch Wood	14.97
No. 967—For 1⅛ inch Wood	14.97
No. 968—For 1¼ inch Wood	14.97
No. 969—For 1⅜ inch Wood	14.97

Packed—One Dozen in a Box.



Nos. 1965 to 1969.

Broad Bolt, Screwed Box, **Four** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 244 Changes Available.

All Brass, 1⅝x2 inch, 24 Keyed.

	Per Dozen
No. 1965—For ⅞ inch Wood	$15.98
No. 1967—For 1⅛ inch Wood	18.87
No. 1969—For 1⅜ inch Wood	18.87

Packed—One Dozen in a Box.

YALE PARACENTRIC DRAWER LOCKS

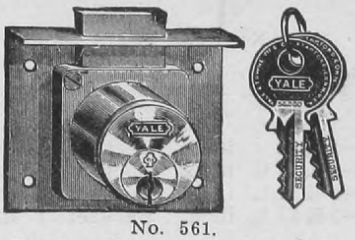
Nos. 5551 and 5561.

Broad Bolt, Screwed Box, ⅞ inch Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

All Brass, for ⅞ inch Wood, 24 Keyed.

	Per Dozen
No. 5551—1½x2 inch, ¾ inch Drop	$29.28
No. 5561—1¾x2 inch, 1 inch Drop	30.08
No. 5561KA—Keyed Alike	32.97
No. 5561MK—Master-Keyed	39.47
Master Keys—Extra Each,	.71

Packed—One-Twelfth Dozen in a Box.

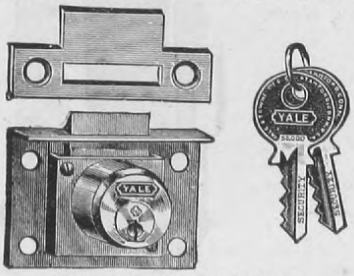


No. 561.

Broad Bolt, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

No. 561—1⅞x2¼ inch, **All Brass,** 24 Keyed.... Per Dozen, $34.50

Packed—One-Twelfth Dozen in a Box.



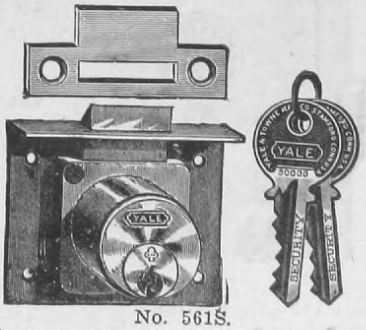
Nos. 5551S and 5561S.

Broad Spring **Latch** Bolt. Screwed Box, ⅞ inch Cylinder. Nickel Bronze Paracentric Keys, changes unlimited. **Can be** Master Keyed.

All Brass, for ⅞ inch Wood, 24 Keyed.

	Per Dozen
No. 5551S—1½x2 inch, ¾ inch Drop	$33.44
No. 5561S—1¾x2 inch, 1 inch Drop	34.30

Packed—One-Twelfth Dozen in a Box.



No. 561S.

Broad Spring **Latch** Bolt, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

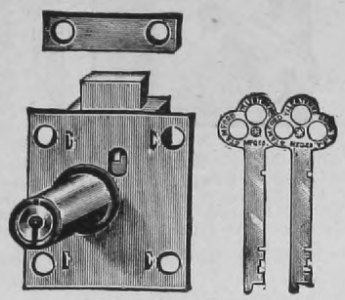
No. 561S—1⅞x2¼ inch, **All Brass,** 24 Keyed.. Per Dozen, $39.72

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.

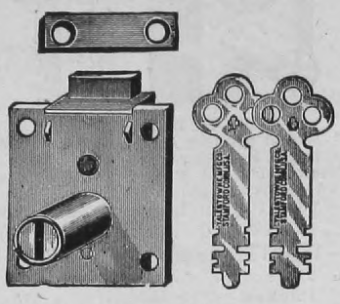


No. R359.

Broad Brass Bolt, **Two** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For wood ⅞ inch thick. Applied to **surface** of wood by boring hole for Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen. 3120 Changes available. **Can be** Master-Keyed.

No. R359—1⅞x1¾ inch, **Iron,** 24 Keyed.....
.....Per Dozen $6.68

Packed—One Dozen in a Box.



No. RA360.

Broad Bolt, Two Secure Levers; **Drop,** 1⅛ inch from Selvedge to center of Cylinder. For wood ⅞ inch thick. Applied to **surface** of wood by boring hole for Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen. 1020 Changes available. **Can be** Master-Keyed.

No. RA360—1⅞x1⅝ inch, **All Brass,** 24 Keyed..
.....Per Dozen, $8.26

Packed—One Dozen in a Box.

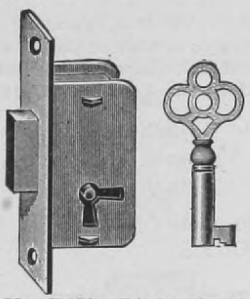
YALE MORTISE CUPBOARD LOCKS

Half Size Cuts.

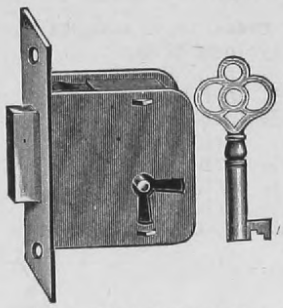
Not Reversible.

State Hand of Door when Ordering.

Cuts show Right Hand Locks.



No. P170—Right Hand.



No. P174—Right Hand.

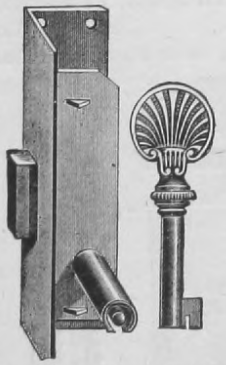
Brass Selvedge, Iron Box, Broad Heavy Bolt, One Tumbler. Backset from Selvedge to center of Key Pin as given below. Fine Flat Bow, Malleable Iron Keys. Double key way for use as a cupboard door or drawer lock as may be desired.

No. P170—2⅝x1 inch. Backset ½ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen $2.62
No. P171—2⅝x1⅛ inch. Backset ⅝ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 2.62
No. P172—2⅝x1¼ inch. Backset ¾ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 2.62
No. P174—2⅝x1½ inch. Backset 1 inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 3.16

Packed—One Dozen in a Box.

YALE CUPBOARD LOCKS

Half Size Cuts.

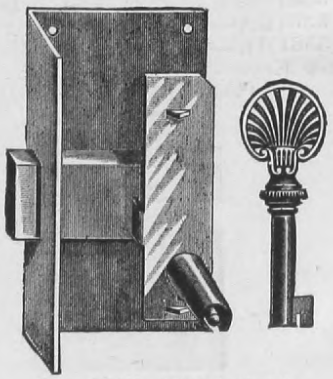


No. PA73—Right Hand.

All Brass, Cut Cupboard Locks; One Tumbler, 12 Keyed, **Fancy** Gold Plated Bow Keys.

Nos. PA73 to **PA81** are all made with the same Key change.

Not Reversible, The Hand of Door must be given; Cuts show Right Hand Locks.



No. PA78—Right Hand.

Polished Brass Finish.

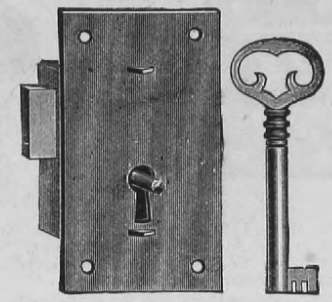
Nos.	PA73	PA75	PA76	PA78	PA80	PA81
Dimensions, inches	3¼x¾	3¼x1⅛	3¼x1⅛	3¼x1⅜	3¼x1⅝	3¼x1⅞
Backset, inches	⅜	⅝	¾	1	1¼	1½
Per Dozen	$14.30	15.52	16.70	19.08	20.24	21.46

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE WARDROBE LOCKS

Half Size Cuts.

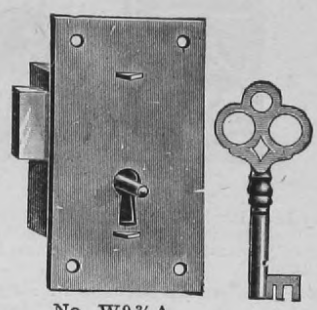


No. W7.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; **Backset,** 13/16 inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys.

No. W7—3x1 5/8 inch, **Iron,** 12 Keyed..Per Dozen, $1.74

Packed—One Dozen in a Box.

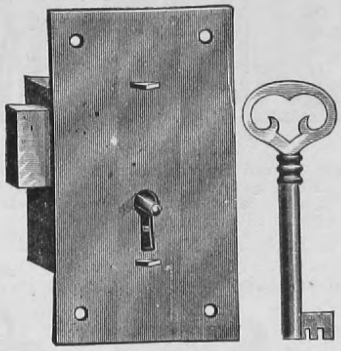


No. W9¾A.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; **Backset,** 13/16 inch from front of Lock to center of Key Pin. **Ornamental** Bronze Keys, 12 Keyed.

No. W9¾A—3x1 5/8 inch, **Iron,** Brass Plated, Unpolished.....Per Dozen, $3.14

Packed—One Dozen in a Box.

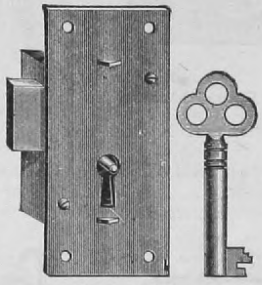


No. W12¼.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; **Backset,** ¾ inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys.

No. W12¼—3 3/8 x1 7/8 inch, **Iron,** 12 Keyed.....
.....Per Dozen, $2.68

Packed—One Dozen in a Box.

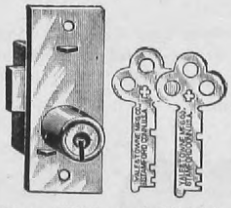


No. W44.

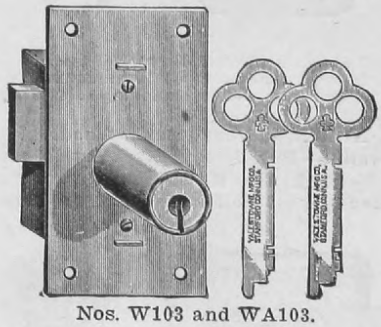
Heavy Bolt that shoots right and left; Square Screwed Box; **Two** Secure Levers; **Backset,** 13/16 inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys, all different in a dozen. 4000 Changes available. **Can be** Master-Keyed.

No. W44—3x1 5/8 inch, **Iron,** 12 Keyed..Per Dozen, $7.72

Packed—One Dozen in a Box.



Nos. W98 and WA98.



Nos. W103 and WA103.

Heavy Bolt that shoots right and left, **Two** Secure Levers; **Backset,** as given below, For Wood as given below, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen. **Can be** Master-Keyed.

Nos.	Material.	Size In.	Backset, In.	For Wood, In.	Changes.	Keyed.	Per Dozen
W98	—Iron	1 7/8 x 3/4	3/8	7/8	252	24	$10.42
WA98	—Brass	1 7/8 x 3/4	3/8	7/8	252	24	12.56
W102	—Iron	2 3/4 x1 1/4	5/8	7/8, 1, 1 1/8	7770	24	14.30
WA102	—All Brass.....	2 3/4 x1 1/4	5/8	7/8, 1, 1 1/8	7770	24	15.08
WA102MK	—Master-Keyed						17.97
Master Keys	—Extra						Each, .71
W103	—Iron	3x1 5/8	13/16	7/8, 1, 1 1/8	7770	24	16.72
WA103	—All Brass.....	3x1 5/8	13/16	7/8, 1, 1 1/8	7770	24	17.38

Packed—Nos. W98 to WA102, One Dozen in a Box; Others, One Half Dozen in a Box.

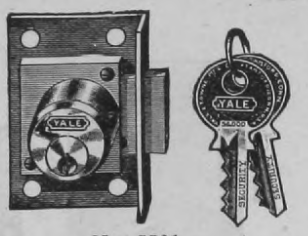
Note.—Nos. WA102MK and RA316MK, page 1173, are Master-Keyed alike with Keys to pass. Order Locks in quantity desired and as many Master-Keys as are wanted.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE CUPBOARD LOCKS

Half Size Cuts.

Not Reversible State Hand of Door when Ordering.

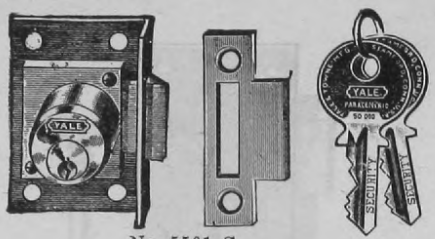


No. 5501.

Heavy Selvedge, Broad Heavy Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5501—2x1½ inch, **All Brass,** 24 Keyed.....Per Dozen, $29.28

Packed—One-Twelfth Dozen in a Box.



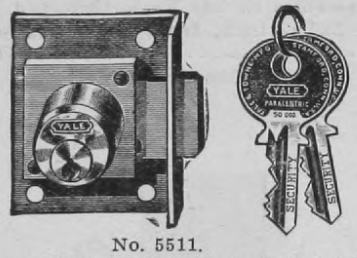
No. 5501-S.

Heavy Selvedge, Broad Spring **Latch** Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5501S—2x1½ inch, **All Brass,** 24 Keyed....Per Dozen, $33.44

Packed—One-Twelfth Dozen in a Box.

Not Reversible. State Hand of Door when Ordering.

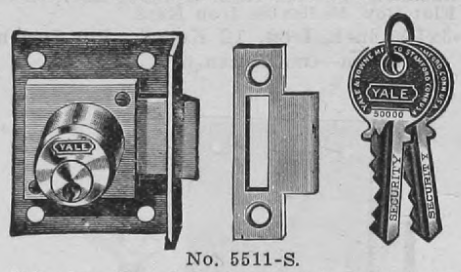


No. 5511.

Heavy Selvedge, Broad Heavy Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5511—2x1¾ inch, **All Brass,** 24 Keyed.....Per Dozen, $30.08

Packed—One-Twelfth Dozen in a Box.

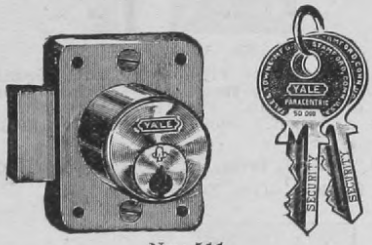


No. 5511-S.

Heavy Selvedge, Broad Spring **Latch** Bolt, Screwed Box, ⅞ inch Cylinder. For ⅞ inch wood; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5511S—2x1¾ inch, **All Brass,** 24 Keyed....Per Dozen, $34.30

Packed—One-Twelfth Dozen in a Box.



No. 511.

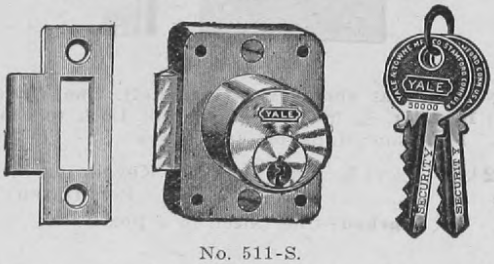
Broad Heavy Bolt, Screwed Box, 1⅛ inch Cylinder, **For** wood as given below; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

All Brass, For ⅞ inch Wood.

Reversible—Bolt Shoots Right and Left.

No. 511—2x1½ inch, 24 Keyed....Per Dozen, $41.82

Packed—One-Twelfth Dozen in a Box.



No. 511-S.

Broad Spring **Latch** Bolt, with Strike. Screwed Box, 1⅛ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to Center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

All Brass, For ⅞ inch Wood.

Not Reversible. State Hand of Door when Ordering.

No. 511S—2x1½ inch, 24 Keyed....Per Dozen, $47.04

Packed—One-Twelfth Dozen in a Box.

Nos. 501 and 505.

Note.—To apply No. 2422 Lock: Remove Knob, apply lock, and replace Knob.

Reversible—Bolt Shoots Right and Left.

Broad Heavy Bolt, Screwed Box, 1⅛ inch Cylinder, For wood as given below; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

2x2 inch, All Brass, Reversible, 24 Keyed.

No. 501—For ⅞ inch Wood.....Per Dozen, $43.86

No. 505—For 1¼ inch Wood.....Per Dozen, 43.86

Packed—One-Twelfth Dozen in a Box.

No. 2422.
Three Lever Tumblers.

Switch Board Box Lock with Knob attachment. Heavy Cast Brass Spring Bolt. Heavy Wrought Screwed Box. Brass Nose **For** ¼ inch Wood or Metal, can be furnished for ⅛, ⅜, ½, ¾, ⅞ and 1 inch to order and at special price. **Backset,** ⅞ inch. **Keys,** Two Nickel Plated Flat Steel, 12 changes, 210 changes possible. Can be Master-Keyed. **Operation**—Latch Bolt is retracted by Knob. Key is used to deadlock or release Knob and Bolt.

For ¼ inch Wood or Iron.

No. 2422—1⅝x1¾ inch, Steel, Black Japanned.....Per Dozen, $17.10

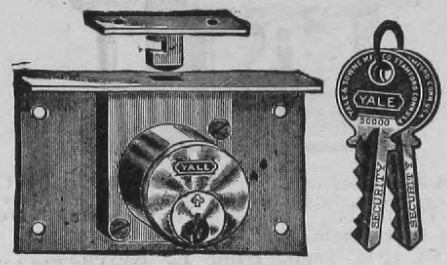
Packed—One Dozen in a Box.

Note.—All Locks on this page **can be** Master-Keyed.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE CHEST AND DESK LOCKS

Half Size Cuts.

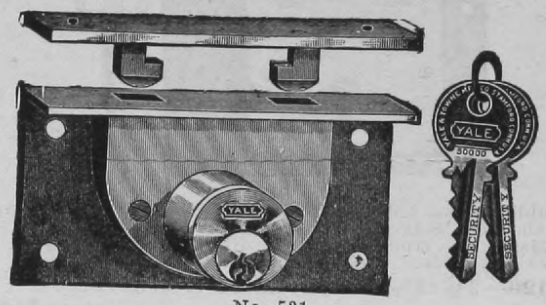


No. 5241.

Single Link, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder, Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 5241—1⅞x3 inch, **All Brass,** 24 Keyed.... .....Per Dozen, $41.16

Packed—One-Twelfth Dozen in a Box.



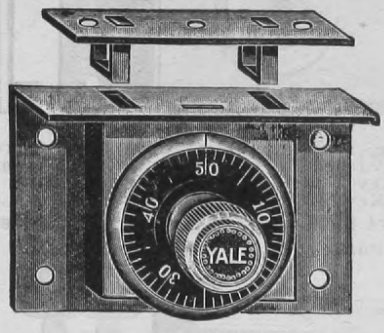
No. 521

Double Link, Screwed Box, 1⅛ inch Cylinder. For 1¼ inch wood. **Drop,** 1¼ inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 521—2x4 inch, **All Brass,** 24 Keyed..... .....Per Dozen, $62.52

Packed—One-Twelfth Dozen in a Box.

CHEST LOCKS



No. 0336.

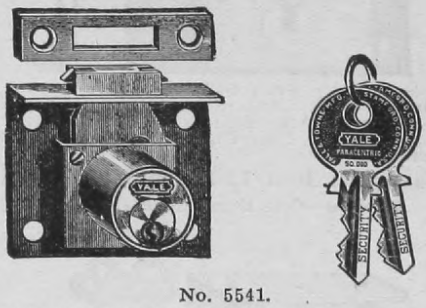
Self Locking, Double Link, Screwed Box, **Four** Tumblers, 11,000 Combinations, 1⅞ inch Dial, black with white numerals: **Drop** 1¼ inch from Selvedge to center of Dial, Combination easily changed without removing Lock. **Specify** thickness of wood when ordering. Directions for operating and changing combination in each box.

Nickel Plated Knob, Black Dial.

No. 0336—2 5/16x3 5/8 inch, **All Brass**..Per Dozen, $50.70

Packed—One-Twelfth Dozen in a Box.

DESK LOCKS



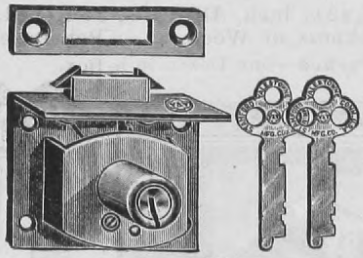
No. 5541.

Double Hook Bolt, Screwed Box, ⅞ inch Cylinder, **Bolt** withdraws from view when in unlocked position. For ⅞ inch wood: **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 5541—1¾x2 inch, **All Brass,** 24 Keyed..... .....Per Dozen, $34.30

Packed—One-Twelfth Dozen in a Box.

YALE DESK LOCKS

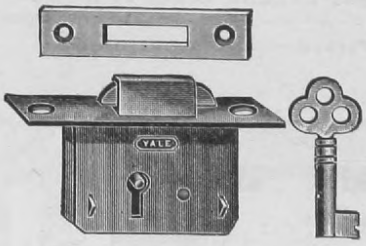


No. SA297.

Double Hook Bolt, **Three** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. Bolt withdraws from view when in unlocked position. For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 1290 Changes available. **Can be** Master-Keyed.

No. SA297—1⅝x2 inch, **All Brass,** 24 Keyed.. .....Per Dozen, $16.02

Packed—One Dozen in a Box.



No. S302.

Heavy **Brass** Strike and Selvedge, Iron Box, Double Hook Bolt; **Drop,** ⅞ inch from Selvedge to center of Key Pin; Bolt withdraws from view when unlocked. Fine Flat Bow Malleable Iron Keys.

No. S302—1⅜x2⅝ inch, 12 Keyed...Per Dozen, $7.12

Packed—One Dozen in a Box.

SPECIAL WORK

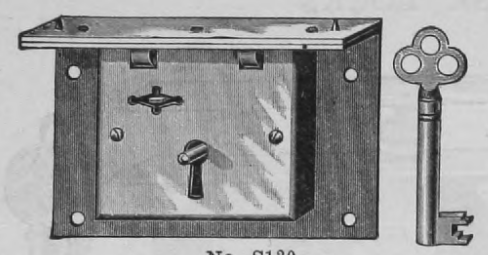
Yale Cabinet Locks in the various styles can be had, Each Lock with any number of Keys, or any number of the same style Lock made with Keys all alike.

Yale Cabinet Locks are also especially adapted to Master-Key work.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE CHEST LOCKS

Half Size Cuts.

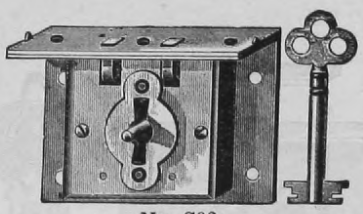


No. S120.

Double Link, Screwed Box, Two Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S120—2¼x3½ inch, **Iron,** 12 Keyed.....
.....Per Dozen, $10.74

Packed—One Dozen in a Box.

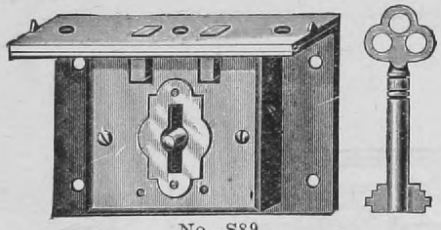


No. S82.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S82—1¾x2½ inch, **Iron,** 12 Keyed.....
..... Per Dozen, $11.36

Packed—One Dozen in a Box.

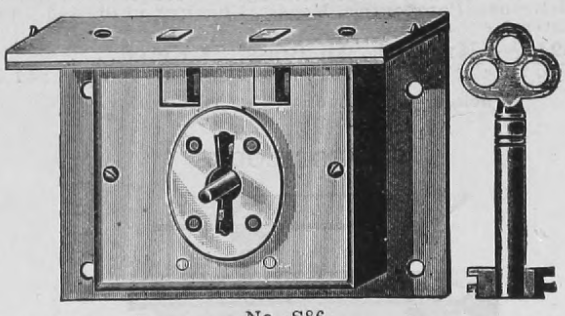


No. S89.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches; **Drop,** 1 inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S89—1⅞x3 inch, **Iron,** 12 Keyed..Per Dozen, $11.96

Packed—One Dozen in a Box.

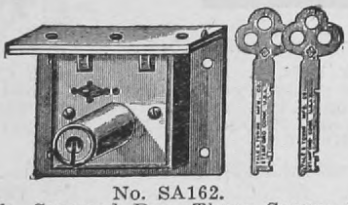


No. S86.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches, Warded Keyhole; **Drop,** 1⅜ inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S86—2¾x4 inch, **Iron,** 12 Keyed..Per Dozen, $14.30

Packed—Half Dozen in a Box.

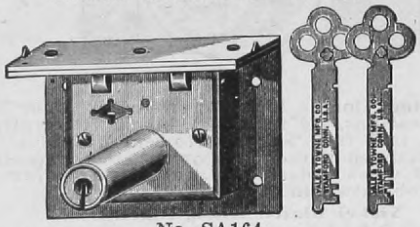


No. SA162.

Double Link, Screwed Box, Three Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For ¾ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen, 252 Changes available.

No. SA162—1½x2 inch, **All Brass,** 24 Keyed....
.....Per Dozen, $15.04

Packed—One Dozen in a Box.

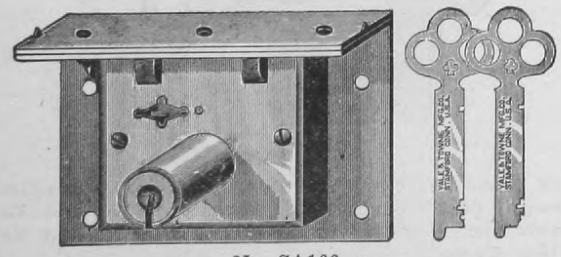


No. SA164.

Double Link, Screwed Box, Four Secure Levers; **Drop,** 1 inch from Selvedge to center of Cylinder. For ¾, ⅞ and 1 inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen. 1020 changes available. **Can be** Master-Keyed.

No. SA164—1¾x2½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, $18.82

Packed—One Dozen in a Box.

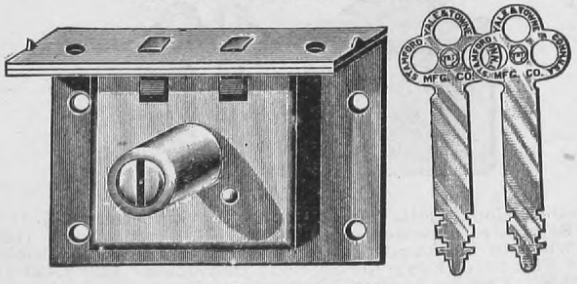


No. SA166.

Double Link, Screwed Box, Four Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Cylinder. For 1 and 1¼ inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. SA166—2¼x3½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, $23.82

Packed—Half Dozen in a Box.



Nos. S168 and SA168.

Self Locking, Double Link, Four Hook Tumblers, Two Wards; Drop, 1⅛ inch from Selvedge to center of Cylinder. For ¾, 1 and 1¼ inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen.

No. S168—2¼x3½ inch, **Iron,** 24 Keyed....
Specify Thickness of Wood.....Per Dozen, $18.38

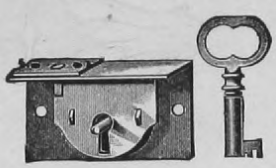
No. SA168—2¼x3½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, 22.24

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE CHEST LOCKS

Half Size Cuts.



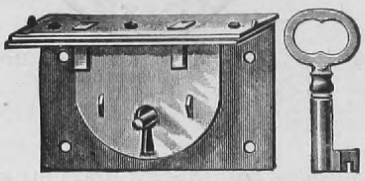
Nos. S22 and SA22.

Single Link, Back Spring; **Drop,** ⅜ inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. S22—⅞x1½ inch, **Iron,** 12 Keyed.....Per Dozen, $1.66

No. SA22—⅞x1½ inch, **Brass,** 12 Keyed.....Per Dozen, 1.80

Packed—One Dozen in a Box.

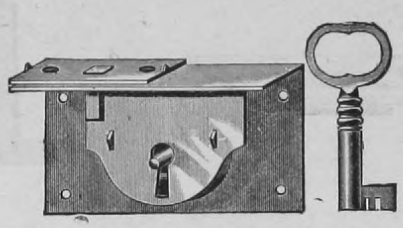


No. S4.

Double Link, Back Spring, One Ward; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys.

No. S4—1½x2½ inch, **Iron,** 12 Keyed..Per Dozen, $5.02

Packed—One Dozen in a Box.

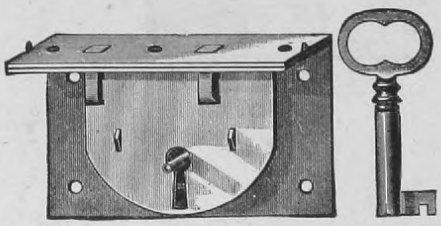


No. S29.

Single Link, Back Spring; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. S29—1½x3 inch, **Iron,** 12 Keyed...Per Dozen, $2.40

Packed—One Dozen in a Box.



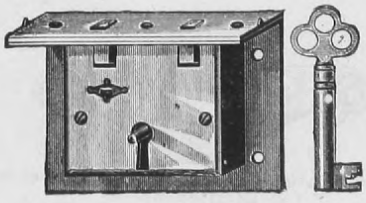
No. S6.

Double Link, Back Spring, One Ward; **Drop,** 1 inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys.

No. S6—2x3 inch, **Iron,** 12 Keyed.....Per Dozen, $5.58

Packed—One Dozen in a Box.

YALE SECURE LEVER CHEST LOCKS

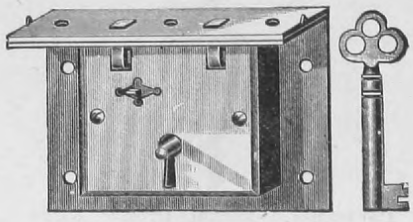


No. S114.

Double Link, Screwed Box, **Two** Secure Levers; **Drop,** 1 inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S114—1¾x2½ inch, **Iron,** 12 Keyed.....Per Dozen, $8.40

Packed—One Dozen in a Box.



Nos. S117 and SA117.

Double Link, Screwed Box, **Two** Secure Levers; **Drop,** 1⅛ inch from Selvedge to center of Key Pin. Fine Flat Bow, Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S117—1⅞x3 inch, **Iron,** 12 Keyed.....Per Dozen, $ 9.60

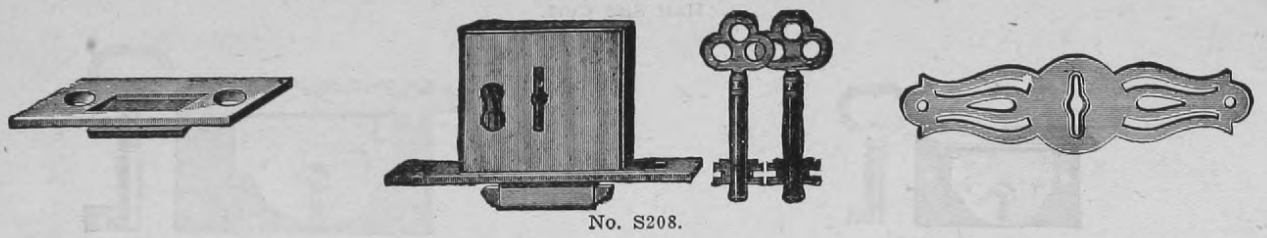
No. SA117—1⅞x3 inch, **Brass,** 12 Keyed.....Per Dozen, 10.74

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE ROLL TOP DESK LOCKS

Half Size Cuts.

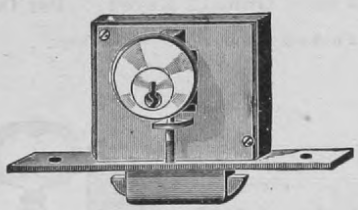


No. S208.

Heavy Brass Selvedge, Iron Box, Brass Escutcheon, **Self Locking,** Double Hook Steel Bolt, Guarded against tampering; One Secure Lever; **Drop,** ⅞ inch from Selvedge to Center of Key Hole. Double Bitted Steel Keys, Six Changes. **Self Closing** Brass Strike.

No. S208—1⅝x3 inch, 24 Keyed, Brass Selvedge.....Per Dozen, $12.76

Packed—Half Dozen in a Box, with Screws.



No. S236 Lock.

Paracentric Nickel Bronze Keys with Coined Gold Plated Bows.

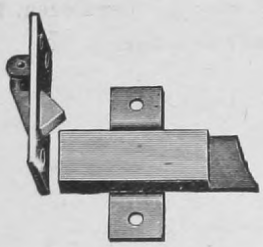
Gold Plated Cast Bronze Escutcheon.

No. S236.

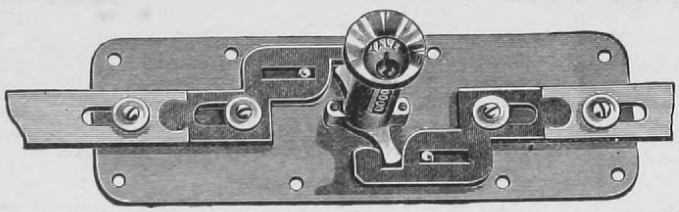
Heavy Brass Selvedge, Screwed Iron Box, Gold Plated Cast Bronze Escutcheon, Self Closing Brass Strike. Self Locking Heavy Brass Spring Bolt with Solid Brass Hooks, guarded against tampering. **Drop,** 1 inch from edge of Selvedge to center of Cylinder. **Thickness**—Made for any thickness of desk rail which must always be specified. Gold Plated Cast Bronze Metal Cylinder, 13/16 inch in diameter. **Two** Paracentric Keys, Pin Tumblers. Changes practically unlimited. **Can be** Master-Keyed. Information on request.

No. S236—1½x3½ inches, Brass Selvedge, 24 Keyed.....Per Dozen, $44.00

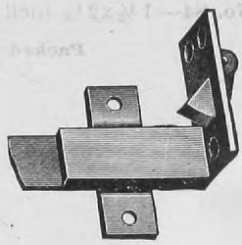
Packed—One-Twelfth Dozen Sets in a Box, with Screws.



View of Bolt and Strike.



No. S250 Lock.



View of Bolt and Strike.

Paracentric Nickel Bronze Keys with Coined Gold Plated Bows.

Gold Plated Ornamental Cast Bronze Escutcheon.

No. S250.

Iron Plate and Rods, Brass Spring Strikes, and Iron Guides. **Length** of Curtain Rail or distance between arms of desk must always be specified. **Drop,** 1⅛ inch from edge of Plate to center of Cylinder. **For Wood**—Furnished for 1⅛, 1¼ or 1½ inch Wood. **Thickness** of Wood must always be specified. Made on special orders for any thickness of Wood. Gold Plated Brass Cylinder, ⅞ inch diameter. **Two** Paracentric Keys, Pin Tumblers. Changes practically unlimited. **Can be** Master-Keyed. Information on request.

No. S250—1⅞x5⅝ inches, 24 Keyed, otherwise as described above.....Per Dozen, $48.34

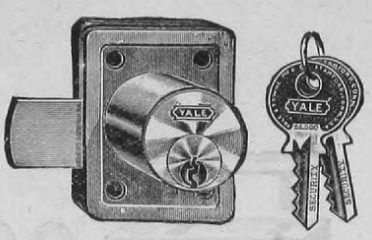
Packed—One-Sixth Dozen Sets in a Box, with Screws.

Note.—Furnished only on special orders.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE LOCKER LOCKS

Half Size Cuts.

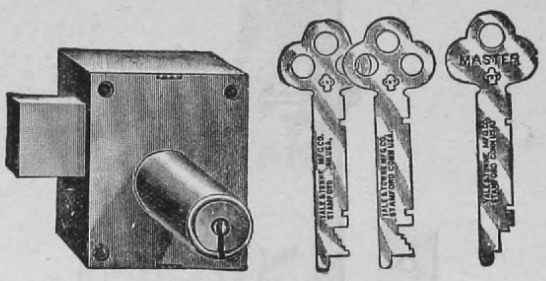


No. 531.

Heavy Bolt, swings right and left, ¾ inch Throw, Bronze Metal Strike, 1⅛ inch Cylinder, **Reversible.** For ⅞ inch wood. **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze **Paracentric** Keys, changes unlimited. **Can be** Master-Keyed.

No. 531—2x1½ inch, **All Bronze** Metal, 24 Keyed .....Per Dozen, $31.38

Packed—One-Twelfth Dozen in a Box, with Screws.



No. W120MK.

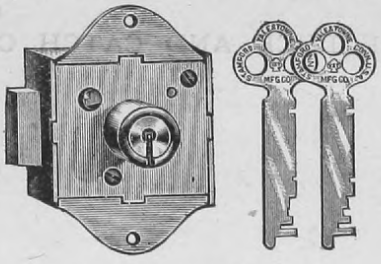
Broad Heavy Brass Bolt, ⅝ inch Throw, shoots right and left. Five Secure Levers. **For** ⅞ inch wood. **Backset,** 13/16 inch from front of Lock to center of Cylinder. Nickel Plated Flat Steel Keys.

Made Regularly Master-Keyed.

No. W120MK—2x1⅝ inch, **Iron,** 24 Keyed..... .....Per Dozen, $18.35

Master Keys "Extra".....Each, .50

Packed—One-Twelfth Dozen in a Box, with Screws.
Note—The $18.35 list does not include Master-Key. Order Locks in quantity desired and as many Master-Keys as are wanted.



No. R381½L.

Dead Bolt Lock for "Metal" Lockers

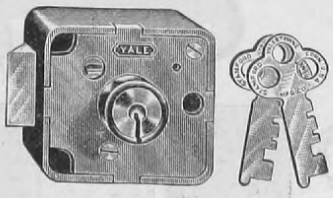
Heavy Cast Bronze Metal Bolt, Three Secure Levers, Heavy Wrought Screwed Box. Brass Cylinder. **Backset,** ⅞ inch from edge of lock to center of nose. **For** ¼ inch thickness, for any other thickness on special orders only. For Doors of either hand. Nickel Plated Flat Steel Keys, all different in a dozen. 46650 Key Changes available. **Can be** Master-Keyed.

No. R381½L—2½x1¾ inch, Steel, Japanned, 24 Keyed.....Per Dozen, $11.08

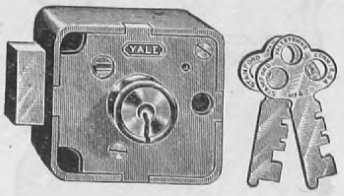
Packed—One Dozen in a Box.

YALE "LOCKER" AND SUB-TREASURY LOCKS

Half Size Cuts.



No. 2222.



No. 2206.

Cylinders are cut either Drawer or Cupboard Style.

Wrought Steel Screwed Case, Heavy Cast Bronze Metal **Spring Latch** Bolt, Three Secure Levers; **Backset,** ⅞ inch from front of Lock to center of Cylinder. **For** ¼ inch thickness, for any other thickness on special orders only. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Key Changes available. **Can be** Master-Keyed.

No. 2222—1½x1¾ inch, Steel, Black Japanned, 24 Keyed.....Per Dozen, $10.56

Packed—One Dozen in a Box.

Wrought Steel Screwed Case, Heavy Brass **Dead Bolt,** Three Secure Levers; **Backset,** ⅞ inch from front of Lock to center of Cylinder. **For** ¼ inch thickness, for any other thickness on special orders only. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Key Changes available. **Can be** Master-Keyed.

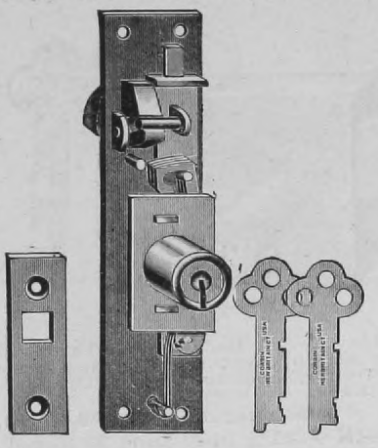
No. 2206—1½x1¾ inch, Steel, Black Japanned, 24 Keyed..... Per Dozen, $10.56

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

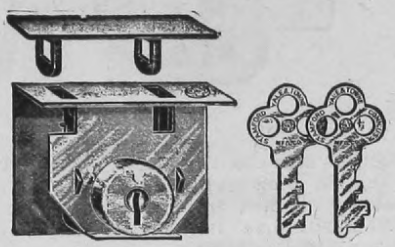
SHOW CASE LOCKS



No. 02295½.
For Sliding Doors.
Heavy Cast Brass Hook Bolt, Heavy Wrought Brass Strike. **Three** Secure Levers. Nickel Plated Flat Steel Keys, all different in a dozen, 252 changes available. For Wood ⅞ inch thick.

No. 02295½—4½x1 inch, **Brass**, 24 Keyed.....Per Dozen, $28.00
Packed—One Dozen in a Box.

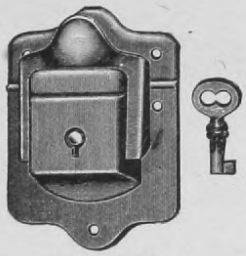
YALE CASH BOX LOCKS



No. S395.
Iron Case, Brass Tube, Iron Double Link, One Secure Lever; **Drop**, 1 inch from Selvedge to center of Cylinder. Nickel Plated Flat Steel Keys. Key Changes alike.

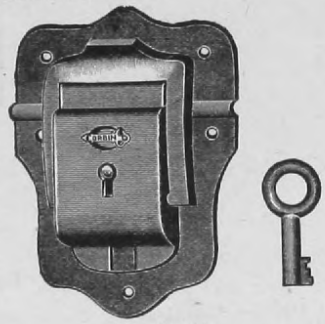
No. S395—1½x2 inch, 24 Keyed.....Per Dozen, $2.34
Packed—One Dozen in a Box.

SUIT CASE LOCK AND CATCH COMBINED



No. 01839.
All Brass, Polished, Buffed and Lacquered. Malleable Iron Key.

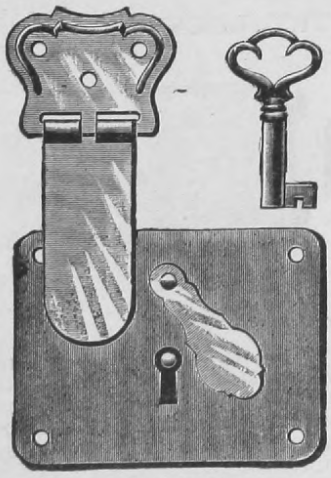
No. 01839—2½x1¾ inch, 12 Keyed...Per Dozen, $6.00
Packed—One Dozen in a Box.



No. 01840.
All Brass, Polished, Buffed and Lacquered. One Secure Lever Wrought Brass Key.

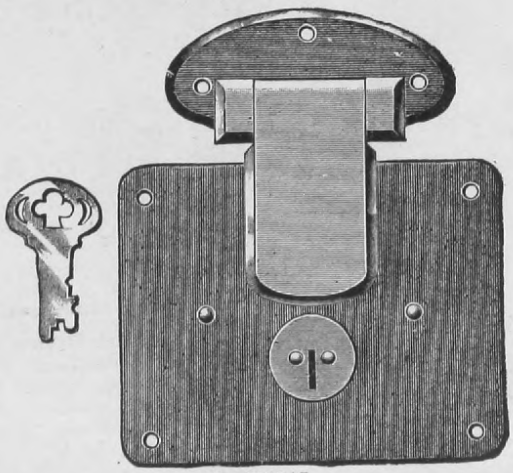
No. 01840—3¼x2¼ inch, 12 Keyed...Per Dozen, $7.00
Packed—One Dozen in a Box.

YALE TRUNK LOCKS



No. TS11J.
Iron Plate and Hasp, Back Spring, Tinned Drop. Malleable Iron Keys.

No. TS11J—3 inch, Japanned, 12 Keyed.....Per Dozen, $1.06
Packed—One Dozen in a Box.



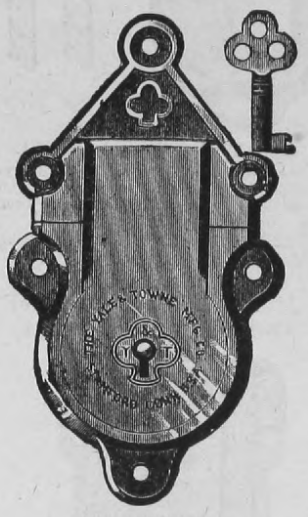
No. TS74J.
Wrought Metal Plate, Extra Heavy Malleable Spring Hasp, Brass Escutcheon. Flat Steel Keys.

No. TS74J—3¼ inch, Japanned, 12 Keyed.....Per Dozen, $1.76
Packed—One Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

YALE TRUNK LOCKS

Half Size Cuts.

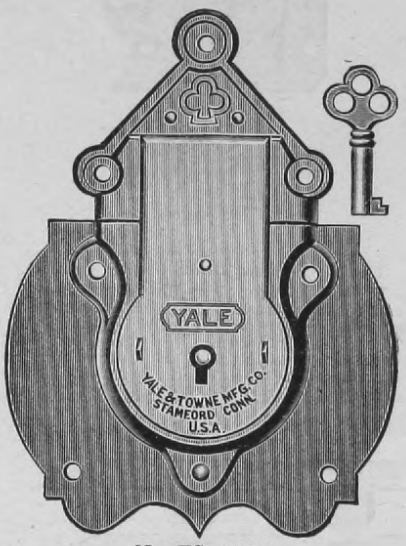


No. TS250½A.

Iron Frame and Center, attached to Surface without cutting Trunk. Flat Bow Malleable Iron Barrel Keys.

No. TS250½A—5 inch, Brass Plated, 12 Keyed... ..... Per Dozen, $2.86

Packed—One Dozen in a Box.



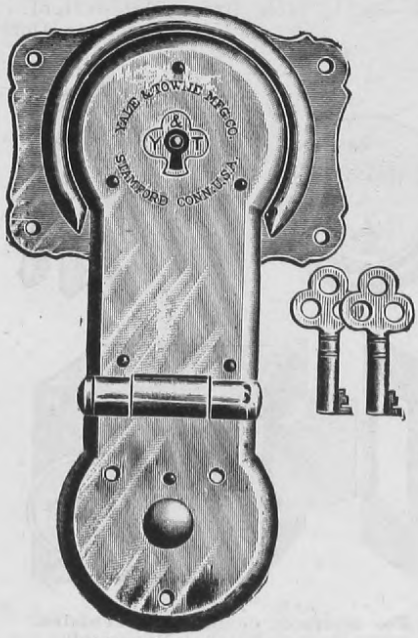
No. TS255½A.

Iron Plate and Center, Malleable Frame, attached to Surface without cutting Trunk. Flat Bow Malleable Iron Barrel Keys.

No. TS255½A—5¼ inch, Brass Plated, 12 Keyed ..... Per Dozen, $3.50

Packed—One Dozen in a Box.

YALE TRUNK LOCKS

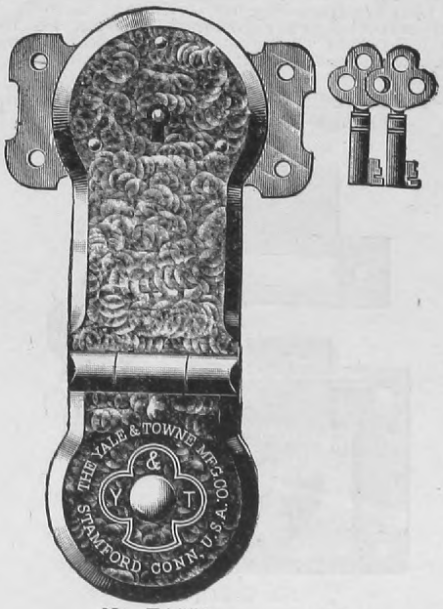


No. TS502¾A.

Brass Plated Wrought Steel Lock with Guard Cup, **Two** Secure Levers. Fine Flat Bow Malleable Iron Barrel Keys, Four Changes in a dozen.

No. TS502¾A—6½ inch, Brass Plated, 24 Keyed .....Per Dozen, $5.58

Packed—One Dozen in a Box.



No. TA552.

Cast Brass Lock and Plated Cup, Machine Surfaced, Buffed Edges, **Two** Secure Levers. Fine Flat Bow Polished Malleable Iron Barrel Keys, Four Changes in a dozen. Furnished with Bolts, Nuts and Washers for attaching.

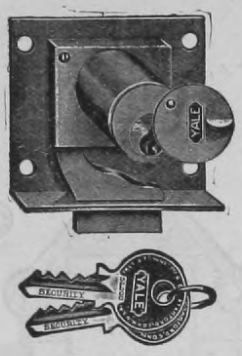
No. TA552—6¼ inch, Cast Brass, 24 Keyed..... .....Per Dozen, $16.40

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.



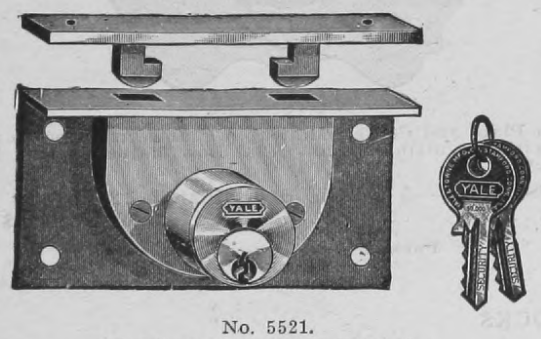
No. 5573¼

For Tool Box Door Under Car.

All Brass, Yale Cylinder Pin Tumbler Lock. Furnished with dust guard to prevent key way from clogging with dirt, etc. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1$^{3}/_{32}$ inch from center of Cylinder to Selvedge. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5573¼—2x1$^{3}/_{16}$ inch, **All Brass**.....Each, $3.50

Packed—One Lock in a Box.



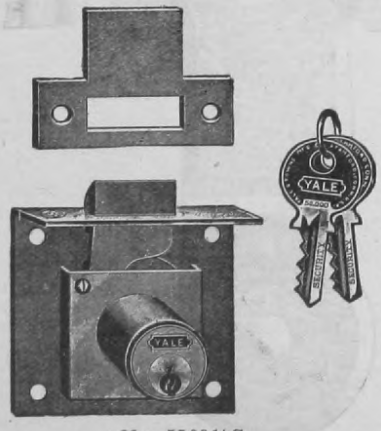
No. 5521.

For Luggage and Tool Boxes.

All Brass, Yale Cylinder Double Hook Lock. Solid Box, Cast Brass Links. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1¼ inch from Selvedge to Center of Cylinder. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5521—2¼x3 inch, **All Brass**....Per Dozen, $45.72

Packed—One Lock in a Box.



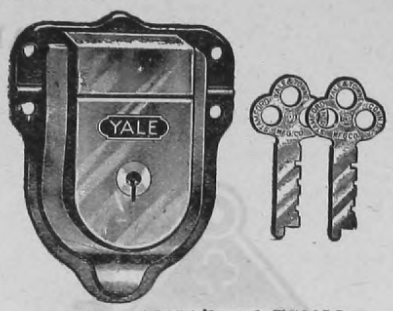
No. 5563½S.

For Heel and Tail Boards.

All Brass, Yale Cylinder Spring Lock. Square Selvedge, Solid Screwed Box. Cast Brass Spring Bolt, Wrought Brass Strike. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1¼ inches from Selvedge to center of Cylinder. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5563½S—2⅛x2¼ inch, **All Brass**.....Per Dozen, $46.26

Packed—One Lock in a Box.



Nos. TA805AZ and TS805J.

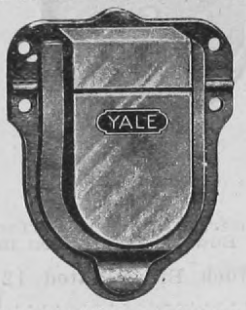
For Metal Tool Boxes. Two Keys.

Yale Lever Tumbler Lock. The Hasp or Loop of Lock is so arranged that when raised it forms a handle and when closed it prevents the lid from rattling.

No. TA805AZ—3x2¼ inch, Polished Brass.....Per Dozen, $8.74

No. TS805J—3x2¼ inch, Japanned Steel.....Per Dozen, 5.24

Packed—One in a Box.



Nos. TA905 and TS905A.

For Metal Battery Boxes. No Keys.

Yale Catch. The Hasp or Loop of Catch is so arranged that when raised it forms a handle and when closed it prevents the lid from rattling.

No. TA905 —3x2¼ inch, Polished Brass.....Per Dozen, $6.11

No. TS905A—3x2¼ inch, Brass Plated Steel....Per Dozen, 3.50

Packed—One in a Box.

No. X042½C.

For Doors of Commercial Vehicles.

Yale Cylinder Spring Latch. **Reversible,** for doors of either hand. **Backset,** 1⅝ inches. **Operated** by Key from outside and by Turn Knob from inside, Self-Locking. **Extra Heavy Case,** Hardened Steel Bolt, 1x⅝ inches, Bronze Cylinder and Turn-Knob. **Illustration** shows Reverse Bevel, which, if wanted, must be specified on order. **Three** Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited.

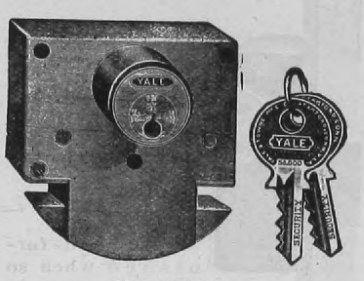
No. X042½C—2x2$^{5}/_{16}$ inch, Cast Iron Case, Antique Copper Finish .....Each, $5.00

Packed—One in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.



No. S261½.

For Hoods.

Wrought Steel Yale Cylinder Spring Lock with Two Cast Bronze Hook Bolts. Designed to securely fasten the Hoods or Bonnets of motor cars and is applied to the center of the lower rim, the bolt engaging with a striker fastened to the frame. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Backset** 1 inch from edge of lock to center of Cylinder. **Two** Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

No. S261½—1½x2¼x½ inch, Steel.....Each, $2.50

Packed—One Lock in a Box.

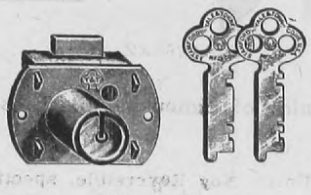
No. 5101.

For Compartments.

All Brass Yale Cylinder Lock, with Broad Heavy Dead Bolt. Screwed Box. **Backset,** ⅝ inch from edge of lock to center of Cylinder. **Diameter** of Cylinder, ⅞ inch. **For Wood**—Regularly furnished for ¾ inch wood; also for ⅞ inch wood, to order, without extra charge; will also be furnished for ⅝, 15/16, 1, 1⅛, 1¼, 1⅜, 1½ and 1⅝ inch wood, to special order, and at an additional price. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5101—1⅝x1¼ inch, **All Brass**...Per Dozen, $32.20

Packed—One in a Box.



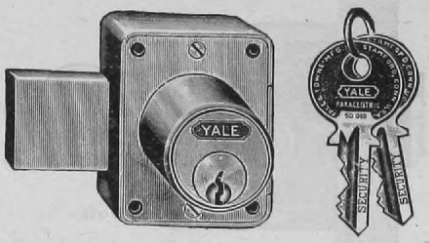
No. R357.

For Compartments.

Iron with Heavy Bolt. **Two** Lever Tumblers. **Drop** or Backset, ½ inch from selvedge to center of Cylinder. **For Wood**—Regularly furnished for ½ inch wood or metal; will also be furnished for 5/32, ¼, 5/16, ⅜, ⅝ and ¾ inch wood, to special order and at an additional price. **Specify** thickness of material when ordering. Applied to surface by boring hole for cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 12 changes. Key can be withdrawn only when lock is locked.

No. R357—1x1½ inch, 24 Keyed.....Per Dozen, $5.80

Packed—One Dozen in a Box.



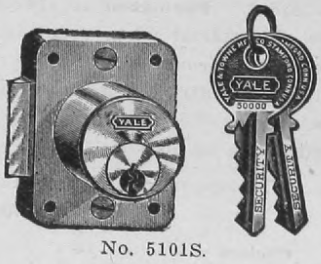
No. 5611.

For Hood Locking Into Radiator.

All Brass Yale Pin Tumbler Cylinder Lock with Broad Heavy Bolt having 1 inch throw. Screwed Box. **Backset,** 13/16 inch from edge of Lock to center of Cylinder. **Cylinder**—⅞ inch diameter; Buffed Nose, may be furnished Nickel Plated to Special order. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5611—2x1⅝ inch, **All Brass**.....Each, $.....

Packed—One in a Box.



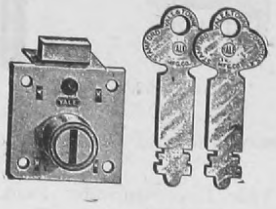
No. 5101S.

For Compartments.

All Brass Yale Cylinder Lock with Broad Heavy **Spring** Bolt. Screwed Box. **Backset,** ⅝ inch from edge of Lock to center of Cylinder. **Diameter** of Cylinder, ⅞ inch. **For Wood**—Regularly furnished for ¾ inch wood; also for ⅞ inch wood, to order, without extra charge; will also be furnished for ⅝, 15/16, 1, 1⅛, 1¼, 1⅜, 1½ and 1⅝ inch wood, to special order, and at an additional price. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5101S—1⅝x1¼ inch, **All Brass**..Per Dozen, $36.38

Packed—One in a Box.



No. R660.

For Compartments.

Iron with Heavy Bolt and **Two** Lever Tumblers. **Drop** or Backset, ¾ inch from selvedge to center of Cylinder. **For Wood**—Regularly furnished for ½ inch wood; will also be furnished for 3/16, ¼, 5/16, ⅜, ⅝ and ¾ inch to special order and at an additional price. **Specify** thickness of material when ordering. Applied to surface by boring hole for cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 12 changes.

Brass Nose and Iron Bolt.

No. R660—13/16x13/16 inch, 24 Keyed....Per Dozen, $6.72

Packed—One Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.

Note.

Dust Guards furnished when so ordered, at an additional price.

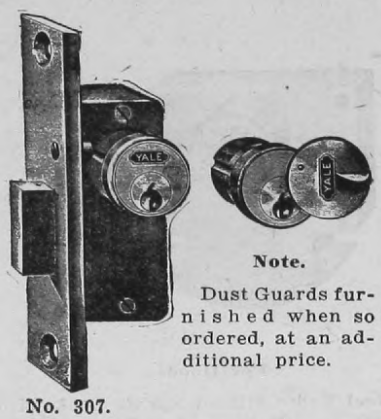
No. 306.

For Limousine and Closed Car Doors

Yale Pin Tumbler Cylinder Dead Lock. **Reversible**—To reverse turn cylinder and tumbler one-half turn. **Cylinder**—⅞ inch diameter, Buffed Nose, may be furnished nickel plated to special order. **Furnished** to special order only; **Specify** thickness of material when ordering. **Operated** by key from outside only. **Front**—Cast Bronze, 3½x⅞ inches, Bronze Bolt, Cylinder and Strike. **Backset,** 1 3/16 inch, **Throw** of Bolt ⅜ inch. **Two** Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 306—2x1¼ inch Copper Plated Iron Case .....Each, $.....

Packed—One in a Box.



Note.

Dust Guards furnished when so ordered, at an additional price.

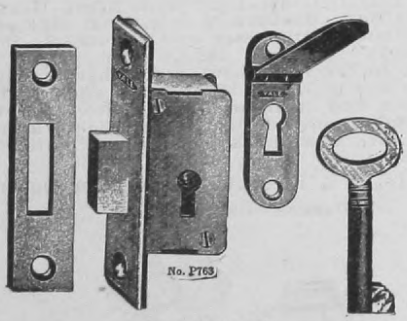
No. 307.

For Limousine and Closed Car Doors

Yale Pin Tumbler Cylinder Dead Lock. **Not** Reversible, **Specify** hand when ordering. **Cylinder**—⅞ inch diameter, Buffed Nose, may be furnished nickel plated to special order. **Furnished** to special order only; **Specify** thickness of material when ordering. **Operated** by key from outside only. **Front**—Cast Bronze, 3¾x⅞ inches, Bronze Bolt, Cylinder and Strike. **Backset**—9/16 inch. **Throw** of Bolt, ⅜ inch. **Two** Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 307—2 5/16x⅞ inch Cast Bronze Case, Each, $.....

Packed—One in a Box.



No. P763AZ.

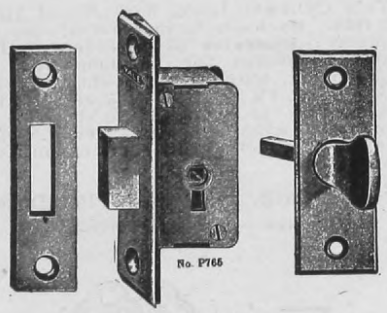
For Limousine and Closed Doors

Wrought Steel, Yale Lever-tumbler Lock. **Operated** by key from outside only. **Not** reversible, **specify** hand required when ordering. **Backset,** ¾ inch from Selvedge to Center of Key Pin. **Front**—Cast Brass, 2 13/16x1 19/32 inch. Brass Bolt and Strike. Throw of Bolt 5/16 inch. **One** Cast Brass Nickel Plated Key with each Lock. 50 Key changes. **Trim:** Cast Brass Key Plate and Drop, 1⅞x9/16 inch.

No. P763AZ—1 11/16x1x⅜ inch **Brass** Plated Steel Case .....Per Dozen, $38.94

Packed—Half Dozen Locks in a Box.

Key Plate, with Dust Shield Extra.....Each, $.....



No. P765AZ.

For Inside Fastening of Limousine and Closed Car Doors

Yale Mortise Bolt. **Not** Reversible, specify hand when ordering. **Operated** by Thumb-Turn from inside only. **Front**—Cast Brass 2 13/16x1 19/32 inches, Brass Bolt and Strike. Cast Brass Thumb-Turn and Plate 2¼x1 3/16 inches. **Backset**—¾ inch. Throw of Bolt 5/16 inch. **Trim:** Cast Brass Thumb-Turn and Plate, 2¼x1 3/16 inches.

No. P765AZ—2¼x1 3/16 inch **Brass** Plated Steel Case .....Per Dozen, $42.82

Packed—One-Twelfth Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE AUTOMOBILE PADLOCKS

No. 701.

No. D701.

For Metal Tire Holders, Tool and Battery Boxes.

No. 701—1⅛ inch, Bronze.....Per Dozen, $20.85
No. D701—With Dust Guard.....Per Dozen, 23.80
Packed—Half Dozen in a Box.

No. 1701.

No. D1701.

No. 1701—1⅛ inch Bronze.....Per Dozen, $21.85
No. D1701—With Dust Guard.....Per Dozen, 24.80
Packed—Half Dozen in a Box.

Note—Nos. 701 to D1701 are particularly adapted for Metal Tire Holders, Tool and Battery Boxes and are described as follows:

Cast Bronze Metal Case, Nickel Plated Self-Locking Steel Spring Shackle. Low Shackle allowing lock to fit close to hasp and staple makes it impossible to force lock and prevents the annoying rattle and defacing of the box. Locks automatically when shackle is brought into locking position. Can be operated with one hand by inserting key and pulling down on lock. Key cannot be withdrawn or drop out until shackle is in a locked position. Four Pin-Tumblers, Two Nickel-Bronze Paracentric Keys. **Can be** Master-Keyed.

No. D830.

For Tire Holders, Gasoline Tanks and Garage Doors.
Cast Bronze Metal Case, Self-Locking Nickel Plated Steel Shackle, Five Pin Tumblers, Two Nickel Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. D830—1½ inch With Dust Guard.....
.....Per Dozen, $31.80
Packed—One-Twelfth Dozen in a Box.

Nos. 2115J and 3115J.

Motorcycle Padlock, Seamless Steel Case, specially treated to prevent rusting, Brass Interior Parts, Nickel Plated Self-Locking Steel Spring Shackle. Easy to apply, the shackle encircles both tubes of the front fork, together with two or more spokes, thus positively preventing the wheel from turning. Fits all makes of machines, is convenient in size and can be carried in the tool bag or pocket. Two Nickel Plated Corrugated Steel Keys.
No. 2115J—2 in. Case, 6⅞ in. Shackle.....
.....Per Dozen, $7.95
No. 3115J—2 in. Case, 5 in. Shackle.....
.....Per Dozen, 7.05
Packed—One-Twelfth Dozen in a Box.

No. 877.

Cast Bronze Metal Case and Self-Locking Spring Shackle, Fire Wheel Finish. Four Lever Tumblers, Two Nickel-Bronze Fluted Keys, 144 Changes.
No. 877—2½ inches, Bronze.....Per Dozen, $62.50
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE PADLOCKS

No. 935MK.

Bicentric Master-Keyed Padlock. Heavy Cast Bronze Metal Case, Fine Wheel Finish, Nickel Plated Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys. **Master-Keyed** by means of a separate plug for the master key. May be arranged in any number of sets with a Master Key to pass the locks in each set and a Grand Master Key to pass all locks. Can also be arranged to operate as a safe deposit lock, requiring the use of both keys to operate.

"Bicentric Master Keyed."

No. 935MK—2 inches, Bronze.....Per Dozen, $53.60

Packed—Each in a Separate Carton, Half Dozen in a Box.

No. 830.

Heavy Cast Bronze Metal Case, Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. 830—1½ inches, Bronze.....Per Dozen, $28.80

Packed—Each in a Separate Carton, Half Dozen in a Box.

No. 840.

Heavy Cast Bronze Metal Case and Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. 840—1¾ inches, Bronze.....Per Dozen, $35.75

Packed—Each in a Separate Carton, Half Dozen in a Box.

No. 850.

Heavy Cast Bronze Metal Case, Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed.

No. 850—2 inches, Bronze.....Per Dozen, $43.70

Packed—Each in a Separate Carton, Half Dozen in a Box.

No. 850½.

Heavy Cast Bronze Metal Case, Self-Locking Steel Spring Shackle. Five Pin-Tumblers, Two Nickel-Bronze Paracentric Keys, Changes unlimited. **Can be** Master-Keyed. **With 9 inch Chain.**

No. 850½—2 inches, Bronze.....Per Dozen, $47.70

Packed—Each in a Separate Carton, Half Dozen in a Box.

Note.—Nos. 840, 850 and 850½ can be furnished with dust guard at additional price.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE PADLOCKS

"STANDARD"

No. 836.

Style of Nos. 814 to 856

No. 853.

Style of Nos. 800 to 863.

Heavy Cast Bronze Metal Case, Fine Wheel Finish; Self-Locking Shackle. Nickel-Bronze Fluted Keys.

Wire Shackle

Nos.	Size, inch.	Tumblers.	Changes.	Keys.		Per Dozen.
814	1	3	48	2	Case Hardened Steel Wire Shackle,	$26.55
815	1	3	48	2	Bronze Wire Shackle,	20.00
836	1½	3	48	2	Steel Wire Shackle,	26.70
856	2	4	144	2	Steel Wire Shackle,	33.45

Packed.—Half Dozen in a Box.

Cast Bronze Shackle

Nos.	Size, inch	Tumblers	Changes	Keys.	Per Dozen.
800	¾	3	24	2	$29.75
813	1	3	48	2	20.00
823	1¼	3	48	2	22.00
833	1½	3	48	2	25.00
843	1¾	4	72	2	28.05
853	2	4	144	2	31.00
863	2¼	4	144	2	38.50

Packed.—Half Dozen in a Box.

No. 843½.

No. 853½.

Heavy Cast Bronze Metal Case, Fine Wheel Finish; Self-Locking Shackle. Nickel-Bronze Fluted Keys.

Cast Bronze Shackle and Wrought Steel Chain

Nos.	Size, inch.	Tumblers	Changes.	Keys.	Chain, inches.	Per Dozen.
843½	1¾	4	72	2	9	$32.25
853½	2	4	144	2	9	35.20

Packed.—Quarter Dozen in a Box.

Note.—Nos. 843, 853, 863, 843½ and 853½ can be furnished with Dust Guard at Additional Price.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE PADLOCKS

Half Size Cuts.

Nos. 563 and 565.

Seamless Steel Case, Bower-Barffed; Nickel Plated Self-Locking Steel Spring Shackle. **Three** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 48 Changes.

No. 563—1½ inches, Steel.....Per Dozen, $13.05
No. 565—2 inches, Steel.....Per Dozen, 15.60

Packed—Half Dozen in a Box.

Nos. 563VX and 565VX.

Seamless Brass Case, Buffed; Nickel Plated Self-Locking Steel Spring Shackle. **Three** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 48 Changes.

No. 563VX—1½ inches, Brass.....Per Dozen, $16.65
No. 565VX—2 inches, Brass.....Per Dozen, 20.00

Packed—Half Dozen in a Box.

Nos. 1563 and 2563.

Seamless Steel Case, Bower-Barffed; Nickel Plated Self-Locking Spring Shackle. **Three** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 48 Changes.

No. 1563—1½ inch Case, 1¾ inch Shackle Clearance.....Per Dozen, $14.00
No. 2563—1½ inch Case, 2½ inch Shackle Clearance.....Per Dozen, 15.05

Packed—Half Dozen in a Box.

Nos. 223 and 225.

Cast Iron Case, Bower-Barffed, with Brass Plated Wrought Steel Panels; Brass Plated Self-Locking Steel Spring Shackle. Warded. **Two** Nickel Plated Flat Steel Keys, 6 Changes.

No. 223—1½ inches, Iron.....Per Dozen, $6.00
No. 225—2 inches, Iron.....Per Dozen, 7.95

Packed—Half Dozen in a Box.

Nos. 8414 to 8454.

Seamless Case, Self-Locking Spring Shackle. **Two** Nickel Plated Corrugated Steel Keys. **Nos. 8414 and 8434** have **Three** Lever Tumblers, 48 Changes; **No. 8454** has **Four** Lever Tumblers, 144 Changes.

Bower-Barffed Case and Shackle

No. 8414—1 inch, Steel.....Per Dozen, $12.90
No. 8434—1½ inches, Steel.....Per Dozen, 16.90
No. 8454—2 inches, Steel.....Per Dozen, 20.85

Packed—Half Dozen in a Box.

No. 8454½.

Seamless Steel Case and Self-Locking Steel Spring Shackle, Bower-Barffed. **Four** Lever Tumblers, **Two** Nickel Plated Corrugated Steel Keys, 144 Changes.

With 9 inch Chain.

No. 8454½—2 inches, Steel.....Per Dozen, $23.85

Packed—Half Dozen in a Box.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

YALE PADLOCKS

Half Size Cuts.

Nos. 803F and 805F.

Iron Case, Bower-Barffed; Buffed Bronze Self-Locking Spring Shackle. **Four** Pin-Tumblers, **Two** Nickel Plated Flat Steel Keys, 144 Changes.

No. 803F—1½ inches, Iron.....Per Dozen, $17.90
No. 805F—2 inches, Iron.....Per Dozen, 17.90

Packed.—Half Dozen in a Box.

Nos. 903 and 905.

Iron Case, Bower-Barffed; Buffed Bronze Self-Locking Spring Shackle. **Four** Pin Tumblers, **Two** Nickel-Bronze Corrugated Keys, 144 Changes.

No. 903—1½ inches, Iron.....Per Dozen, $19.85
No. 905—2 inches, Iron.....Per Dozen, 21.85

Packed.—Half Dozen in a Box.

No. 326.

Cast Iron Case, Nubian Finish, with Copper Plated Steel Discs, **Steel** Inside Parts, Copper Plated Self-Locking Steel Spring Shackle. Warded, **Two** Nickel Plated Flat Steel Keys, 6 Changes.

No. 326—2¼ inches, Iron.....Per Dozen, $11.95

Packed.—Half Dozen in a Box.

No. 805½F.

Iron Case, Bower-Barffed; Buffed Bronze Self-Locking Spring Shackle. **Four** Pin-Tumblers, **Two** Nickel Plated Flat Steel Keys, 144 Changes. **With 9 in. Chain.**

No. 805½F—2 inches, Iron.....Per Dozen, $20.90

Packed.—Quarter Dozen in a Box.

No. 115J.

Steel Case, Ivory Black Finish; Nickel Plated Self-Locking Steel Spring Shackle. Warded, **Two** Nickel Plated Corrugated Steel Keys, 6 Changes.

No. 115J—2 inches, Steel.....Per Dozen, $4.80

Packed.—Half Dozen in a Box.

No. 9425½B.

Cast Bronze Metal Case, Face and Edges Fine Wheel Finish; Buffed Bronze Self-Locking Spring Shackle. **Two** Lever Tumblers and Two Wards, **Two** Nickel Plated Malleable Iron Barrel Keys, 12 Changes. **Size,** 2 inches.

No. 9425B—2 inch, **Without** Chain..Per Dozen, $10.65
No. 9425½B—**With 9 inch Chain**...Per Dozen, 13.65

Packed.—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE PADLOCKS

Half Size Cuts.

No. 9645J.

Steel Case, Ivory Black; Brass Plated Self-Locking Steel Spring Shackle. **Two** Lever Tumblers, **Two** Nickel Plated Malleable Iron Barrel Keys, 12 Changes.

No. 9645J—2 inch, Steel.....Per Dozen, $5.20

Packed.—Half Dozen in a Box.

No. 645C.

Wrought Metal Case and Self-Locking Spring Shackle. **Two** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes.

No. 645C—2 inch, **Steel,** Old Coppered..Per Doz., $5.20

Packed.—Half Dozen in a Box.

No. 9575ZMK.

Galvanized Steel Case and Self-Locking Malleable Iron Spring Shackle. **Six** Lever Tumblers, **Two** Nickel Plated Malleable Iron Barrel Keys, 4000 Changes. **Master-Keyed,** can be arranged in one set of 4000 Locks or less, all different, and all controlled by one Master-Key. **Cannot** be Grand Master-Keyed.

No. 9575ZMK—2 inches, Steel.....Per Dozen, $14.30

Master-Keys—Extra .....Each, .75

Packed.—Half Dozen in a Box.

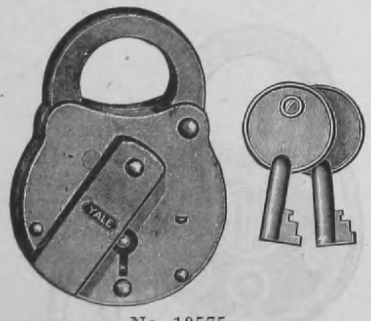
No. 9475Z.

Galvanized Steel Case and Self-Locking Malleable Iron Spring Shackle. **Six** Brass Lever Tumblers, **Two** Double Bitted Barrel Keys, **Keyed alike.**

No. 9475Z—2 inches, Steel.....Per Dozen, $6.95

Packed.—Half Dozen in a Box.

"RAILROAD PADLOCKS"



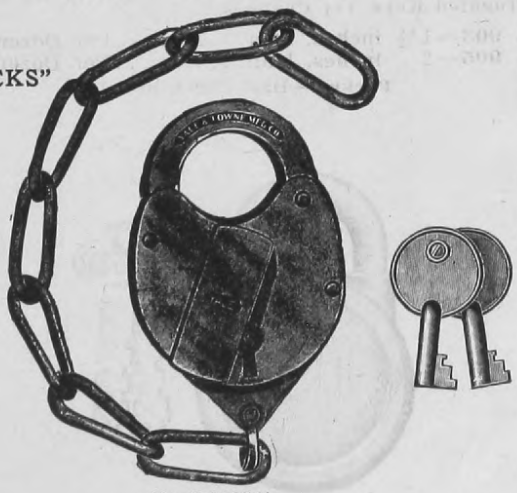
No. 19575.

"Wrought" Bronze Metal Case, Dipped Bright and Lacquered. Brass and Bronze Inside Parts. Cast Bronze Self-Locking Spring Shackle, Wheel Finish. Spring Drop over Keyhole. **Six** Lever Tumblers, **Two** Malleable Iron Barrel Keys, 144 Changes. **Can be** Master-Keyed.

No. 19575—2 in., Wrought Bronze. Per Dozen, $15.70

No. 19575½—2 in., **with** 9 inch Chain.....Per Dozen, 19.70

Packed.—Half Dozen in a Box.



No. D1625½.

Heavy "Cast" Bronze Metal Case, Unpolished. Bronze Metal Inside Parts. Cast Bronze Self-Locking Spring Shackle, Unpolished. Spring Drop over Keyhole. **Three** Lever Tumblers, **Two** Bronze Metal Barrel Keys, 96 Changes. **Can be** Master-Keyed.

No. D1625½—2⅛ inch Case, **with** 9 inch Chain .....Per Dozen, $21.60

Packed.—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE PADLOCKS

Half Size Cuts.

Nos. 681J and 681N.

Steel Case, Nickel Plated Self-Locking Steel Spring Shackle, **Four** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes.

No. 681J—1 inch, Black Japanned...Per Dozen, $5.55

No. 681N—1 inch, Nickel Plated.....Per Dozen, 5.55

Packed.—Half Dozen in a Box.

No. 164J.

Steel Case, Ivory Black Finish; Nickel Plated Self-Locking Steel Spring Shackle. Warded. **Two** Nickel Plated Flat Steel Keys. 6 Changes.

No. 164J—1¾ inches, Steel.....Per Dozen, $5.45

Packed.—Half Dozen in a Box.

No. 674N.

Steel Case, Ivory Black Finish; Brass Plated Self-Locking Steel Spring Shackle. **Two** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 4 Changes.

No. 674N—1¾ inches, Steel.....Per Dozen, $3.30

Packed.—Half Dozen in a Box.

No. 615S.

Steel Case, Ivory Black Finish; Nickel Plated Self-Locking Steel Spring Shackle. Two Lever Tumblers, Two Nickel Plated Flat Steel Keys, 12 Changes. **Can be** furnished with Three Lever-Tumblers and 36 Changes at an additional price.

No. 615S—2 inches, Steel.....Per Dozen, $7.10

Packed.—Half Dozen in a Box.

No. 605V.

Wrought Brass Case, Dipped Bright; Nickel Plated Self-Locking Steel Spring Shackle. **Six** Lever Tumblers, **Two** Nickel Plated Half Corrugated Steel Keys, 12 Changes.

No. 605V—2 inches, Brass.....Per Dozen, $11.95

Packed.—Half Dozen in a Box.

Note.—No. 605V can be furnished with 4000 Key changes on special orders at an additional price.

No. 235.

Iron Case, Bower-Barff Finish; Nickel Plated Self-Locking Steel Shackle. **Two** Corrugated Steel Keys, 6 Changes.

No. 235—2⅛ inches, Iron.....Per Dozen, $7.95

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE PADLOCKS

Half Size Cuts.

No. 671V.

Wrought Brass Case and Self-Locking Spring Shackle. Dipped Bright. **Two** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes.

No. 671V—1 inch, Brass.....Per Dozen, $4.90

Packed.—Half Dozen in a Box.

No. 671½V.

Wrought Brass Case and Self-Locking Spring Shackle, Dipped Bright. **Two** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes. **With 9 inch Chain.**

No. 671½V—1 inch, Brass.....Per Dozen, $7.30

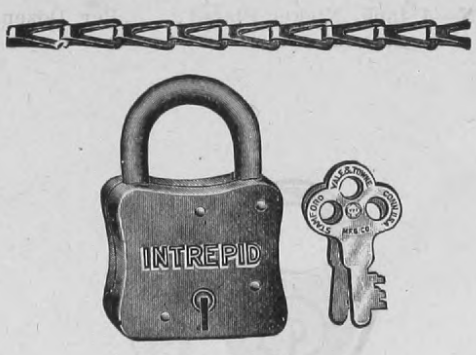
Packed.—Half Dozen in a Box.

No. 534J.

Wrought Steel Case, Japanned; Brass Plated Self-Locking Steel Spring Shackle. **Four** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes. **Can be** Master-Keyed.

No. 534J—1¾ inches, Steel.....Per Dozen, $10.50

Packed.—Half Dozen in a Box.



No. 534½J.

Wrought Steel Case, Japanned; Brass Plated Self-Locking Steel Spring Shackle. **Four** Lever Tumblers, **Two** Nickel Plated Flat Steel Keys, 12 Changes. **Can be** Master-Keyed. **With 9 inch Chain.**

No. 534½J—1¾ inches, Steel.....Per Dozen, $12.90

Packed.—Half Dozen in a Box.

Note.—Nos. 534J and 534½J can be furnished with Six Lever Tumblers and not exceeding 4000 changes on special orders at an additional price.

Nos. 453X and 455X.

Heavy Wrought Steel Case, Brass Plated; Brass Plated Self-Locking Malleable Iron Spring Shackle. Warded, **Two** Nickel Plated Flat Steel Keys, 6 Changes.

No. 453X—1½ inches, Steel.....Per Dozen, $2.60

No. 455X—2 inches, Steel.....Per Dozen, 3.80

Packed.—Half Dozen in a Box.

Nos. 453½X and 455½X.

Heavy Wrought Steel Case, Brass Plated; Brass Plated Self-Locking Malleable Iron Spring Shackle. Warded, **Two** Nickel Plated Flat Steel Keys, 6 Changes. **With 9 inch Chain.**

No. 453½X—1½ inches, Steel.....Per Dozen, $5.00

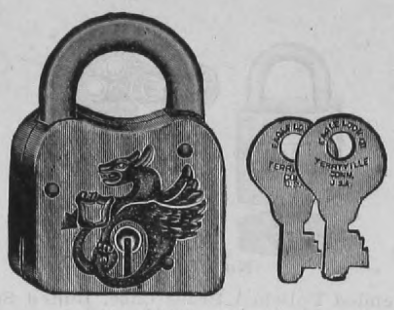
No. 455½X—2 inches, Steel.....Per Dozen, 6.20

Packed.—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EAGLE PADLOCKS

Half Size Cuts.



Nos. 4166 to 4168.

Ivory Black Wrought Iron Case. Nickel Plated Self-Locking Cast Spring Shackle. **Two** Nickel Plated Flat Steel Keys, 6 Changes of Keys.

No. 4166—1¾ inches, Iron.....Per Dozen, $2.00

No. 4167—2 inches, Iron.....Per Dozen, 2.50

No. 4168—2¼ inches, Iron.....Per Dozen, 3.00

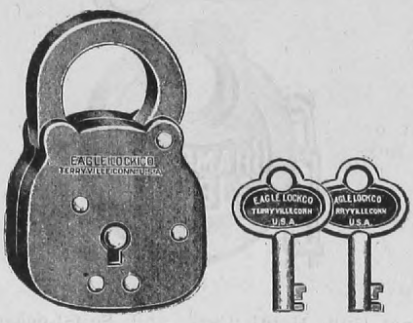
Packed—One Dozen in a Box.

No. 04610⅓.

Cast Brass Case, Polished. Self-Locking Malleable Iron Spring Shackle, Black Nickel. Warded. **Two** Nickel Plated Flat Steel Keys each. Six Changes of Keys.

No. 04610⅓—1¾ inches, Cast Brass..Per Dozen, $6.00

Packed—One Half Dozen in a Box.



No. 4560¼.

Brass Plated Wrought Iron Case. Brass Plated Malleable Iron Self-Locking Spring Shackle. **Three** Secure Levers. **Two** Nickel Plated Steel Barrel Keys. 12 Changes of Keys.

No. 4560¼—2 inches. Iron.....Per Dozen, $8.00

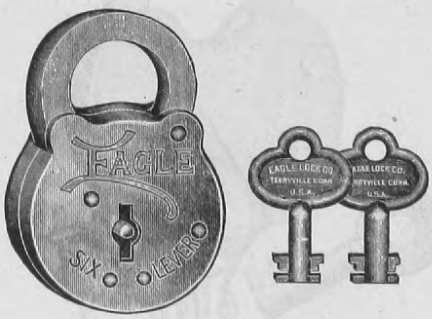
Packed—One Dozen in a Box.

No. 4059.

Corrugated Iron Case, Antique Silver Lacquered; Self-Locking Heavy Cast Brass Spring Shackle, Jiggered and Buffed. **Four** Secure Levers. **Two** Nickel Plated Flat Steel Keys, 12 Changes of Keys. 250 Changes available.

No. 4059—2 inches, Iron.....Per Dozen, $10.00

Packed.—Half Dozen in a Box.

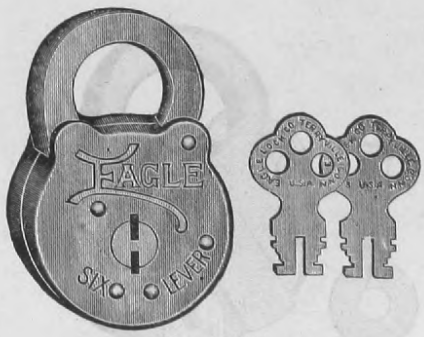


No. 4234½.

Brass Plated Wrought Iron Case. Brass Plated Malleable Iron Self-Locking Spring Shackle. **Six** Secure Levers. **Two** Nickel Plated Double Bitted Wrought Steel Barrel Keys. Twelve Changes of Keys.

No. 4234½—2 inches, Iron.....Per Dozen, $7.50

Packed—Half Dozen in a Box.



No. 4158¼.

Brass Plated Wrought Iron Case. Brass Plated Self-Locking Spring Shackle. **Six** Secure Levers. **Two** Double Bitted Flat Steel Keys. 12 Changes of Keys.

No. 4158¼—2 inches, Iron.....Per Dozen, $8.00

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EAGLE PADLOCKS

Half Size Cuts.

No. 04123A.

Heavy Brass Case and Self-Locking Spring Shackle, Revolving Key Bushing, Dipped Finish. **Four** Secure Levers, **Two** Nickel Plated Flat Steel Keys. **Master-Keyed,** made regularly with 150 Changes of Keys. **Can be** made with 3000 Changes of Keys.

No. 04123A—1¼ inches, Cast Brass..Per Dozen, $10.00
Master-Keys, Extra .....Each, .75

Packed—Half Dozen in a Box.

No. 04279.

Solid Extended Polished Brass Case, Buffed Self-Locking Brass Spring Shackle. Pin-Tumbler Mechanism. **Two** Embossed Gilt Bow Nickel-Silver Keys. **No** two locks alike. Changes practically unlimited. **Can be** Master-Keyed.

No. 04279—1 inch, All Brass.....Per Dozen, $20.00
No. 04280—1⅜ inches, All Brass...Per Dozen, 22.50

Packed.—One-Twelfth Dozen in a Box.

MILLER PADLOCKS

No. 1.

Gun Metal Springs

Fully guaranteed not to rust or give out under the action of any climate.

No. 1C.

Heavy Cast Gun Metal Case and Self-Locking Spring Shackle, Brass Inside Parts, Gun Metal Springs. **Six** Levers. **Two** Nickel Plated Flat Steel Keys, all different in a Dozen. Unlimited Changes.

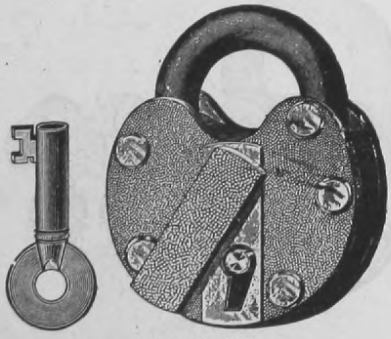
No. 1—2¼ inches, Gun Metal.....Per Dozen, $18.29

Packed.—Half Dozen in a Box.

Heavy Cast Gun Metal Case and Self-Locking Spring Shackle, Brass Inside Parts, Gun Metal Springs. **Six** Levers. **Two** Nickel Plated Flat Steel Keys, all different in a Dozen. Unlimited Changes. **With 8 inch Chain.**

No. 1C—2¼ inches, Gun Metal.....Per Dozen, $20.50

Packed.—Half Dozen in a Box.



No. 0039-1.

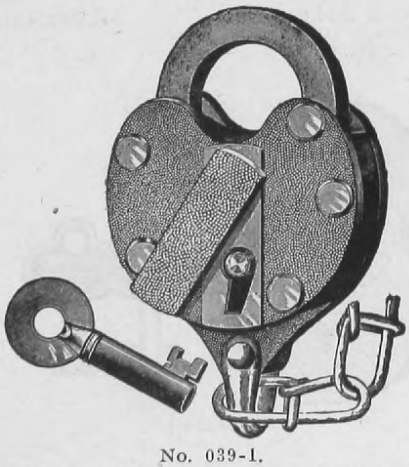
Railroad Switch, Car and Warehouse Locks

Heavy Cast Bronze Case and Shackle, with Spring Drop over Keyhole. **One** Cast Bronze Drilled Barrel Key, 12 Changes.

No. 0039-1—2½ inches, Bronze.....Per Dozen, $17.73

Packed.—Half Dozen in a Box.

Note.—Specify on order if Keys are wanted **"alike."**



No. 039-1.

Railroad Switch, Car and Warehouse Locks

Heavy Cast Bronze Case and Shackle, with Spring Drop and 9 inch Steel Chain. **One** Cast Bronze Drilled Barrel Key. 12 Changes.

No. 039-1—2½ inches, Bronze.....Per Dozen, $19.40

Packed.—Half Dozen in a Box.

Note.—Specify on order if Keys are wanted **"alike."**

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

MILLER PADLOCKS

Half Size Cuts.

No. 21.

No. 220.

Wrought Metal Case, Self-Locking Malleable Iron Spring Shackle. **Two** Nickel Plated Flat Steel Keys. Shackles are bolted at the nose as well as the heel, giving additional security and strength.

Steel Case, Black Enameled, Nickel Plated Shackle.

No. 16—1 5/16 inches, 6 Changes.....Per Dozen, $2.66
No. 18—1 ½ inches, 6 Changes.....Per Dozen, 2.89
No. 21—2 inches, 12 Changes.....Per Dozen, 4.00
No. 22—2 ⅝ inches, 24 Changes.....Per Dozen, 5.55

Packed—Nos. 16 and 18, One Dozen;
Nos. 21 and 22, Half Dozen in a Box.

Brass Case, Dipped Bright; Brass Inside Parts, Black Enameled Shackle.

No. 180—1 ½ inches, 6 Changes.....Per Dozen, $4.99
No. 210—2 inches, 12 Changes.....Per Dozen, 7.20
No. 220—2 ⅝ inches, 24 Changes.....Per Dozen, 10.53

Packed—No. 180, One Dozen;
Nos. 210 and 220, Half Dozen in a Box.

Nos. 88 and 88B.

Extra Thick Wrought Steel Case, Brass Rivets, Self-Locking Malleable Iron Spring Shackle. Shackles are bolted at both nose and heel. **Two** Nickel Plated Flat Steel Keys, 12 Changes.

No. 88—2 inches, Black Enameled..Per Dozen, $4.10
No. 88B—2 inches, Brass Plated.....Per Dozen, 4.10

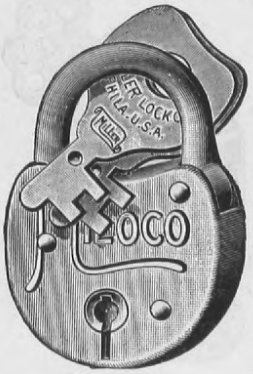
Packed.—Half Dozen in a Box.

No. 77.

Wrought Brass Case and Self-Locking Spring Shackle, Buffed Bright. Brass Inside Parts. **Four** Levers, **Two** Nickel Plated Flat Steel Keys, 12 Changes.

No. 77—2 inches, Brass.....Per Dozen, $11.08

Packed.—Half Dozen in a Box.



No. 478.

"Miloco"—Black Enameled Steel Case. Brass Plated Malleable Iron Self-Locking Spring Shackle. **Two** Nickeled Flat Steel Keys each.

No. 477—1 1/16 inches, Steel.....Per Dozen, $1.20
No. 478—1 5/16 inches, Steel.....Per Dozen, 1.20

Packed—One Dozen in a Box.

No. 705.

"Keyed Alike"

Black Enameled Heavy Wrought Steel Case, Brass Plated Self-Locking Malleable Iron Spring Shackle, Extra Strong Interior Parts. **Six** Levers, **Two** Nickel Plated Double Bitted Flat Steel Keys, **Keyed alike.**

No. 705—2 inches, Steel.....Per Dozen, $4.88

Packed.—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

MILLER PADLOCKS

Half Size Cuts.

No. 1805B.

Brass Plated Steel Case and Self-Locking Malleable Iron Spring Shackle. **Two** Nickel Plated Flat Steel Keys, 6 Changes.

No. 1805B—1⅝ inches, Steel.....Per Dozen, $2.33

Packed.—Half Dozen in a Box.

No. 50.

Black Enameled Steel Case, Nickel Plated Self-Locking Malleable Iron Spring Shackle, Brass Inside Parts. **Five** Levers, **Two** Nickel Plated Flat Steel Keys, 400 Changes.

No. 50—1½ inches, Steel.....Per Dozen, $8.87

Packed.—Half Dozen in a Box.

No. 242.

Rural Free Delivery Padlocks. Dipped Brass Case, Galvanized Self-Locking Malleable Iron Spring Shackle, Brass Inside Parts. **Two** Nickel Plated Flat Steel Keys. **Master-Keyed** in 36 Changes, One Master-Key with each dozen locks.

No. 242—1¾ inches, Brass.....Per Dozen, $7.43

Packed.—Half Dozen in a Box.

No. 242C.

Rural Free Delivery Padlocks. Dipped Brass Case, Galvanized Self-Locking Malleable Iron Spring Shackle, Brass Inside Parts. **Two** Nickel Plated Flat Steel Keys. **Master-Keyed** in 36 Changes, One Master-Key with each dozen locks. **With 8 inch Chain.**

No. 242C—1¾ inches, Brass.....Per Dozen, $9.10

Packed.—Half Dozen in a Box.

MISCELLANEOUS PADLOCKS

No. 4133.

Ivory Black Finish, Wrought Iron Case, Brass Plated Self-Locking Spring Shackle. **Eight** Secure Levers, **Two** Nickel Plated Double Bitted Wrought Steel Keys. Made regularly all different in a Dozen. **Can be** made with 3120 changes of keys and 780 changes, all different, to one Master-Key, or 3120 changes, all different, to four different Master-Keys.

No. 4133—2½ inches, Iron.....Per Dozen, $7.86

Packed.—Half Dozen in a Box.

No. 160.

Heavy Iron Case, Black Rustless Finish, Self-Locking Bronze Shackle. **Four** Pin Tumblers, **Two** Nickel Plated Flat Steel Keys.

No. 160—2 inches, Iron.....Per Dozen, $16.50

Packed.—Half Dozen in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

MISCELLANEOUS PADLOCKS

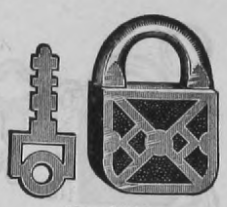
Half Size Cuts.

No. 1903.

Heavy Brass Case, Black Finish; Self-Locking and Self-Rotating Steel Spring Shackle. Two Nickel Plated Corrugated Steel Keys.

No. 1903—1¼ inches, Brass.....Per Dozen, $4.80

Packed.—One Dozen in a Box.

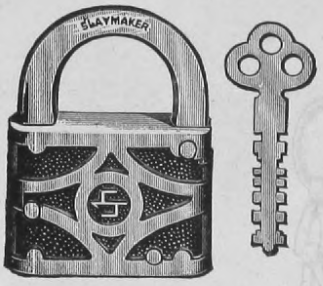


No. 3303.

Brass Plated Iron Case and Self-Locking Spring Shackle. Two Double Bitted Flat Steel Keys.

No. 3303—1⅜ inches, Iron.....Per Dozen, $2.40

Packed.—One Dozen in a Box.



No. 9161.

Heavy Brass Case, Black Finish, with Raised Parts Relieved; Black Finish Self-Locking Brass Spring Shackle. Two Nickel Plated Flat Steel Keys, all different in a Half Dozen.

No. 9161—2⅛ inches, Brass.....Per Dozen, $7.80

Packed.—Half Dozen in a Box.

No. 412.

Brass Plated Steel Case, and Self-Locking Spring Shackle. Two Nickel Plated Flat Steel Keys.

No. 412—2 inches, Steel.....Per Dozen, $2.50

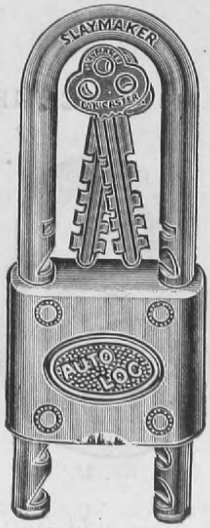
Packed.—One Dozen in a Box.

No. 196.

Heavy Steel Case, Black Enameled; Heavy Steel Wire Self-Locking Spring Shackle, Nickel Plated, Spring Levers, Two Flat Steel Keys.

No. 196—2¼ inches, Steel.....Per Dozen, $7.60

Packed.—Half Dozen in a Box.



"Auto Lock."

Polished Cast Brass Case, Hardened Steel Rod Shackle with inside clearance adjustable from ⅝ inch to 4¼ inches. Two Corrugated Steel Keys.

No. 1093—2⅛ inches, Brass.....Per Dozen, $12.70

Packed.—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MISCELLANEOUS PADLOCKS

Half Size Cuts.

No. 715.

Black Finished Steel Case, Brass Plated Malleable Iron Shackle. **Three** Brass Tumblers, Brass Key Bushing, 12 inch Chain with Ring. **Two** Nickel Plated Flat Steel Keys with each lock. 12 Changes.

No. 715—1 inch, Steel.....Per Dozen, $4.80

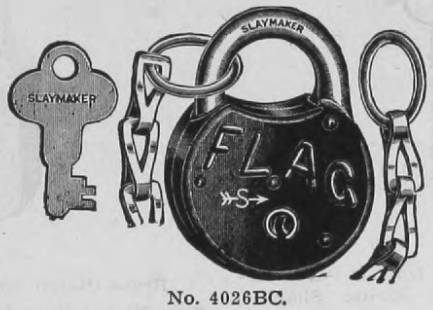
Packed.—One Dozen in a Box.

No. 07240.

Aluminum Case and Shackle, Phosphor Bronze and Steel Springs, Aluminum Bronze Key-Hole Cylinder, 10 inch Brass Chain. **Two** Nickel Plated Flat Steel Keys with each lock.

No. 07240—$1\frac{1}{16}$ inches, Aluminum....Per Dozen, $5.90

Packed.—One Dozen in a Box.



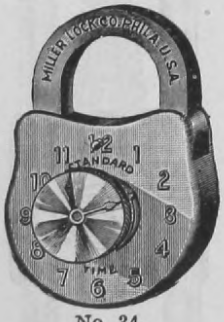
No. 4026BC.

Black Enameled Steel Case, Nickel Plated Self-Locking Wrought Steel Wire Shackle, Brass Bushing, 10 inch Galvanized Steel Safety Chain. **Two** Nickel Plated Flat Steel Keys with each lock.

No. 4026BC—1½ inches, Steel.....Per Dozen, $3.30

Packed.—One Dozen in a Box.

COMBINATION OR KEYLESS PADLOCKS



No. 34.

Standard Time Padlock. Black Enameled Steel Case, Nickel Plated Self-Locking Malleable Iron Spring Shackle, Nickel Plated Brass Dial and Knob, Brass Inside Parts. Opens at right combination only, 600 combinations available. Full directions for operating with each lock.

No. 34—2 inches, Steel.....Per Dozen, $19.95

Packed.—One-Twelfth Dozen in a Box.

No. 5.

The Keyless Wonder. No number to look for. Wrought Steel Case, Ivory Black Finish. Blued Steel Wire Self-Locking Spring Shackle. Always responds to Correct Combination.

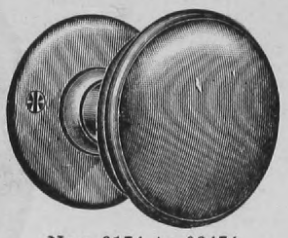
No. 5—2 inches, Steel.....Per Dozen, $12.00

Packed.—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

METAL DOOR KNOBS



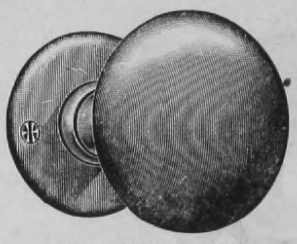
Nos. 3174 to 03474.

Half Size Cut.

Bead Type, 2¼x2¼ inches. 5/16 inch Triplex Spindles, 2¼ inch Plain Roses.

Wrought Bronze Metal

Nos.	Finishes	Per Dozen Pairs
3174	—Plain Bronze Metal	$14.55
3274	—Antique Copper	16.05
3474	—Light Dull Brass	16.05
3574	—Sanded Statuary Brass	16.05



Nos. 4174 to 4874.

Half Size Cut.

Spheroid Type, 2¼x2¼ inches. 5/16 inch Triplex Spindles, 2⅛ inch Plain Roses.

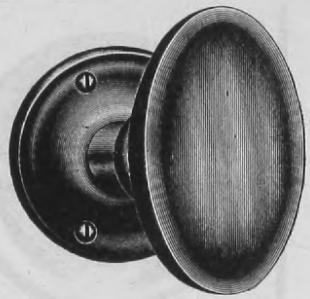
Wrought Bronze Metal

Nos.	Finishes	Per Dozen Pairs
4174	—Plain Bronze Metal	$17.85
4274	—Antique Copper	19.35
4474	—Light Dull Brass	19.35
4574	—Sanded Statuary Brass	19.35
4874	—Bower-Barff	15.00

Wrought Steel-Beaded Type

No. 03274—Antique Copper Finish.....Per Dozen Pairs, $8.35
No. 03474—Light Dull Brass Finish.....Per Dozen Pairs, 8.35

Packed.—Quarter Dozen Pairs in a Box.



No. 9474. Half Size Cut.

Cast Brass Metal

Oval Old English Type.

2⅝x1⅝ inches. 5/16 inch Spindles.
2⅛ inch Cast Brass Plain Roses.

No.	Finish	Per Dozen Pairs
9474	—Light Dull Brass	$60.00

Packed.—Quarter Dozen Pairs in a Box.

No. 710. One-Third Size Cut.

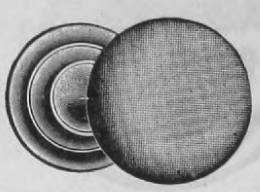
Cast Brass Metal

Octagon Type.

2¼x2¼ inches. 5/16 inch Solid Spindles, 1¾ inch Cast Brass **Octagon** Roses.

No.	Finish	Per Dozen Pairs
710	—Light Dull Brass	$36.00

Packed.—Quarter Dozen Pairs in a Box.



No. 8474. Half Size Cut.

Cast Brass Metal

Ball Type.

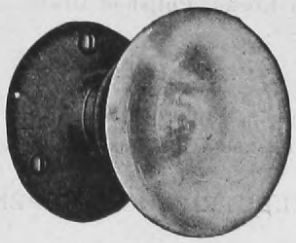
2x2 inches with Curved Shank.
5/16 inch Solid Spindles.
15/16 inch Cast Brass Plain Roses.

No.	Finish	Per Dozen Pairs
8474	—Light Dull Brass	$42.00

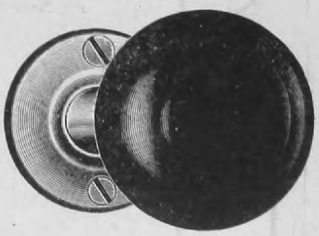
Packed.—Quarter Dozen Pairs in a Box.

MINERAL, PORCELAIN AND JET DOOR KNOBS

Nos. 100 and 102.



Nos. 200 and 202.



Nos. 203 and 205.

Size—2¼x2¼ inches, 5/16 inch Solid Spindles, Japanned Iron Shanks and Roses.
Half Size Cuts.

Rim Knobs.
Adjustable from 1 to 1¾ inches.

		Per Dozen Pairs
No. 100	—Mineral Knobs	$2.00
No. 200	—Porcelain Knobs	2.20
No. 203	—Jet Knobs	2.20

Packed.—Half Dozen Pairs in a Box, with Screws.

Mortise Knobs.
Adjustable from 1½ to 2½ inches.

		Per Dozen Pairs
No. 102	—Mineral Knobs	$2.00
No. 202	—Porcelain Knobs	2.20
No. 205	—Jet Knobs	2.20

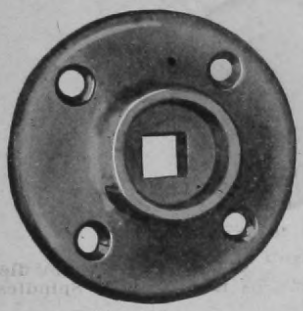
Packed.—Half Dozen Pairs in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KNOB OR LEVER HANDLE ROSES

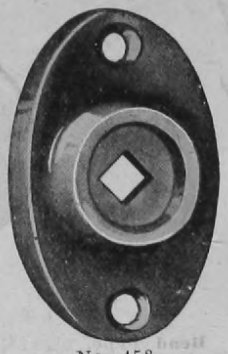
Cast Brass Metal

AUXILIARY SPRINGS



No. 451.

Auxiliary Springs for Lever Handles.....Per Dozen, $12.00



No. 458.

ROSES FITTED WITH AUXILIARY SPRINGS

Double Acting.

Round.

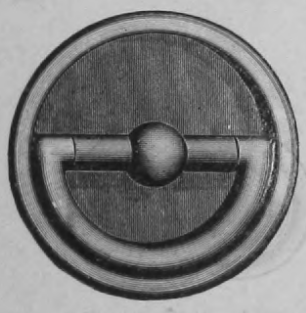
No.	Finish	Each
451—1 15/16 inches,	Light Dull Brass	$1.00

Oval.

No.	Finish	Each
458—2 ¼ x 1 ⅜ inches,	Light Dull Brass	$1.00

Note.—These Roses set flush on door and are not to be mortised in. All Roses work right and left.

Packed—As ordered, Complete with Screws to match.



No. 1015.

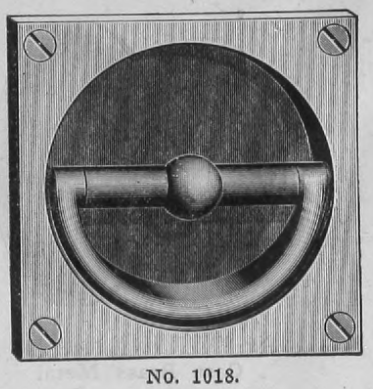
FLUSH DROP HANDLES

Cast Brass Metal, 3x3 inches, 5/16 inch Spindle.

No. 1015—Light Dull Brass Finish...Each, $3.25

Cast Brass Metal, 3½x3½ inches, 5/16 inch Spindle.

No. 1018—Light Dull Brass Finish...Each, $3.95

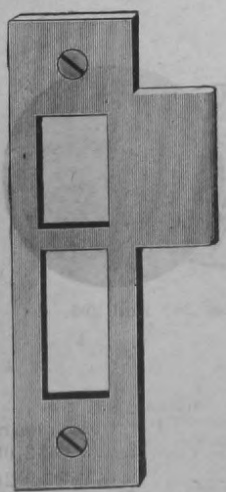


No. 1018.

LOCK STRIKES AND DOOR OPENERS

Mortise Lock Strikes

No. 20—For 3 ½ inch Locks, Wrought Steel	Per Dozen,	$0.90
No. 30—For 4 inch Locks, Polished Brass	Per Dozen,	1.50
No. 40—For 4 ¼ inch Locks, Polished Brass	Per Dozen,	2.00
No. 50—For 4 ½ inch Locks, Polished Brass	Per Dozen,	2.25

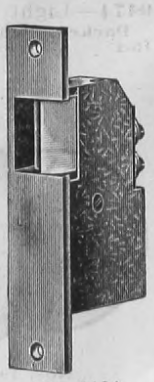


Nos. 20 to 50.

Rim Lock Strikes

No. 10—For 4 inch Locks, **Japanned Iron**.....Per Dozen, $0.90

Packed—One Dozen in a Box.



No. 3194.

ELECTRIC DOOR OPENERS

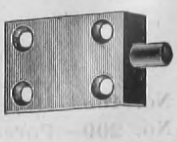
Cast Bronze Metal Frame and Face Plate. Size of Front, 5¾x1¼ inches. Mortise Required—3⅞x2⅛x1 inches.

Positive action is assured when current is applied. The lock releasing Device is operated by the armature and is so easily controlled that two cells of open circuit battery will release it on short lines, and not over four cells are required for the longest circuits with heavy doors.

Each Opener is equipped with the Push-Out Spring illustrated, without extra charge.

No. 3194—Schneider Mortise Electric Door Opener.....Each, $2.50

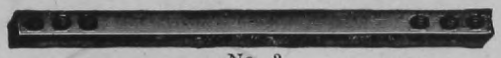
Packed—One in a Box Complete, with Screws.



Push-Out Spring.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KNOB SPINDLES



No. 2.

Length 3⅝ inches, Extension 1¼ to 2¼ inches.

No. 2—5/16 inch Solid Spindle.....Per Dozen, $0.50

Packed—One Dozen in a Box.

No. 4102.

Length 3⅝ inches, Extension ⅞ to 2¾ inches.

No. 4102—5/16 inch Triplex Spindle....Per Dozen, $0.85

Packed—One Dozen in a Box.

No. 1170½.

One end is threaded for glass knobs, other end is solid and drilled for knobs with pin end.

No. 1170½—5/16 inch Combination Solid French Knob Spindle, Length 4¼ inches.....Per Dozen, $1.00

Nos. 10 and 22.

Nos. 4110 and 4122.

No. 10—5/16 inch Solid Swivel Spindle, Length 4½ inches, Extension 1¼ to 2¾ inches.....Per Dozen, $1.20
No. 22—⅜ inch Solid Swivel Spindle, Length 5½ inches, Extension 1½ to 3¼ inches.....Per Dozen, 1.68
No. 4110—5/16 inch Triplex Swivel Spindle, Length 4½ inches, Extension ⅞ to 2¾ inches.....Per Dozen, 2.00
No. 4122—⅜ inch Triplex Swivel Spindle, Length 5½ inches, Extension 1½ to 3½ inches.....Per Dozen, 2.75

Packed—One Dozen in a Box.

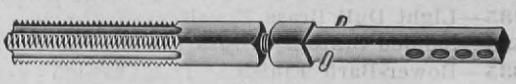
COMBINATION SWIVEL SPINDLES

No. 63.

No. 67A.

No. 63—For ⅜ inch Hubs, with 5/16 inch Plain Ends for Plain Shank Knobs.....Per Dozen, $1.68
No. 67A—For ⅜ inch Hubs, with 5/16 inch Threaded Ends for Screwless Shank Knobs.....Per Dozen, 2.40

No. 75.

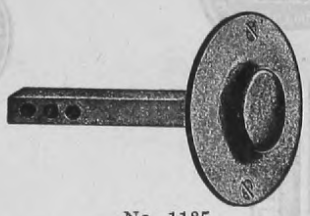


No. 76.

No. 75—For ⅜ inch Hubs, with one ⅜ inch Plain End and one 5/16 inch Threaded End.....Per Dozen, $2.40
No. 76—For ⅜ inch Hubs, with one ⅜ inch Threaded End and one 5/16 inch Plain End.....Per Dozen, 2.40

Packed—One Dozen in a Box.

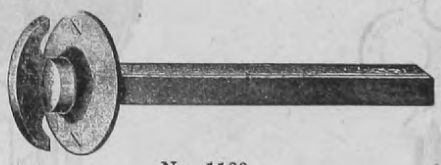
CLOSET KNOB SPINDLES



No. 1185.

No. 1185—5/16 inch Solid Closet Knob Spindle, with iron head and washer, for all steel and pottery knobs. Length 4¼ inches.....Per Dozen, $4.95

Packed—One Dozen in a Box.



No. 1189.

No. 1189—5/16 inch Safety Triplex Closet Knob Spindle, with bronze tee and washer. Length 4¼ inches.....Per Dozen, $7.90

Packed—One Dozen in a Box.

SET SCREWS

Full Size Cuts.

No. 1191. No. 1192.

No. 1191—For Triplex Knob Spindles..Per Gross, $1.40
No. 1192—For Lever Handles, with Triplex Spindles.....Per Gross, 2.10

Packed—One Gross in a Box.

KNOB SCREWS

No. 9—⅜ inch

Blued—Per Gross.....$0.70
Brass—Per Gross.....1.35

Packed—One Gross in a Box.

FLAT LOCK SPRING STEEL

Nos. 332 to 832.

Nos.	332	532	832
Width, inch	3/32	5/32	8/32

Per Dozen Coils... $..... ....

Packed—In Coils of Five Feet.

KNOB WASHERS

Steel

5/16 inch.....Per Pound, $1.00
⅜ inch.....Per Pound, 1.00

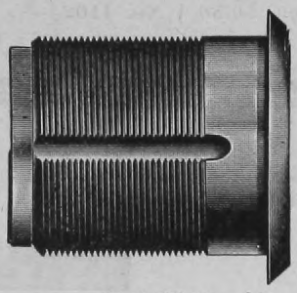
Packed—Quarter Pound in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Full Size Cut

LOCK CYLINDERS

Nos. 1122 to 1822 Front View.



Back View.

CYLINDER RINGS

Nos. 1135 to 1835.

Lock Cylinders

Cast Bronze Metal, for use with all regular Yale Pin Tumbler Mortise Locks and Latches.

For Doors ..... Inches,	1	1¼	1½	1¾	2
No. 1122—Plain Bronze Metal..... Per Dozen,	$25.00	25.00	25.00	25.00	33.35
No. 1222—Antique Copper Finish..... Per Dozen,	26.00	26.00	26.00	26.00	34.35
No. 1422—Light Dull Brass Finish..... Per Dozen,	26.00	26.00	26.00	26.00	34.35
No. 1522—Sanded Statuary Brass Finish.. Per Dozen,	26.00	26.00	26.00	26.00	34.35
No. 1822—Bower-Barff Finish ..... Per Dozen,	25.00	25.00	25.00	25.00	33.35

Cylinder Rings

Wrought Bronze Metal 5/16 inch Adjustable Cylinder Rings, for use with all regular Yale Pin Tumbler Mortise Locks and Latches.

No. 1135—Plain Bronze Metal..... Per Dozen, $1.70
No. 1235—Antique Copper Finish..... Per Dozen, 1.95
No. 1435—Light Dull Brass Finish..... Per Dozen, 1.95
No. 1535—Sanded Statuary Brass Finish..... Per Dozen, 1.95
No. 1835—Bower-Barff Finish ..... Per Dozen, 1.70

YALE KEY BLANKS

No. 6.

No. 8.

No. 11.

No. 13.

No. 6—Blank, Steel, Corrugated, for Yale Padlocks and Night Latches ..... Per Dozen, $0.60
No. 8—Blank, Nickel-Bronze Paracentric, for Yale Cylinder Door Locks and Large Nose Cabinet Locks..... Per Dozen, .90
No. 11—Blank, Nickel-Bronze Paracentric, for Yale Cylinders having 6 Pin Tumblers..... Per Dozen, .90
No. 13—Blank, Nickel-Bronze Paracentric, for Yale Small Cylinder Night Latches and Cabinet Locks..... Per Dozen, .90

Packed—Three Dozen in a Box.

Yale Cylinder Cut Keys

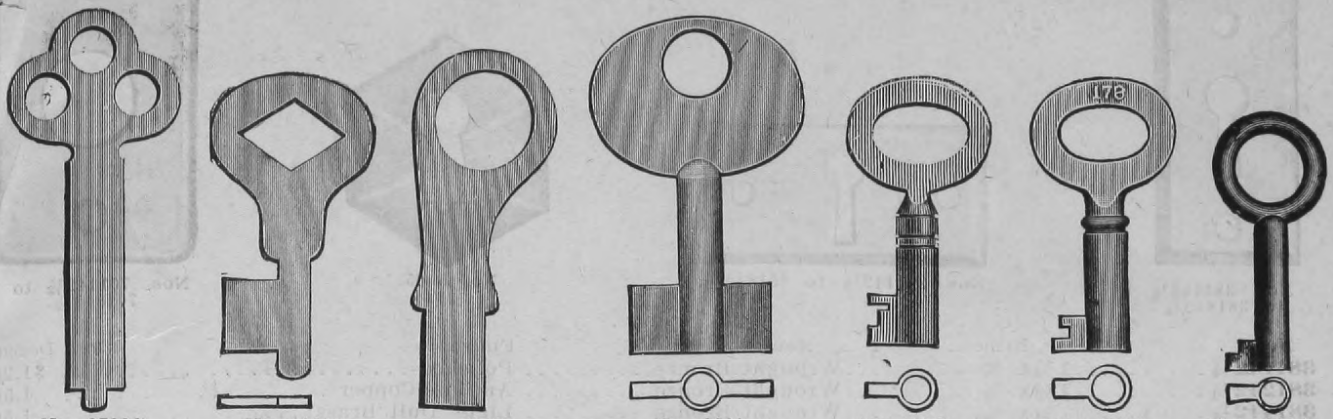
Quantity	1 only	2 to 6	7 or more
All same Bitting..... Each, $	.....	.....	.....

Note.—We have at great expense installed special machinery for duplicating Yale Keys and can fill orders same day they are received. We must have a sample Key to work from and will positively guarantee the key to fit when the cylinder is sent to us along with sample key.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BLANK AND CUT KEYS

Full Size Cuts.



No. 2733C. No. 02756. No. 2762. No. 3290. No. 4229. No. 4194. No. 4399A.

No. 2733C—Flat Steel Blank for Pad and Cabinet Locks . . . . . Per Gross, $3.60
No. 02756 —Flat Steel Blank for Padlocks . . . . . Per Gross, 3.60
No. 2762 —Flat Steel Blank for Padlocks . . . . . Per Gross, 3.60
No. 3290 —Double Bit Blank for Padlocks . . . . . Per Gross, 10.00
No. 4229 —Polished Steel Cut Trunk Keys, Assorted for Excelsior Locks . . . . . Per Gross, 9.00
No. 4194 —Mal. Iron Cut Trunk Keys . . . . . Per Gross, 3.00
No. 4399A—Mal. Iron Cut Suit Case Keys, Nickeled . . . . . Per Gross, 3.00

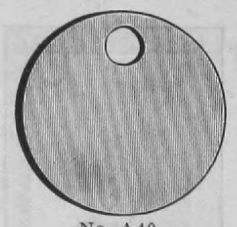
Packed—Half Gross in a Box

HOTEL CHECKS

Full Size Cuts.

No. A39.

No. A48.



No. A40.

Stamped as ordered and filled with Black Enamel.

No. A48—1 inch Brass Key Checks, 85 to 1 lb. . . . . Per 100, $4.00
No. A40—1⅛ inch Brass Key Checks, **Plain**, 75 to 1 lb. . . Per Pound, 1.60

No. A42.

No. A107.

Stamped as ordered and filled with Black Enamel.

No. A39 —Brass Key Checks with Brass Links for attaching Keys . . . . . Per 100, $30.00
No. A42 —Brass Key Checks with Brass Links for attaching Keys . . . . . Per 100, 15.00
No. A107—Brass Coat Room Checks . . . . . Per 100, 10.00

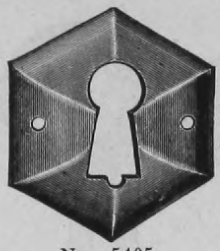
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CABINET KEY PLATES

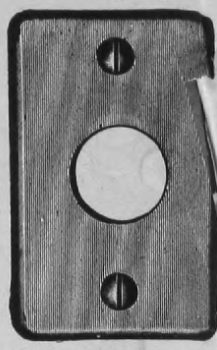
Full Size Cuts.

Nos. 381142¼ to 381842¼.

Nos. 381142½ to 381842½.



No. 5405.



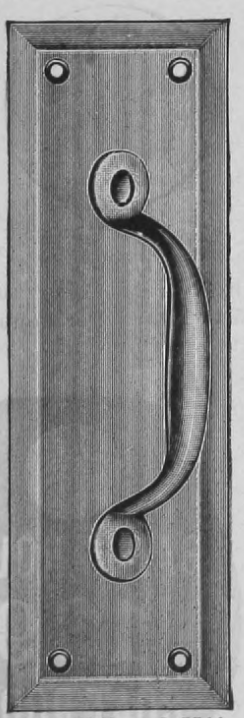
Nos. 701142½ to 701842½.

Nos.	Size, Inches.	Metal	Finish	Per Dozen.
381142¼	1½ x ¾	Wrought Bronze	Polished	$1.25
381242¼	1½ x ¾	Wrought Bronze	Antique Copper	1.50
381442¼	1½ x ¾	Wrought Bronze	Light Dull Brass	1.50
381542¼	1½ x ¾	Wrought Bronze	Sanded Statuary Brass	1.50
381842¼	1½ x ¾	Wrought Steel	Bower-Barff	1.25
381142½	¾ x 1½	Wrought Bronze	Polished	1.25
381242½	¾ x 1½	Wrought Bronze	Antique Copper	1.50
381442½	¾ x 1½	Wrought Bronze	Light Dull Brass	1.50
381542½	¾ x 1½	Wrought Bronze	Sanded Statuary Brass	1.50
381842½	¾ x 1½	Wrought Steel	Bower-Barff	1.25
5405	1¼ x 1¼	Cast Bronze	Light Dull Brass	2.50
701142½	1¾ x 1	Wrought Bronze	Polished	1.25
701242½	1¾ x 1	Wrought Bronze	Antique Copper	1.50
701442½	1¾ x 1	Wrought Bronze	Light Dull Brass	1.50
701542½	1¾ x 1	Wrought Bronze	Sanded Statuary Brass	1.50
701842½	1¾ x 1	Wrought Steel	Bower-Barff	1.25

Packed—Three Dozen in a Box, with Screws.

DOOR PULLS

For Screen and Light Panel Doors.



Nos. 5542 and 5544.

No. 243.

Nos. 542 to 544.

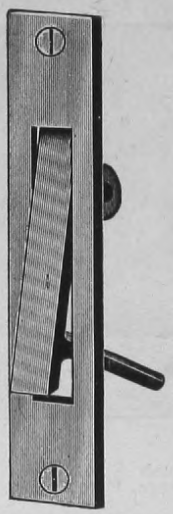
Nos. 3148¼ to 3448¼

Wrought Steel.

No. 5542	—7x2½ inch Plate, 5 inch Grip, Antique Copper. Half Dozen in a Box, with Screws. Per Dozen,	$2.50
No. 5544	—7x2½ inch Plate, 5 inch Grip, Dull Brass Finish. Half Dozen in a Box, with Screws. Per Dozen,	2.50
No. 243	—4⅜ inches long, Brass Plated. Half Gross in a Box. Per Gross,	2.20
No. 542	—4¾ inches long, Antique Copper Finish. Six Dozen in a Box, with Screws. Per Dozen,	.50
No. 543	—4¾ inches long, Bright Brass Plated. Six Dozen in a Box, with Screws. Per Dozen,	.50
No. 544	—4¾ inches long, Dull Brass Finish. Six Dozen in a Box, with Screws. Per Dozen,	.50
No. 3148¼	—5 inches long, Bright Bronze Plated. Three Dozen in a Box, with Screws. Per Dozen,	.50
No. 3248¼	—5 inches long, Antique Copper Finish. Three Dozen in a Box, with Screws. Per Dozen,	.50
No. 3448¼	—5 inches long, Dull Brass Finish. Three Dozen in a Box, with Screws. Per Dozen,	.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DOOR PULLS



Nos. 3148½ to 3848½.

Cast Iron For Sliding Doors.

No. 3148½—5x⅞ in. Bronze Plated...Per Dozen,		$3.00
No. 3248½—5x⅞ in. Antique Copper.Per Dozen,		3.20
No. 3448½—5x⅞ in. Light Dull Brass.Per Dozen,		3.20
No. 3548½—5x⅞ in. Sanded Statuary Brass....		3.20
No. 3848½—5x⅞ in. Bower-Barff ...Per Dozen,		3.20

Packed—Half Dozen in a Box, with Screws.

Nos. 4148¼ to 4848¼.

Cast Bronze Metal.

Size	3½ inches	4¾ inches
No. 4148¼—Plain Bronze Metal. Per Dozen	$3.00	4.00
No. 4248¼—Antique Copper. Per Dozen	3.60	4.60
No. 4448¼—Light Dull Brass. Per Dozen	3.60	4.60
No. 4548¼—Sanded Statuary Brass. Per Dozen	3.80	4.80
No. 4848¼—Bower-Barff. Per Dozen	3.00	4.00

Packed—One Dozen in a Box, with Screws.

Note.—State number and size wanted when ordering.

Nos. 4048¾ to 4548¾.

Heavy Cast Bronze Metal, 5⅝ inches.

No. 4048¾—Nickel Plated.....Per Dozen,		$7.60
No. 4148¾—Plain Bronze Metal.....Per Dozen,		7.00
No. 4248¾—Antique Copper.....Per Dozen,		7.60
No. 4448¾—Light Dull Brass.....Per Dozen,		7.60
No. 4548¾—Sanded Statuary Brass..Per Dozen,		7.80

Packed—One Dozen in a Box, with Screws.

Nos. 4148 to 4848.

Extra Heavy Cast Bronze, Brass or Iron, 5¾ inches.

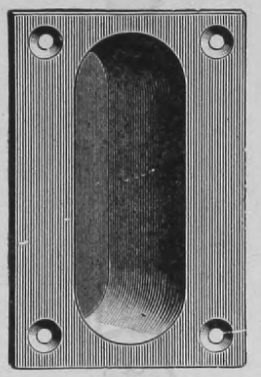
No. 4148—Plain Bronze Metal.....Per Dozen,		$7.50
No. 4248—Antique Copper Finish...Per Dozen,		8.00
No. 4448—Light Dull Brass Finish...Per Dozen,		8.00
No. 4548—Sanded Statuary Brass Finish.....		8.00
No. 4848—Bower-Barff Finish.....Per Dozen,		7.00

Packed—Half Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DOOR PULLS

Half Size Cuts.

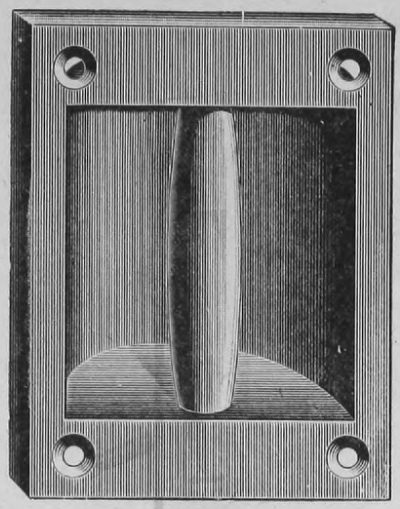


No. 500.

Flush Barn Door Pull, 3¾x2½ inches.

No.	Finish	Per Dozen
500—Iron, Japanned		$0.80

Packed—One Dozen in a Box.



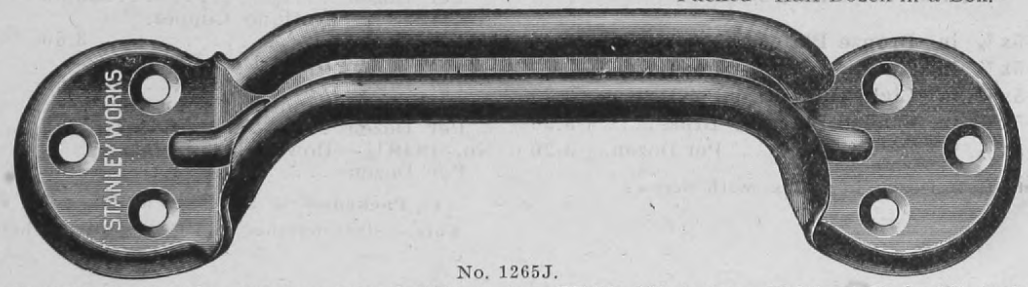
No. 1400.

Extra Heavy Flush Door Pull, with Bar Hand Hold in Center, for Barn Doors, Fire Doors, and other heavy Sliding Doors.

Flush, Sliding Door Pull, 4⅝x3½ inches.

No.	Finish	Per Dozen
1400—Iron, Japanned, Extra Heavy		$5.00

Packed—Half Dozen in a Box.

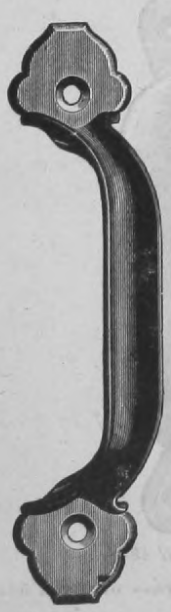


No. 1265J.

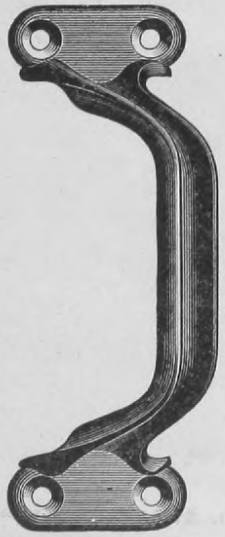
Heavy Straight Door Pulls, Extreme Length 10½ inches, Width 1¼ inches, Width at Ends 2½ inches.

No. 1265J—Wrought Steel, Japanned Finish ..... Per Dozen, $5.00

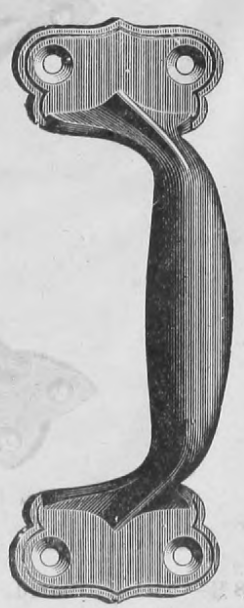
Packed—Half Dozen in a Box, with Screws.



No. 502.



No. 503.



Nos. 504 and 505.

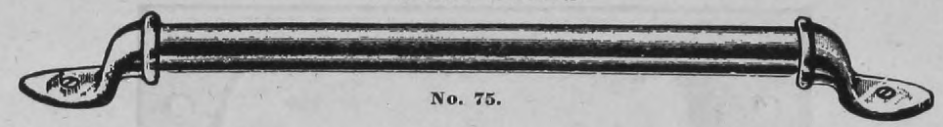
Cast Iron.

No. 502—Japanned Iron, Heavy Straight Door Pulls, Length 6 inches	Per Dozen	$0.80
No. 503—Japanned Iron, Heavy **Oblique** or Offset Door Pulls, Length 5½ inches	Per Dozen	1.00
No. 504—Japanned Iron, Very Heavy Straight Door Pulls, Length 6⅛ inches	Per Dozen	1.50
No. 505—**Galvanized** Iron, otherwise the same as No. 504	Per Dozen	2.50

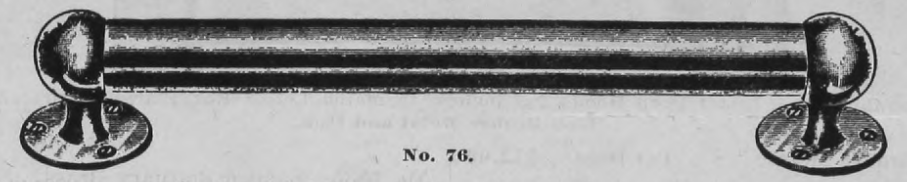
Packed—Nos. 502 and 503, Two Dozen; Nos. 504 and 505, One Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PUSH BARS



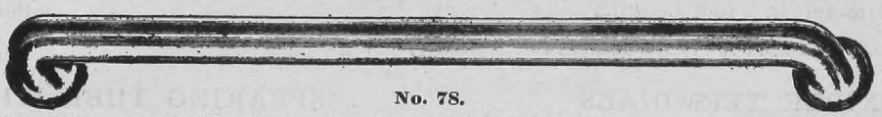
No. 75.



No. 76.

For Entrance Doors, Etc. Made with Cast Bronze or Brass End Sockets and solid Brass or Bronze Tube, depending on finish ordered. Complete with Screws.

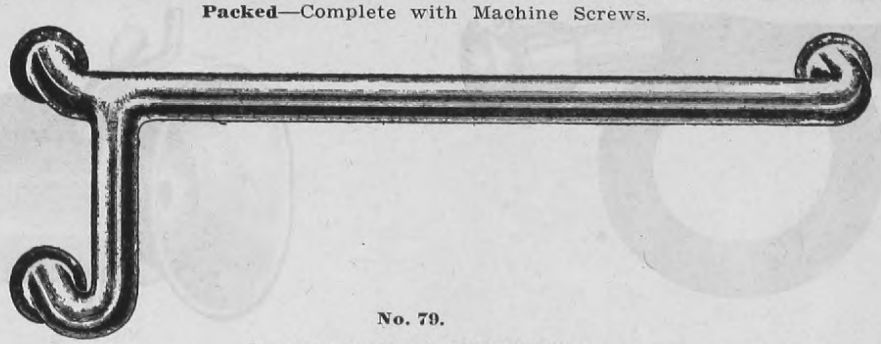
Width Center to Center	Diameter of Tube and Price Each.							
	½"	⅝"	¾"	1"	1¼"	1½"	1¾"	2"
18 inches	$2.00	$2.50	$2.85	$3.40	$3.55	$3.80	$4.25	$5.25
20 inches	2.05	2.55	2.90	3.45	3.60	3.90	4.35	5.40
22 inches	2.10	2.60	2.95	3.50	3.70	4.00	4.50	5.55
24 inches	2.15	2.65	3.05	3.60	3.75	4.15	4.60	5.75
26 inches	2.25	2.75	3.10	3.70	3.85	4.25	4.75	5.90
28 inches	2.30	2.80	3.15	3.75	3.90	4.35	4.85	6.15
30 inches	2.35	2.85	3.20	3.80	4.00	4.50	5.00	6.35
32 inches	.....	2.90	3.25	3.85	4.10	4.60	5.15	6.50
34 inches	.....	3.00	3.30	3.90	4.15	4.70	5.25	6.70
36 inches	.....	.....	3.40	4.00	4.25	4.85	5.35	6.90
38 inches	.....	.....	3.50	4.10	4.35	5.00	5.55	7.15
40 inches	.....	.....	3.60	4.20	4.50	5.20	5.75	7.40



No. 78.

No. **78**—1⅛ inch Brass Tube, Cast End Brackets, 18 to 40 inches long ..... Each, $4.00

Packed—Complete with Machine Screws.



No. 79.

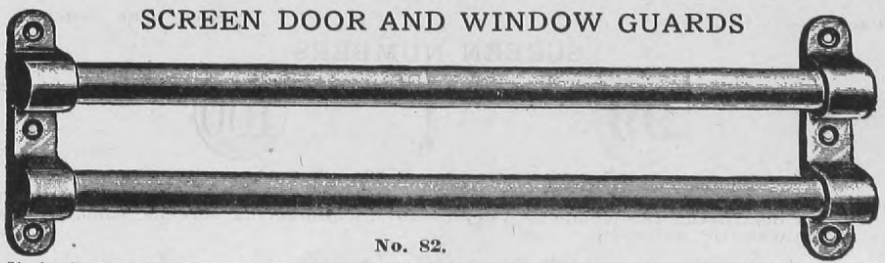
Combination Push and Pull Bars.

No. **79**—1⅛ inch Brass Tube, Cast End Brackets, 18 to 40 inches long ..... Each, $5.50

Note.—Specify "hand" wanted. Above cut shows a left hand bar.

Packed—Complete with Machine Screws.

SCREEN DOOR AND WINDOW GUARDS



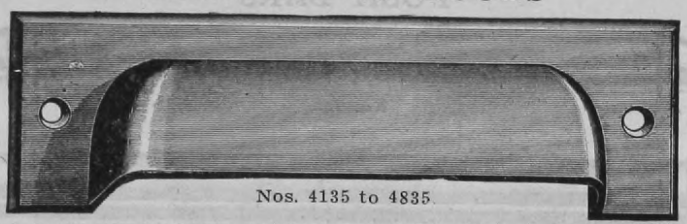
No. 82.

Brass Tube ⅝ inch in diameter, Cast Brass End Brackets. Measurements are from Center to Center.

Length, in.	18	22	26	30	34	38
No. 81—One Bar ..... Each,	$1.00	1.15	1.20	1.32	1.40	1.50
No. 82—Two Bars ..... Each,	1.95	2.15	2.35	2.52	2.70	2.90
No. 83—Three Bars ..... Each,	3.00	3.25	3.55	3.85	4.15	4.40
No. 84—Four Bars ..... Each,	3.90	4.30	4.65	5.05	5.45	5.80

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

LETTER DROP HOODS



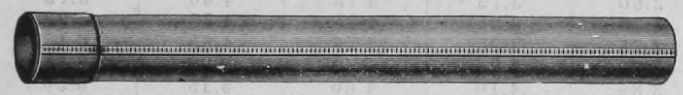
Nos. 4135 to 4835

Plain, Regular Bevel, Letter Drop Hoods, 2x7 inches, to match Letter Box Plates on preceding page.
Cast Bronze Metal and Iron.

No. 4135—Plain Bronze Metal.....Per Dozen, $12.00
No. 4235—Antique Copper .....Per Dozen, 13.80
No. 4435—Light Dull Brass.....Per Dozen, 13.80
No. 4535—Sanded Statuary Brass....Per Dozen, $14.40
No. 4835—Genuine Bower-Barff .....Per Dozen, 8.40

Packed—One-Sixth Dozen in a Box, with Screws.

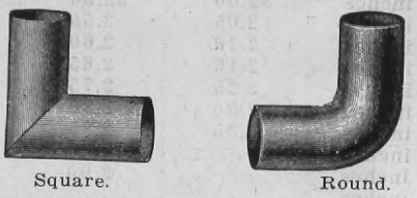
SPEAKING TUBE AND TRIMMINGS



Standard Speaking Tube.

Heavy Tin, Lock Seam, Machine Made.

Standard—1 inch Diameter, in 5 foot Lengths
.....Per Foot, $.....



Square. Round.

Standard Speaking Tube Elbows.
Heavy Tin, Reinforced by Locking Tongue.

Square Elbows, 1 inch Diameter.....
.....Per Dozen, $.....
Round Elbows, 1 inch Diameter.....
.....Per Dozen, ...

FLEXIBLE TERMINALS

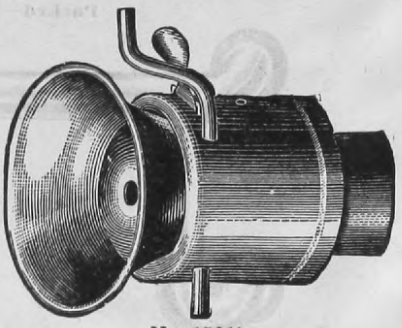
No. 24.

For 1 inch Tubes, made of Best Green and Black Mohair Braided Flexible Tubing, with Steel Wire Insertion. Fitted with Nickel Plated Whistles.

No. 24—Length 2 feet.....Per Dozen, $.....
No. 36—Length 3 feet.....Per Dozen, ...

Packed—As Ordered.

SPEAKING TUBE WHISTLES



No. 158½.

Nickel Plated, for 1 inch Tube.

No. 158½—With Indicator.....Per Dozen, $.....
No. 159 —Without Indicator ..Per Dozen, ...

Packed—One Dozen in a Box.

SCREEN NUMBERS

"Solidhed" Numbered Thumb Tacks.

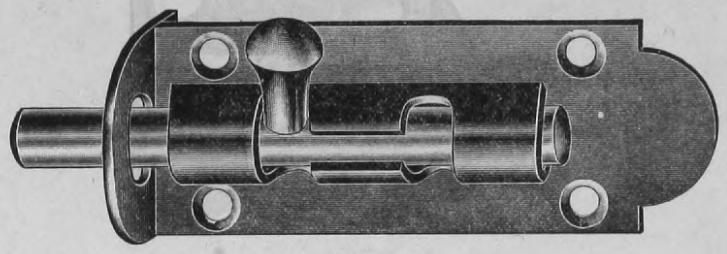
"Solidhed" Thumb Tacks are made of Brass with Solid Head, Beveled Edge and Raised Numbers running from 1 to 150. Can be painted over without destroying the Number. Very useful in numbering screens, sash, etc., while their uses in the home, store and office are practically unlimited.

Set Nos.	Per Set	Set Nos.	Per Set
0—Contains 1 to 25 inclusive (50 Tacks)	$1.25	**03**—Contains 1 to 99 inclusive (200 Tacks)	$5.00
01—Contains 1 to 50 inclusive (100 Tacks)	2.50	**04**—Coneains 1 to 125 inclusive (250 Tacks)	6.25
02—Contains 1 to 75 inclusive (150 Tacks)	3.75	**05**—Contains 1 to 150 inclusive (300 Tacks)	7.50

Note.—Each Set contains Two Numbers of each denomination.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BARREL BOLTS

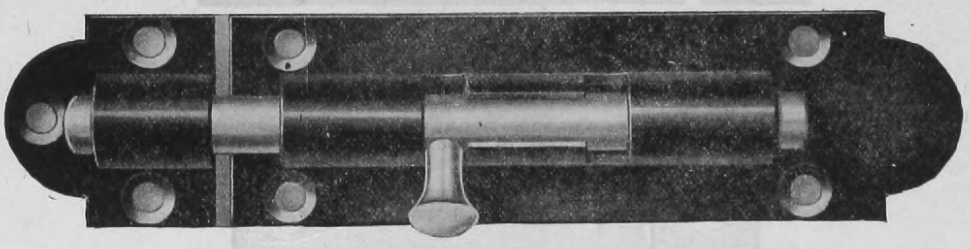


No. SC1078¼.
Full Size Cut of 3 inch.

Wrought Steel, Japanned, with Brass Knob and Polished Bolt, Medium Pattern. With Universal Strike, which can be used on every type of casing construction.

No. SC1078¼—Inches	2½	3	4	5	6
Per Dozen	$1.95	2.10	2.40	2.70	3.60

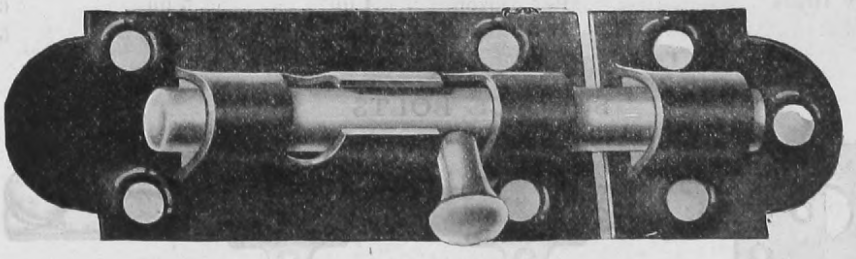
Packed—One Dozen in a Box, with Screws.



No. 1078.
Full Size Cut of 4 inch.
Wrought Steel, Japanned, with Brass Knob and Polished Bolt, Medium Pattern.

No. 1078—Inches	2½	3	4	5	6
Per Dozen	$1.50	1.90	2.15	2.50	2.90

Packed—One Dozen in a Box.



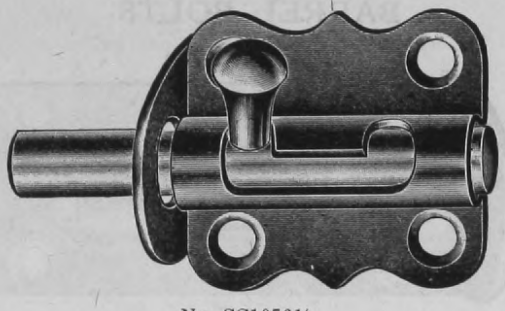
No. 1084.
Full Size Cut of 4 inch.
Wrought Steel, Japanned, with Brass Knob and Polished Bolt, Heavy Pattern.

No. 1084—Inches	3	4	5	6	8
Per Dozen	$2.15	2.45	3.00	3.40	6.50

Packed—Eight inch, Half Dozen; Other Sizes, One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BARREL BOLTS

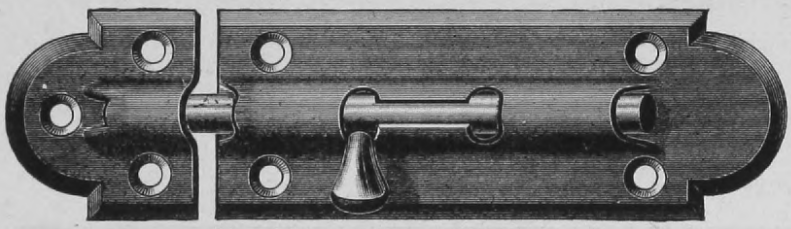


No. SC1076¼.

Wrought Steel, Japanned, with Polished Bolt and Universal Strike.

No. SC1076¼—Inch	2	2½
Per Dozen	$1.00	1.05

Packed—One Dozen in a Box, with Screws.

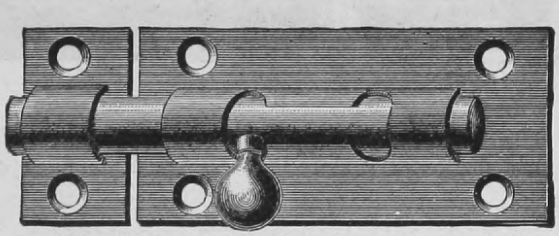


Nos. 1208 and 1408. Full Size Cut.

Wrought "Steel," with Beveled Edges.

No. 1208—4 inch, Antique Copper Finish	Per Dozen, $2.00
No. 1408—4 inch, Light Dull Brass Finish	Per Dozen, 2.00

Packed—One Dozen in a Box, with Screws.



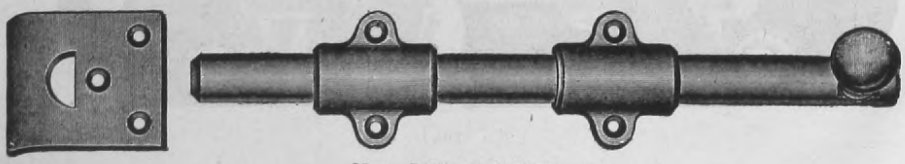
Nos. 4195 to 4895. Half Size Cut of 5 inch.

Wrought "Bronze" Metal, with Square End Staple and Plate.

Nos. Finish	Inches,	3	4	5	6
4195—Plain Bronze Metal	Per Dozen,	$3.50	4.50	5.75	6.50
4295—Antique Copper	Per Dozen,	4.00	5.00	6.25	7.00
4495—Light Dull Brass	Per Dozen,	4.00	5.00	6.25	7.00
4595—Sanded Statuary Brass	Per Dozen,	4.00	5.00	6.25	7.00
4895—Bower-Barff	Per Dozen,	3.50	4.50	5.75	6.50

Packed—One Dozen in a Box, with Screws.

SURFACE BOLTS



Nos. 7470 and 8470.

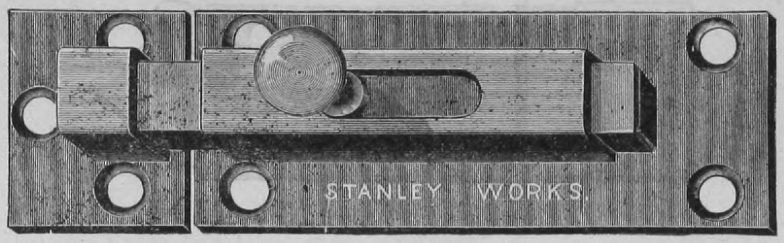
Half Oval Wrought Brass, with 2 Strikes.

Nos.	Length, Inches	4	6	12	18
7470—½ inch Wide, Dull Brass Finish	Per Dozen,	$.....	.....	.....	.....
8470—⅝ inch Wide, Dull Brass Finish	Per Dozen,	.....	.....	.....	.....

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SQUARE CASED DOOR BOLTS

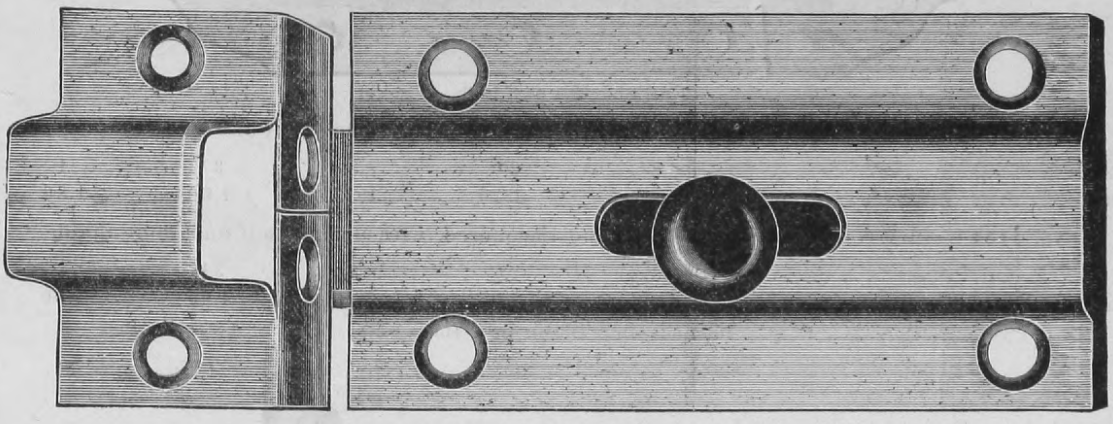


Nos. 3194 to 3894. Full Size Cut.

Wrought Steel, Planished, Light Pattern.

Nos. Finishes	Inches,	3
3194—Plain Bronze Plated	Per Dozen,	$3.80
3294—Antique Copper	Per Dozen,	4.30
3494—Light Dull Brass	Per Dozen,	4.30
3594—Sanded Statuary Brass	Per Dozen,	4.75
3894—Bower-Barff	Per Dozen,	4.75

Packed—One Dozen in a Box, with Screws.

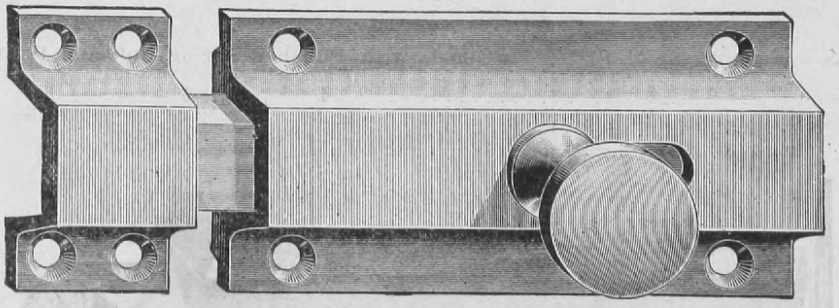


No. 400—Full Size Cut of 4 inch.

Heavy Wrought Steel. Japanned Bolt ½x1 1/16 inch with Brass Knob.

No. 400—Inches	2	4	6
Per Dozen	$8.00	9.20	10.20

Packed—Half Dozen in a Box, with Screws.



Nos. 4194 to 4894. Full Size Cut of 3 inch.

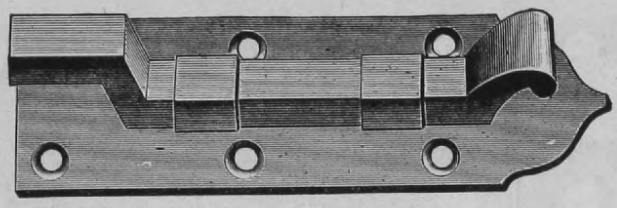
Heavy, Cast Bronze Metal.

Nos. Finishes.	Inches,	2½	3	4
4194—Plain Bronze Metal	Per Dozen,	$6.75	8.25	10.50
4294—Antique Copper	Per Dozen,	9.00	10.50	12.75
4494—Light Dull Brass	Per Dozen,	9.00	10.50	12.75
4594—Sanded Statuary Brass	Per Dozen,	9.75	11.25	13.50
4894—Bower-Barff	Per Dozen,	6.00	7.50	9.75

Packed—One Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

NECK BOLTS



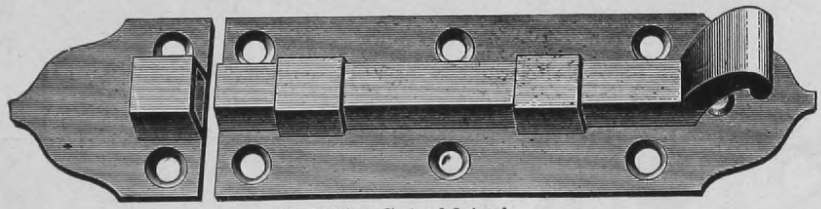
Full Size Cut of 3 inch.

No. 1154—Wrought Steel Plate, Japanned, with Polished Bolt.

Inches	2½	3	3½	4
Per Dozen	$1.20	1.35	1.60	1.80

Packed—One Dozen in a Box.

SQUARE SPRING BOLTS



Full Size Cut of 3 inch.

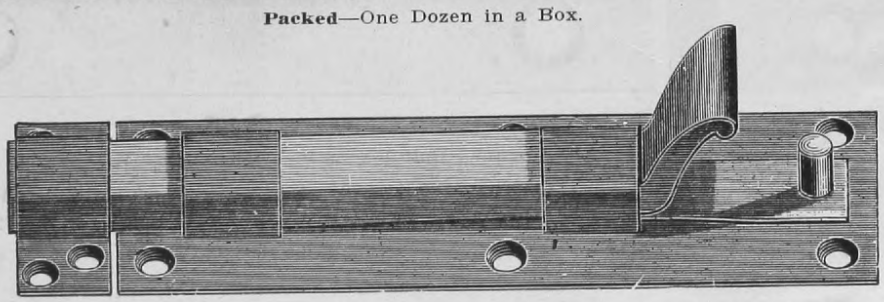
No. 1150—Wrought Steel Plate, Japanned, with Polished Spring Bolt and Plate Staple.

Inches	2	2½	3	3½	4	5
Per Dozen	$1.10	1.20	1.35	1.60	1.80	2.25

No. 1151—All Wrought Brass, Polished and Lacquered, with Spring Bolt and Plate Staple.

Inches	2	2½	3	3½	4	5
Per Dozen	$2.25	2.70	3.25	4.00	4.30	5.40

Packed—One Dozen in a Box.

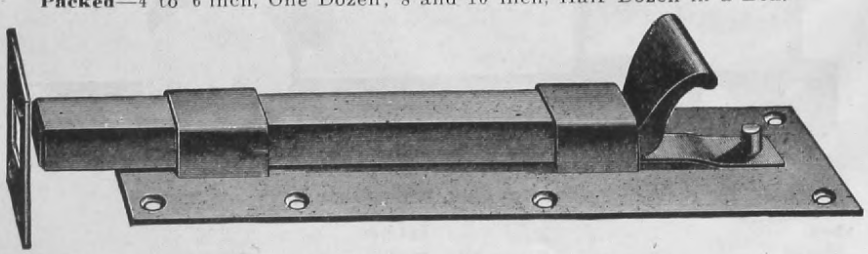


Two-Thirds Size Cut of 6 inch.

No. 1088—Wrought Steel Plate, Japanned, with Polished Spring Bolt and Plain Staple.

Inches	4	5	6	8	10
Per Dozen	$2.50	2.65	2.85	4.00	6.50

Packed—4 to 6 inch, One Dozen; 8 and 10 inch, Half Dozen in a Box.



Two-Thirds Size Cut of 6 inch.

No. 1094—Wrought Steel Plate, Japanned, Extra Heavy, with Polished Spring Bolt and Flat Strike.

Inches	6	8	10	12
Per Dozen	$3.60	5.25	8.00	9.75

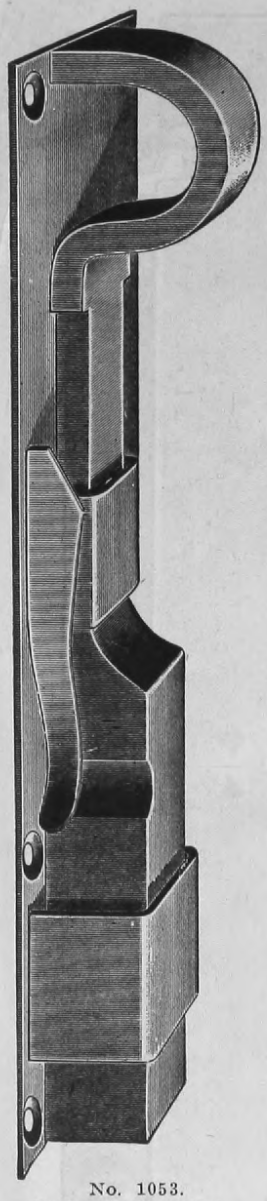
Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HEAVY SPRING FLAT BOLTS

And

HEAVY GARAGE AND FACTORY DOOR BOLTS

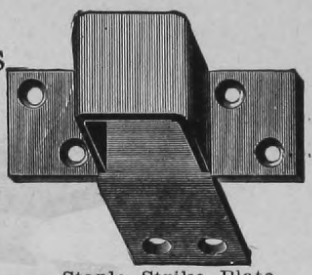


No. 1053.
Reduced Size Cut.

No. 524-2.
Bottom Bolt.

No. 100.
Bottom Bolt.

No. 110.
Top Bolt.



Staple Strike Plate.

Black Japanned Finish.

No. 524-2—Bottom Bolt, ¾x24 inches, with Flat Strike and Screws.....Per Dozen, $.....

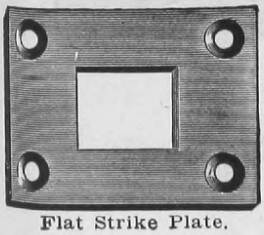
No. 100—Bottom Bolt, ¾x25 inches, with Flat Strike but **without** Screws or Bolts..Per Dozen, ...

No. 110—Top Bolt, ¾x25 inches, with Loop Strike but **without** Screws or Bolts.....Per Dozen, ...

Packed—No. 524-2, One-Sixth Dozen in a Box.
Nos. 100 and 110, Each Wrapped Separately.

SPRING BOTTOM BOLTS

Heavy Wrought Steel Plate and Strike, Japanned.

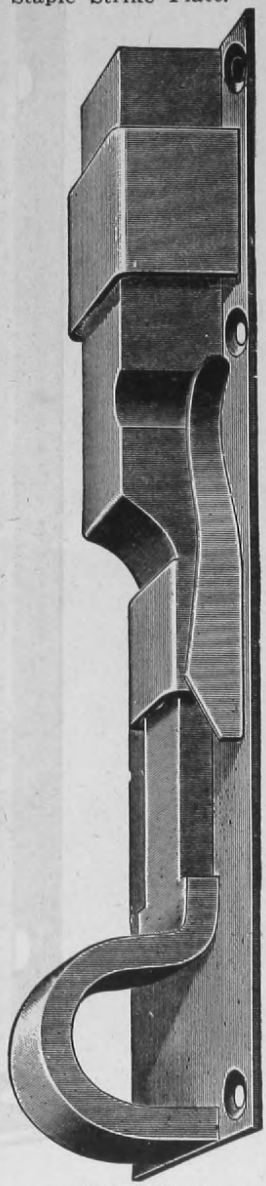


Flat Strike Plate.

Plates 1¾ inches wide, 3/16 inch thick; Bronzed Bolt, ¾ inch square, with Flat Strike.

Inches	8	10	12
No. 1053—Per Dozen.....	$7.90	8.40	8.90

Packed—Half Dozen in a Box.



No. 1051.
Reduced Size Cut.

SPRING TOP BOLTS

Heavy Wrought Steel Plate and Strike, Japanned.

Plates 1¾ inches wide, 3/16 inch thick; Bronzed Bolt, ¾ inch square, with Staple Strike.

No.	Finish	Inches,	8	10	12	18	24	30	36	48
1051	Heavy, Japanned.....	Per Dozen,	$7.90	8.40	8.90	10.20	10.80	11.80	12.70	15.20

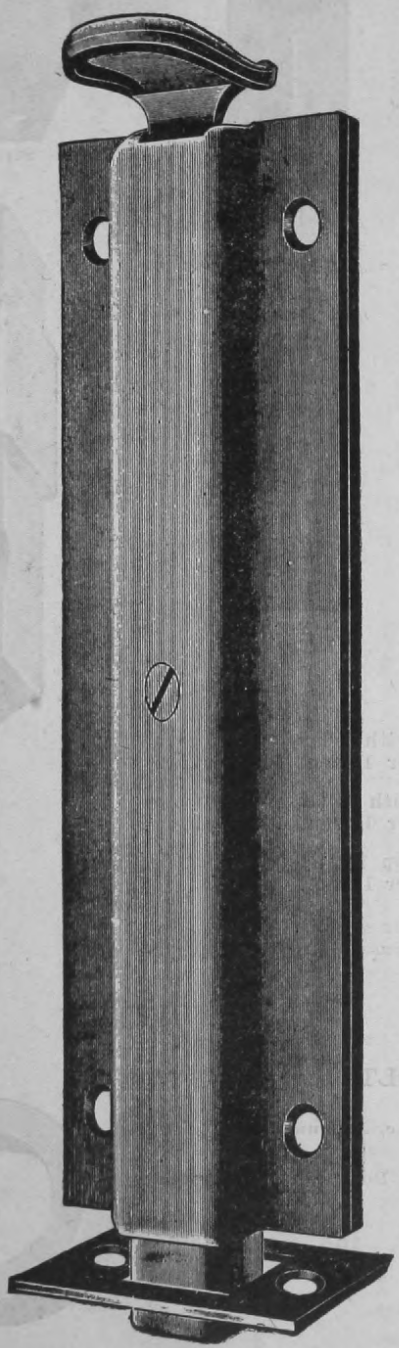
Packed—8 to 36 inch, Half Dozen; 48 inch, Quarter Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

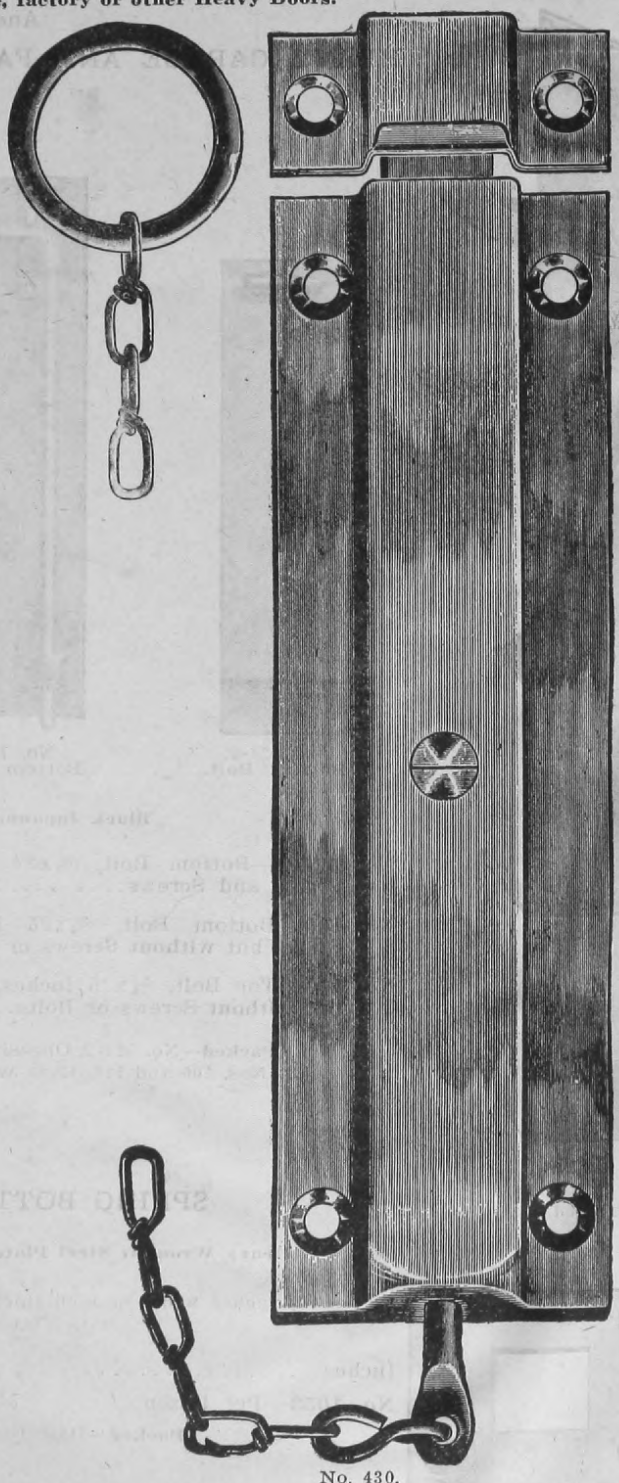
Reduced Size Cuts.

EXTRA HEAVY FOOT AND CHAIN BOLTS

Designed for use on garage, factory or other Heavy Doors.



No. 440.



No. 430.

Extra Heavy Pressed Steel Case and Strikes

Made of ⅛ inch heavy Drawing Steel, with back plate to prevent binding.

Foot Bolts.

The use of the central or kick spring is eliminated as the bolt is released by a slight pressure against the toe piece at the top.

No.	Finish	Inches	8	12
440—Japanned	..... Per Dozen,		$12.00	47.00

Packed—Half Dozen in a Box, with Screws.

Chain Bolts.

Reversible for doors opening outward by removing the central screw. Tensile strength of chain 250 pounds.

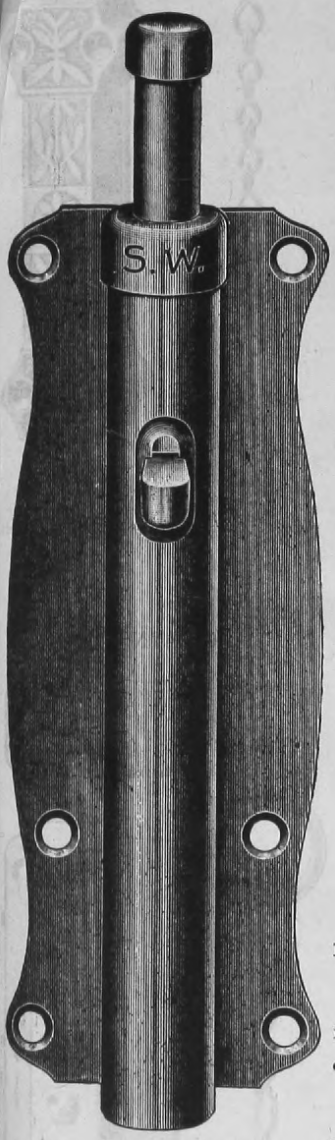
No.	Finish	Inches	8	12
430—Japanned	..... Per Dozen,		$12.00	47.00

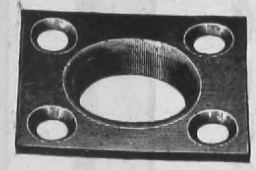
Packed—Half Dozen in a Box, with Screws.

Note.—Chain Bolts shown on this page are packed with **both** styles of strikes, Regular and Reverse Bevel.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FOOT AND CHAIN BOLTS





No. 1056J.

Half Size Cut of 10 in.

BOLT SOCKETS

No. 1138.

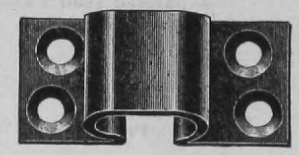
Half Size Cut.

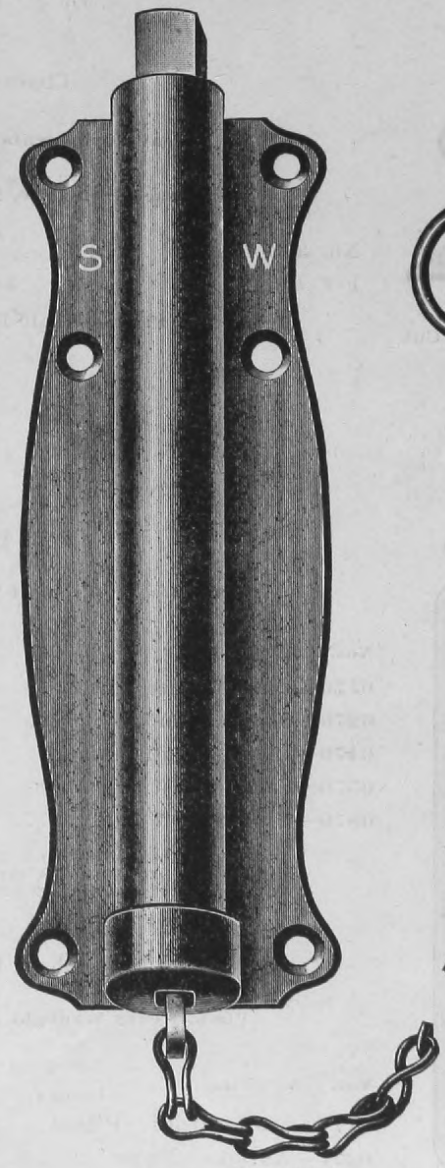
Heavy Gauge Wrought Steel.

For use in Concrete Floors in connection with No. 1056J or other Foot Bolts.

Inside Diameter 1⅛ inches.

No. 1138—Per Dozen, $2.20





No. 1055J.

Half Size Cut of 10 in.

For Garage, Warehouse and Other Heavy Doors.

Heavy Wrought Steel Case and Strike, ⅞ inch Bolt. Floor Plate is cupped to guide bolt and has oval shaped hole to take care of shrinkage in door.

No. 1056J—10 inch, Japanned.....Per Dozen, $17.50

Packed—One-Twelfth Dozen in a Box, with Screws.

Heavy Wrought Steel Case and Strike, ⅞ inch Bolt. Provided with One Chain Guide and Two Staples for Each Bolt, One Strap and One Angle Plate.

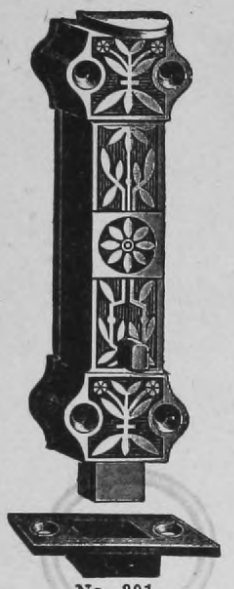
No. 1055J—10 inch, Japanned.....Per Dozen, $18.75

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FOOT AND CHAIN BOLTS

FOOT



No. 391.
One-Third Size Cut of 8 inch.

Foot Bolts

Heavy Ornamental Case, Plain Strike.

Japanned Iron Case, Polished Spring Bolt.

No. 391—Inches	6	8
Per Dozen	$3.20	3.90

Packed—Half Dozen in a Box.

Chain Bolts

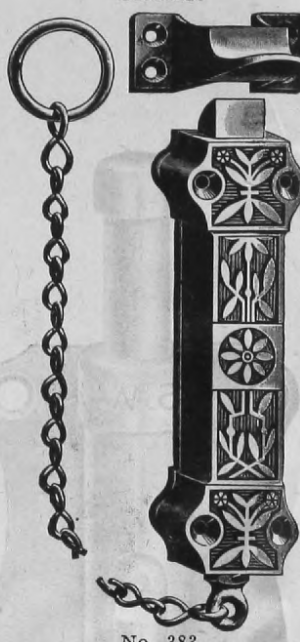
Heavy Ornamental Case, Plain Strike.

Japanned Iron Case, Polished Spring Bolt.

No. 383—Inches	6	8	10
Per Dozen	$4.00	5.00	7.00

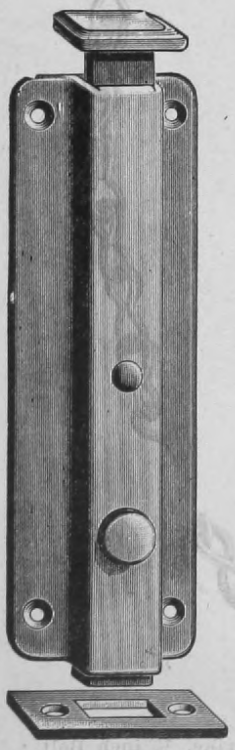
Packed—Half Dozen in a Box.

CHAIN



No. 383.
One-Third Size Cut of 8 inch

FOOT



Nos. 6170 to 6870.
Half Size Cut of 6 inch.

Foot Bolts

Plain, Heavy Wrought Steel Case and Strike.

Nos. Finishes	Per Dozen. Inches	3	4	6	8
6170—Plain Bronze Plated		$ 5.90	7.40	10.40	12.80
6270—Antique Copper		8.00	9.60	12.80	15.00
6470—Light Dull Brass		8.00	9.60	12.80	15.00
6570—Sanded Statuary Brass		9.40	10.80	12.50	15.80
6870—Bower-Barff		12.00	14.80	20.40	26.00

Packed—3 and 4 inch, One Dozen.
6 and 8 inch, Half Dozen in a Box, with Screws.

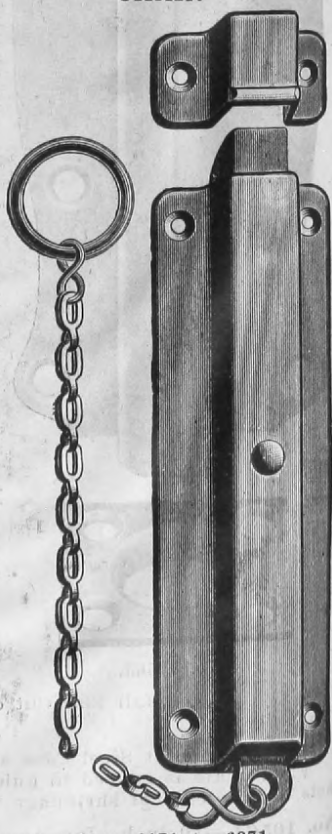
Chain Bolts

Plain, Heavy Wrought Steel Case and Strike.

Nos. Finishes	Per Dozen. Inches	3	4	6	8
6171—Plain Bronze Plated		$7.40	8.40	11.50	14.00
6271—Antique Copper		9.30	10.40	14.00	16.00
6471—Light Dull Brass		9.30	10.40	14.00	16.00
6571—Sanded Statuary Brass		10.80	11.50	15.00	17.00
6871—Bower-Barff		13.40	15.00	21.00	26.00

Packed—3 and 4 inch., One Dozen; 6 and 8 inch, Half Dozen in a Box, with Screws.

CHAIN

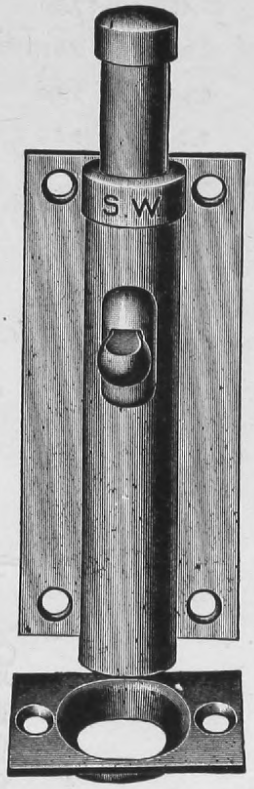


Nos. 6171 to 6871.
Half Size Cut of 6 inch.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

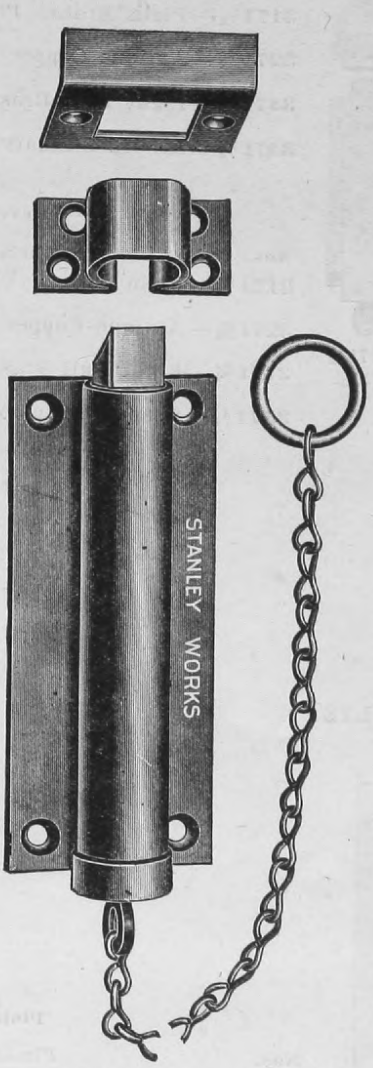
FOOT AND CHAIN BOLTS

FOOT



Nos. 1056J to 356SF2.
Half Size Cut of 6 inch.

CHAIN



Nos. 1055J to 355SF2.
Half Size Cut of 6 inch.

Foot Bolts

Heavy Wrought Steel Case and Strike.

Nos. Finish.	Inches,	3	6
1056J —Japanned	Per Dozen,	$4.75	6.25
356D2 —Antique Copper	Per Dozen,	6.60	8.00
356F —Light Dull Brass	Per Dozen,	6.60	8.00
356SF2—Sanded Brass, Oxidized	Per Dozen,	7.25	8.75

Packed—Half Dozen in a Box, with Screws.

Chain Bolts

Heavy Wrought Steel Case and Strike.

Nos. Finish.	Inches,	3	6
1055J —Japanned	Per Dozen,	$5.00	7.00
355D2 —Antique Copper	Per Dozen,	7.50	10.00
355F —Light Dull Brass	Per Dozen,	7.50	10.00
355SF2—Sanded Brass, Oxidized	Per Dozen,	7.50	10.00

Packed—Half Dozen in a Box, with Screws.

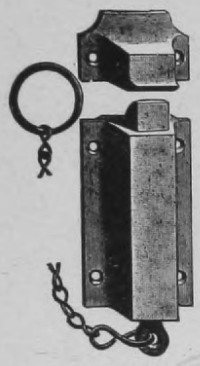
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

CHAIN BOLTS

Plain Iron Case and Strike, Plated.

"Regular Bevel" with Rim Strike.



Nos. 3171½ to 3571½.

Nos.	Finishes	Inches,	3	4	6
3171½	—Plain Bronze Plated	Per Dozen,	$4.90	$5.45	$7.50
3271½	—Antique Copper	Per Dozen,	6.40	6.95	9.00
3471½	—Light Dull Brass	Per Dozen,	6.40	6.95	9.00
3571½	—Sanded Statuary Brass	Per Dozen,	7.15	7.70	9.75

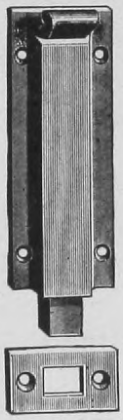
"Reverse Bevel" with Mortise Strike.

Nos. 3171¾ to 3571¾.

Nos.	Finishes	Inches,	3	4	6
3171¾	—Plain Bronze Plated	Per Dozen,	$4.90	$5.45	$7.50
3271¾	—Antique Copper	Per Dozen,	6.40	6.95	9.00
3471¾	—Light Dull Brass	Per Dozen,	6.40	6.95	9.00
3571¾	—Sanded Statuary Brass	Per Dozen,	7.15	7.70	9.75

Packed—Half Dozen in a Box, with Screws.

BOTTOM BOLTS



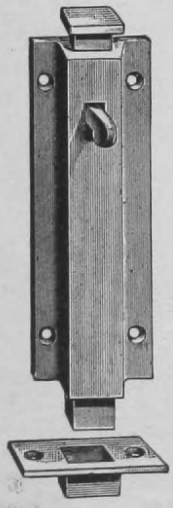
Nos. 3170½ to 3870½.

Plain Iron Case and Strike, Plated.

Nos.	Finishes	Inches,	3	4
3170½	—Plain Bronze Plated	Per Dozen,	$4.50	5.40
3270½	—Antique Copper	Per Dozen,	6.00	6.90
3470½	—Light Dull Brass	Per Dozen,	6.00	6.90
3570½	—Sanded Statuary Brass	Per Dozen,	6.75	7.65
3870½	—Bower-Barff	Per Dozen,	9.75	10.50

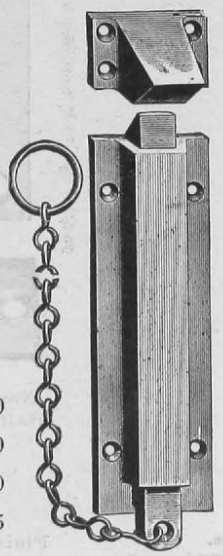
Packed—One Dozen in a Box, with Screws.

FOOT BOLTS



Nos. 4170 to 4870.

CHAIN BOLTS



Nos. 4171 to 4871.

Plain Heavy Cast Bronze, Brass or Iron Case and Strike.

Foot Bolts, Per Dozen.

Nos.	Finishes	6 in.	8 in.
4170	—Plain Bronze Metal	$18.00	$22.50
4270	—Antique Copper	20.25	24.75
4470	—Light Dull Brass	20.25	24.75
4570	—Sanded Statuary Brass	21.00	25.50
4870	—Bower-Barff	18.00	22.50

Packed—Half Dozen in a Box, with Screws.

Chain Bolts, Per Dozen.

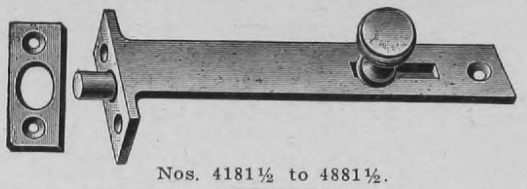
Nos.	Finishes	6 in.	8 in.
4171	—Plain Bronze Metal	$16.50	$22.00
4271	—Antique Copper	18.75	24.75
4471	—Light Dull Brass	18.75	24.75
4571	—Sanded Statuary Brass	19.50	25.50
4871	—Bower-Barff	16.50	22.50

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

CABINET FLUSH BOLTS



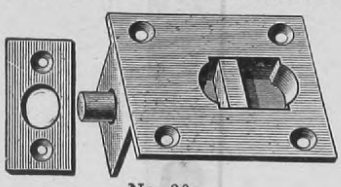
Nos. 4181½ to 4881½.

With Round Knob and Strike Plate, Cast Bronze, Brass or Iron.

Nos. Finishes.	Inches,	3	4	6
4181½—Plain Bronze	Per Dozen,	$2.70	4.50	5.00
4281½—Antique Copper	Per Dozen,	3.45	5.25	5.75
4481½—Light Dull Brass	Per Dozen,	3.45	5.25	5.75
4581½—Sanded Statuary Brass	Per Dozen,	3.60	5.40	5.90
4881½—Genuine Bower-Barff	Per Dozen,	2.70	4.50	5.00

Packed—One Dozen in a Box, with Screws.

SHIP FLUSH BOLTS



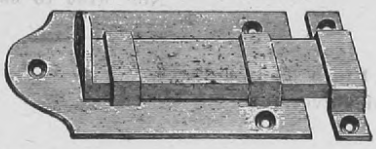
No. 20.

Heavy Cast Brass Highly Polished, with Strike.

No. **20**—Natural Color, Polished.....
- Size 1¾x1¼ inch, ⅝ inch Angle.....Per Dozen, $3.90
- Size 2 x1½ inch, ⅝ inch Angle.....Per Dozen, 4.60

Packed—Two Dozen in a Box, with Screws.

FLAT SHIP BOLTS

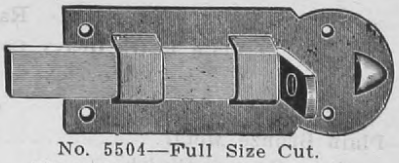


No. 5503.
Cast Brass Polished and Lacquered.

Inches	2	3
No. 5503—Per Dozen	$2.85	4.35

Packed—One Dozen in a Box, with Screws.

COMMODE BOLTS

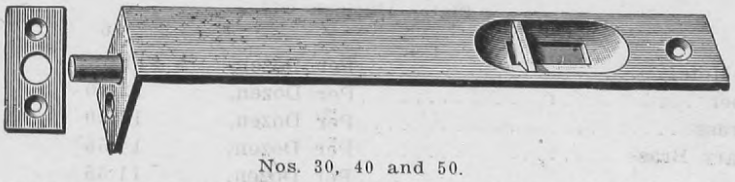


No. 5504—Full Size Cut.
Wrought Steel, Brass Plated.

Size.....Case ⅝x1¾ inches, Bolt ¼ inch wide
No. 5504—Per Gross.....$5.00

Packed—Quarter Gross in a Box.

BRASS FLUSH BOLTS



Nos. 30, 40 and 50.

Wrought Brass, with Flush Thumb Piece, Polished and Lacquered, with Strike.

No. **30**—⅜ inch wide	Inches	2	2½	3	3½
	Per Dozen	$1.35	1.45	1.65	1.95

Packed—Three Dozen in a Box, with Screws.

No. **40**—½ inch wide	Inches	2½	3	4	6
	Per Dozen	$1.65	1.85	2.45	3.35

Packed—Two Dozen in a Box, with Screws.

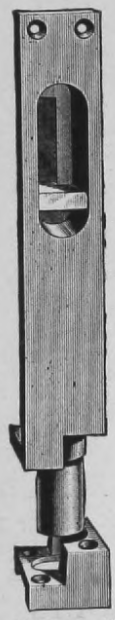
No. **50**—⅝ inch wide, 1 inch Angle	Inches	4	6	8	10
	Per Dozen	$3.50	4.50	6.50	7.30

Packed—One Dozen in a Box, with Screws.

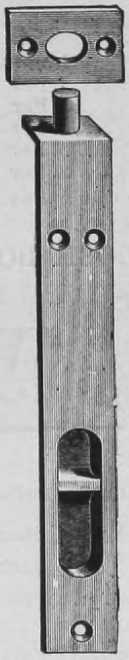
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

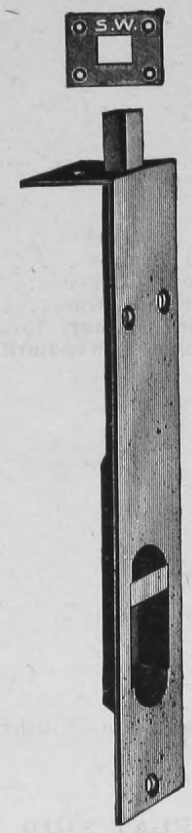
MORTISE FLUSH BOLTS



Nos. 4193 to 4893.



Nos. 4186 to 4886.



Nos. 6186 to 6886.

Rabbeted "Dutch Door" Bolt

Plain Extra Heavy Cast Bronze Metal Plate with Flush Thumb Piece.

Plate 7⅛x1¼ inches, ½ inch Rabbet. **Not** Reversible.

Order Right or Left Hand.

No. 4193—Plain Bronze Metal	Per Dozen,		$45.00
No. 4293—Antique Copper Finish	Per Dozen,		50.40
No. 4493—Light Dull Brass Finish	Per Dozen,		50.40
No. 4593—Sanded Statuary Brass Finish	Per Dozen,		52.20
No. 4893—Bower-Barff Finish	Per Dozen,		45.00

Packed—One-Sixth Dozen in a Box, with Screws.

Plain Extra Heavy Cast Bronze Metal with Flush Thumb Piece.

Plates 1⅛ inch wide.

Inches		6	8	12
No. 4186—Plain Bronze Metal	Per Dozen,	$11.55	14.25	18.75
No. 4286—Antique Copper	Per Dozen,	13.80	16.50	21.00
No. 4486—Light Dull Brass	Per Dozen,	13.80	16.50	21.00
No. 4586—Sanded Statuary Brass	Per Dozen,	14.55	17.25	21.75
No. 4886—Bower-Barff	Per Dozen,	11.55	14.25	18.75

Packed—Half Dozen in a Box, with Screws.

Plain Wrought Steel Plate with Flush Thumb Piece.

Plate 1 inch wide, ⅜ inch square bolt. Bolt has 1 inch throw

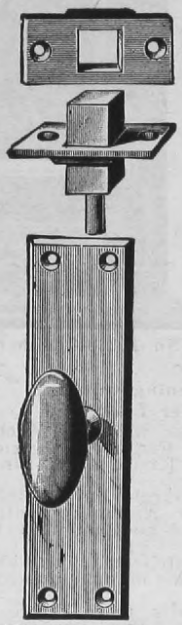
Inches		6	9	12
No. 6186—Plain Bronze Plated	Per Dozen,	**$7.10**	8.20	9.25
No. 6286—Antique Copper Finish	Per Dozen,	7.80	8.90	10.00
No. 6486—Light Dull Brass Finish	Per Dozen,	7.80	8.90	10.00
No. 6586—Sanded Statuary Brass Finish	Per Dozen,	8.50	9.60	10.70
No. 6886—Bower-Barff Finish	Per Dozen,	8.50	9.60	10.70

Packed—6 and 9 inch, One Dozen; 12 inch, Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

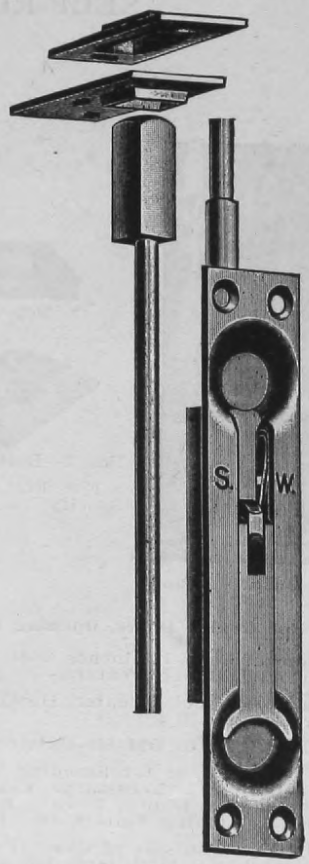
One-Third Size Cuts.

EXTENSION FLUSH BOLTS



Nos. 4183 to 4883.

Nos. 8183 to 8883.



Nos. 8185 to 8885.

Oval Knob Heavy Extension Flush Bolts

Plain Cast Bronze, Brass or Iron.

Size of Plate 6x1¾ inches, Heavy Square Bolt Head ⅝ inch.

Inches		12	18	24
No. 4183—Plain Bronze Metal	Per Dozen,	$19.80	19.80	19.80
No. 4283—Antique Copper Finish	Per Dozen,	21.60	21.60	21.60
No. 4483—Light Dull Brass Finish	Per Dozen,	21.60	21.60	21.60
No. 4583—Sanded Statuary Brass Finish	Per Dozen,	22.50	22.50	22.50
No. 4883—Bower-Barff Finish	Per Dozen,	19.80	19.80	19.80

Packed—12 and 18 inch, One-Third Dozen; 24 inch, One-Sixth Dozen in a Box, with Screws.

Flush Lever Heavy Extension Flush Bolts

Plain Cast Bronze, Brass or Iron.

Size of Plate 6¼x1¼ inches, Heavy Round Bolt Head ½ inch.

Inches		12	18	24
No. 8183—Plain Bronze Metal	Per Dozen,	$27.00	27.00	27.00
No. 8283—Antique Copper Finish	Per Dozen,	28.80	28.80	28.80
No. 8483—Light Dull Brass Finish	Per Dozen,	28.80	28.80	28.80
No. 8583—Sanded Statuary Brass Finish	Per Dozen,	28.80	28.80	28.80
No. 8883—Bower-Barff Finish	Per Dozen,	27.00	27.00	27.00

Packed—One-Sixth Dozen in a Box, with Screws.

Plain Wrought Steel Plate with Flush Lever.

Size of Plate 6¼x1¼ inches, Heavy Square Head. Bolt has ¾ inch throw.

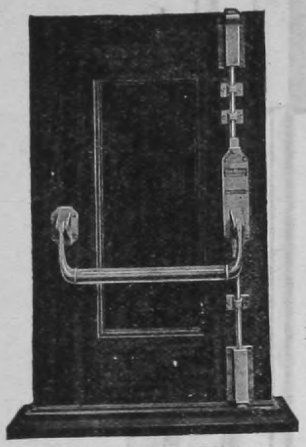
Inches		12	18	24
No. 8185—Plain Bronze Plated	Per Dozen,	$18.50	19.25	20.00
No. 8285—Antique Copper Finish	Per Dozen,	18.50	19.25	20.00
No. 8485—Light Dull Brass Finish	Per Dozen,	18.50	19.25	20.00
No. 8585—Sanded Statuary Brass Finish	Per Dozen,	20.00	20.75	21.50
No. 8885—Bower-Barff Finish	Per Dozen,	20.00	20.75	21.50

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SELF-RELEASING FIRE DOOR LATCHES

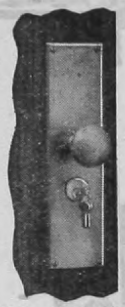
Von Duprin



No. 1127—Inside of Door.

Top Strike.

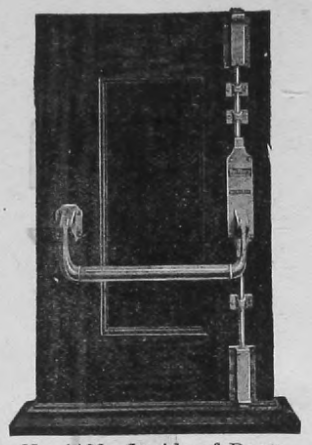
No. 1—Bottom Strike.
For Flat Stone Sill Specify No. 2 Strike.



No. 1123—Outside Trim.

Top Strike.

No 1—Bottom Strike.
For Flat Stone Sill Specify No. 2 Strike.



No. 1123—Inside of Door

For Double Doors, Opening Outward.

Dimensions of Case, 1⅞ inches wide, 7⅝ inches high. Has top and bottom Latching Feature.

Designed for School, Theater, Hotel, Office Building and Fire Tower Exits only.

No Dead-Locking or Outside Unlatching Feature.

One on each door, or for Standing Door of Double Door where Dead-Bolting is Necessary. **Can be** used in connection with other Von Duprin Devices having Outside Dead-Locking and Unlatching feature for the swinging door.

No hardware on outside of doors, Push bar and latch on inside. Featured to unlatch latch bolts from inside by touch against or pull up on bar at any point, at same time permitting door to open outward. Latch bolts can be dogged with special hook device No. 46, page 1258.

No. 1127—Brass Metal.....Each, $51.90

For Double Doors, Opening Outward.
With Rim Cylinder Lock.

Dimensions of Case, 1⅞ inches wide, 7⅝ inches high. Has Top and Bottom Latching Feature. Outside Escutcheon 12x3 inches, Cast Brass Knob, **Five** Pin Tumbler Lock, **Three** Cylinder Keys.

Designed for School House, Church, Public Building Entrance and Exits, Auditorium or Assembly Hall Corridor Doors. Made with Outside Dead-Locking and Unlocking Feature.

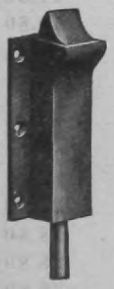
Furnished with Knob and Escutcheon on outside of door; Latch operated from outside in same manner as any ordinary lock and latch device.

Featured to unlatch latch bolts from inside by touch against or pull up on bar at any point even though deadlocked from outside, at the same time permitting door to open outward. Latch bolts can be dogged by special dogging device No. 46, page 1258.

No. 1123—Brass Metal .....Each, $70.40

Not Reversible. In ordering, state width and height of Door, width of stile, hand of doors and finish required.
Take Hand of Door from Outside of House or Room.

Vertical Latch Bolts



First—Designed to eliminate all element of friction or shock, by contact with the strike at soffit.

Second—Impossible to bind.

Third—Phosphorous Bronze Spring.

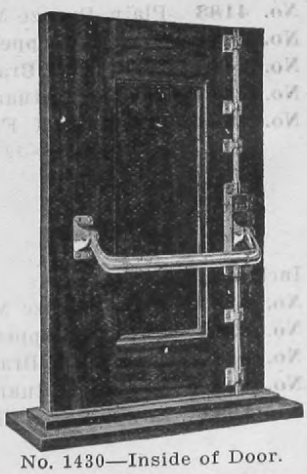
Fourth—Hinged Latch Bolt.

Fifth—Very Heavy, Strong and Durable.

Vertical Latch Bolts will be furnished on all future orders on No. 1127 and No. 1123 Von Duprin Devices.

Top Strike.

No. 1—Bottom Strike.
For Flat Stone Sill Specify Strike No. 2.



No. 1430—Inside of Door.

No. 1430.

Prince Panic Bolt for Double Doors Opening Outward.

Dimensions of Case, 1⅝ inches wide, 7½ inches high. Has Top and Bottom Bolting Feature. **Designed** for School, Theater, Hotel, Office Building and Fire Tower Exits only, or Standing Door of Double Doors where Dead-Bolting is Necessary. **No** Outside Unlatching Feature. Push Bar on inside.

Featured to disengage bolts from inside by touch against bar at any point, at same time permitting door to open outward. Bolts can be dogged by special dogging device No. 46 page 1258, Cross Bar will drive or release bolts.

No hardware on outside of door.

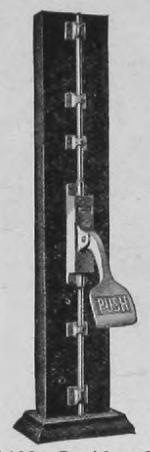
No. 1430—Prince Panic Bolt, Brass Metal.....Each, $38.50

Furnished in Polished Brass or any Standard Finish.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SELF-RELEASING FIRE EXIT DEVICES

Von Duprin



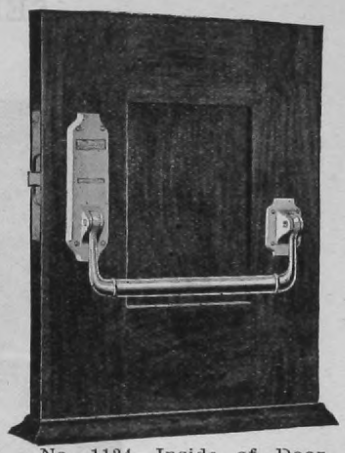
No. 1433—Inside of Door.

Top Strike.

Bottom Strike.

Guarded Strike.

Grip and Trim for Outside



No. 1124—Inside of Door.

Prince Automatic
Cremorne Bolt with Panic Release Feature

Suitable for Doors Opening Outward or Inward.

Dimensions of Case, 1⅝ inches wide, 7½ inches high.

For use on the Standing Door of a pair of doors where a moderate priced device is wanted. Bolts are engaged in the same manner as in ordinary cremorne bolts; this action setting the push plate in operative position. Push plate is so designed that a slight pressure against it will release simultaneously the top and bottom rods, thus permitting doors to open.

No hardware on Outside.

No. 1433—Brass Metal.....Each, $24.40

In ordering state if doors open in or out, and give height of door between rabbets. Push Plate is regularly placed 54 inches from the floor.

Von Duprin
Self-Releasing Fire Exit Latch

With Mortise Cylinder Lock for Door Opening Outward.

Dimensions of Case, 3⅞ inches wide, 5 inches high.

Burglar Proof Guarded Front and Strike. Impossible to Pick. No intricate Lock Parts. Has Horizontal or Side Latching Feature. **Designed** for School House, Church, Public Building Entrance and Exit, Auditorium or Assembly Hall Corridor Door. **Made** with Outside Dead-Locking and Unlatching Feature. **Well adapted** for Single Entrance Doors.

Furnished regularly with sectional grip and thumb piece on outside of door; latch operated from outside in same manner as any ordinary thumb latch or lock device. **Featured** to unlatch latch bolt from inside by touch against or pull up on bar at any point, even though dead-locked from outside, at the same time permitting door to be opened outward. Latch bolts can be dogged by key.

No. 1124—Brass Metal.....Each, $55.00

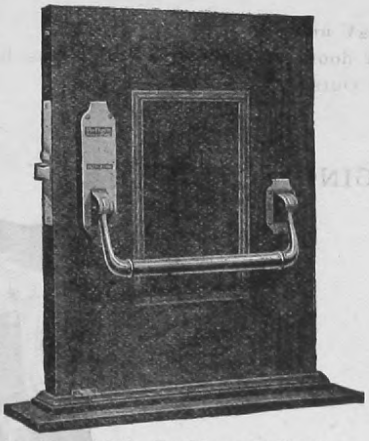
No. 1124 Continued.

Not Reversible. In ordering, state width of door, width of stile, thickness and hand of door, and finish required. **Take Hand of** Door from Outside of House or Room.

Note.—Many Architects specify No. 1127 Von Duprin Device or No. 1430 Prince Panic Bolt on standing door of double doors and No. 1124 Von Duprin device on active door.

Open Strike.

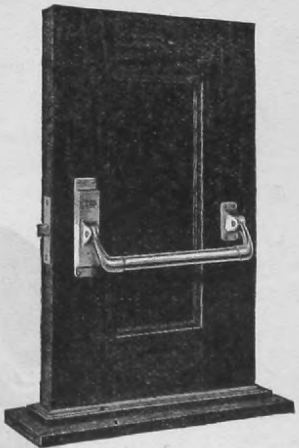
Grip and Trim for Outside.



No. 1724—Inside of Door.

Strike.

Grip and Thumb Piece for Outside.



No. 1426—Inside of Door.

Von Duprin Self-Releasing Fire Exit Latch

Suitable for Active Door of Double Doors, with Mortise Cylinder Lock for Door Opening Outward.

Dimensions of Case, 4 inches wide, 5⅛ inches high. Backset 2⅞ inches, Spacing 4½ inches.

Burglar Proof Auxiliary Dead-Locking Latch Bolt. Impossible to Pick. No Intricate Lock Parts. Has Horizontal or Side Latching Feature. **Designed** for School House, Church, Public Building Entrance and Exit, Auditorium or Assembly Hall Corridor Door. **Made** with Outside Dead-Locking and Unlatching Feature.

Furnished regularly with sectional grip and thumb piece on outside door; latch operated from outside in same manner as any ordinary thumb latch or lock device. **Featured** to unlatch latch bolt from inside by touch against bar at any point, even though dead-locked from outside, at the same time permitting door to be opened outward. Latch bolts can be dogged by key.

No. 1724—Brass Metal.....Each, $55.00

Prince Self-Releasing Fire Exit Latch

Designed for School House Class Room Door to Corridor.

Furnished with a sectional grip and thumb latch on outside of door, has push bar and latch on inside. **Featured** to unlatch latch bolt from inside by touch against bar at any point, at same time permitting door to open outward.

No. 1426—Brass Metal.....Each, $52.60

Nos. 1724 and 1426

Not Reversible. In ordering, state width of door, width of stile, thickness, hand and finish required.

Take Hand of Door from Outside of House or Room.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SELF-RELEASING FIRE EXIT LATCHES

"VON DUPRIN"

No. 924½V—Inside of Door.

Von Duprin

Self-Releasing Fire Exit Latch

Mortise Device, for Single Door Opening Outward.

Dimensions of Case, 3⅞ inches wide, 3½ inches high.

Designed for Theater, School or Hotel Fire Escape Exit Only. **No** Dead-Locking or Outside Unlatching Feature.

Burglar Proof Guarded Front and Strike. Backset, 2¾ inches.

No hardware on outside of door; has push bar and latch on inside. **Featured** to unlatch latch bolt from inside by touch against or pull up on bar at any point, at same time permitting door to open outward. Latch bolt can be retracted back into lock case and locked in that (retracted) position by disc and key from inside of door.

No. 924½V—Brass Metal, Polished.....Each, $33.90

No. 929—Inside of Door.

Von Duprin

Self-Releasing Fire Exit Latch

Mortise Device, for Single Door Opening Outward.

Dimensions of Case, 4 inches wide, 2 inches high.

Designed for Theater, School or Hotel Fire Escape Exit Only. **No** Dead-Locking or Outside Unlatching Feature.

Front to Center of Lift, 2½ inches.

No hardware on outside of door; has push bar and latch on inside. **Featured** to unlatch latch bolt from inside by touch against or pull up on bar at any point, at same time permitting door to open outward.

No. 929—Brass Metal, Polished.....Each, $31.70

Nos. 924½V and 929.

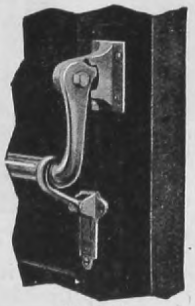
Not Reversible. In ordering, state width and height of door, width of stile, thickness, hand and finish required.

Take Hand of Door from Outside of House or Room.

HOOK DOGGING DEVICE

No. 46.

Cut Showing Hook Released, Latches Engaged.



No. 46.

Cut Showing Hook Engaged, Latches Released.

No. 46—Hook Dogging Arrangement. For Holding in Release Latch Bolts on Von Duprin Self-Releasing Fire Exit Latches when desired.....Each, $3.90

Special Catalogue on Request

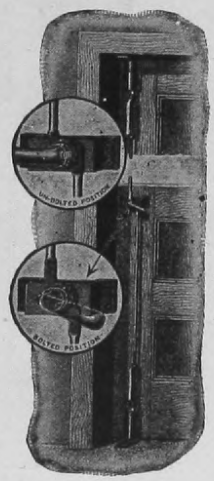
Von Duprin Self-Releasing Fire Exit Latches are made strong, to withstand the severest kind of handling—yet the mechanism is so well balanced that a mere child can operate the latch. No instructions required. These latches cannot become blocked by accident or design. An absolutely reliable safeguard against panic disasters. Failure to operate is impossible.

Specified Regularly by the Best School and Theater Architects in This and Other Countries.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

EXTRA HEAVY DOOR BOLTS

No. 1052J.



No. 517.

Double Acting Combination Top and Bottom Bolts, Designed Expressly for Garage Doors.

No. 517-1—For Hinged Flush Doors Swinging In, 7 to 8 feet high ..... Each, $5.00

No. 517-2—For 1½ to 1¾ inch Lap Hinged Doors Swinging In, 8 to 9 feet high..... Each, $5.50

Packed—One in a Box, with Strikes and Screws.

No. 1052J—Heavy Cremone Bolts

Double Action, Forged Oval Steel Bolts, Lever Handle. For Garage and Other Heavy Doors.

No. 1052J-8′6″—Adjustable for Doors from 8 feet 6 inches to 9 feet high..... Each, $14.00

No. 1052J-9′—Adjustable for Doors from 9 feet to 9 feet 6 inches high..... Each, 14.00

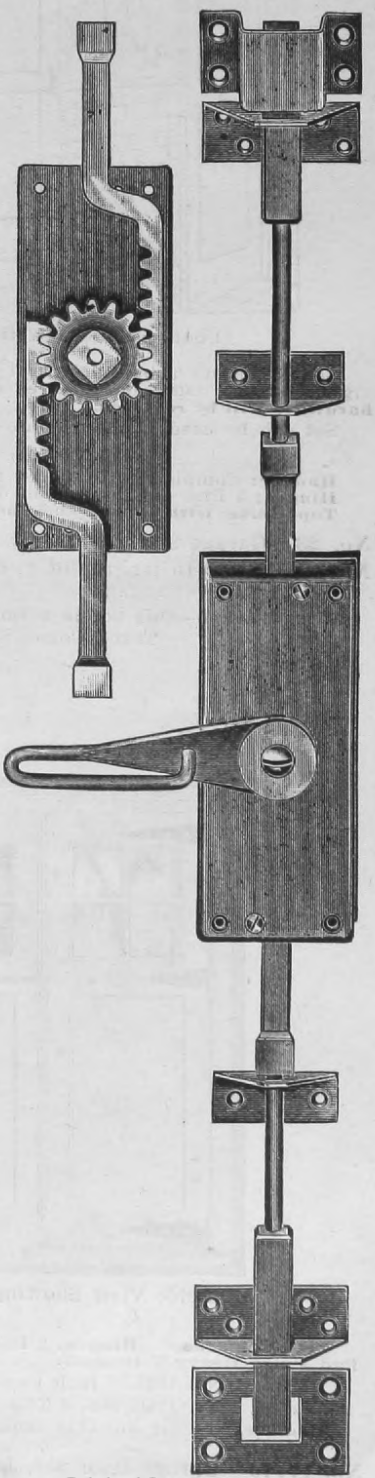
Packed—One in a Package with Guides, Staples and Screws.

No. 460—Combination Bolts

Double Acting Combination Top and Bottom Bolts, for garage, schoolhouse and other heavy doors. Made of Wrought Steel, with Bronze Metal Gears. The bolt parts are tapped ⅜-16, to receive the rods, extending the bolt for any height of door. **One** Rim and **Two** Flat Strikes are packed with each bolt, thus making it suitable for Doors opening in or out.

No. 460—Japanned, for any height of door..... Each, $18.00

Packed—One in a Box.

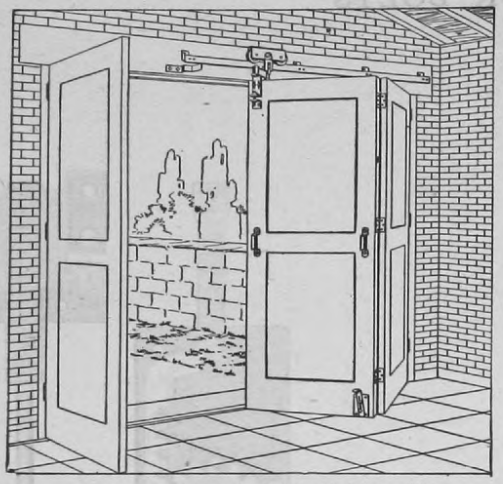


No. 460.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GARAGE DOOR SETS

SHARON



Doors Trimmed With Set No. 23.

Set Comprises Trimmings for Two Doors as shown at the right of the illustration, **if three doors are used, additional hardware will be required.**

Set can be used Inside or Outside of Garage.

Set Comprises:

Hanger; Complete with Bolts, without track.
Hinges; 3 Prs. 4x4 in. Japanned Tight Pin Butts.
Top Guide with Closer and **Bottom Latch.**

No. 23—Garage Set, Japanned.....Per Set, $6.00

No. 12 Track—In lengths of 4, 6, 8 and 10 feet.. .....Per Foot, .09

Packed—One Set in a Box, with Screws.
Track Comes Separate.

STANLEY

Doors Trimmed With Set No. 1776J.

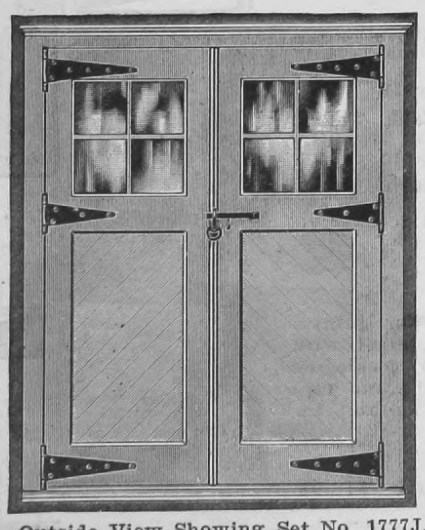
Set Comprises:

Hinges; 3 Prs. No. 963, 10 in. Reversed Pad Extra Heavy T Hinges.
Bolts; 1 No. 1055, 6 in. Chain Bolt. 1 No. 1056, 6 in. Foot Bolt.
Latch; 1 No. 1260, Size 4 Thumb Latch.
Handle; 1 No. 1257, Size 4 Door Handle.

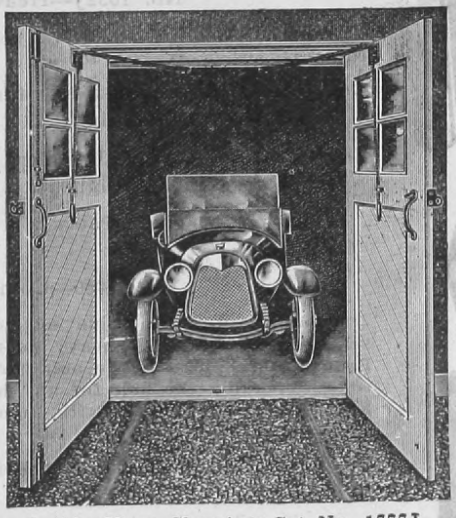
No. 1776J—Garage Set, Japanned.....Per Set, $6.00

Packed—One Set in a Box, with Screws and Directions.

STANLEY GARAGE DOOR SETS



Outside View Showing Set No. 1777J.



Inside View Showing Set No. 1777J.

Set Comprises: **Hinges;** 2 Pairs No. 963, 16 inch Reversed Pad Extra Heavy T Hinges. 1 Pair No. 963, 12 inch Reversed Pad Extra Heavy T Hinges.
Bolts; 1 No. 1055, 6 inch Chain Bolt, with Staples. 1 No. 1056, 6 inch Foot Bolt, with Floor Plate.
Latch; 1 No. 1260, Size 4 Thumb Latch. 1 No. 1257, Size 4 Door Handle.
Holders; 1 Pair No. 1774 Door Holders.

No. 1777J—Garage Door Set, Japanned.....Per Set, $11.30

Packed—One Set in a Box, with Screws and Directions for Use.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

GARAGE DOOR SETS

STANLEY

Inside View Showing Set No. 1779J.

Set Comprises:

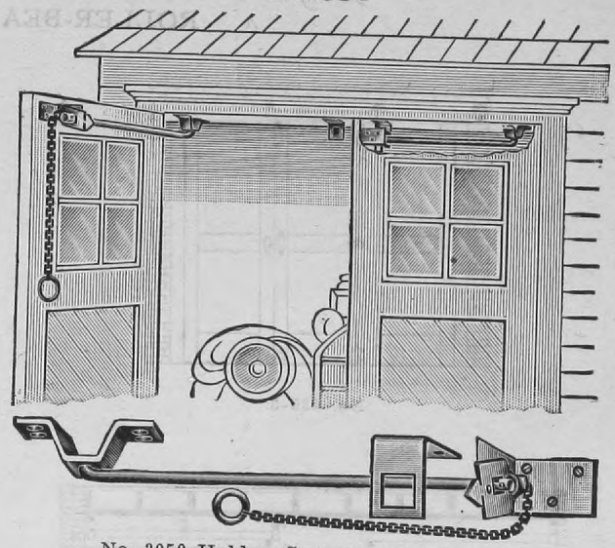
Hinges: 3 Pairs No. 963, 10 inch Reversed Pad T Hinges; 3 Pairs No. 243, 2¾x6 inch Ball Tip Loose Pin Hinges, with 3¼ inch Throw.
Bolts: 2 No. 1055J, 6 inch Chain Bolts; 2 No. 1056J, 6 inch Foot Bolts.
Latch: 1 No. 1260J, Size 4 Thumb Latch.
Handle: 1 No. 1257J, Door Handle.

No. 1779J—Garage Door Set, Japanned..Per Set, $10.00

Packed—One Set in a Box, with Directions for Use.

GARAGE DOOR HOLDERS

SHELBY



No. 3050 Holder, Separate and In Use.

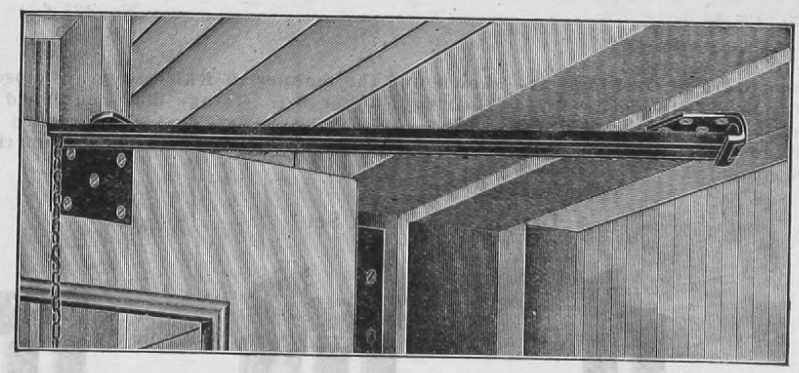
Wrought Steel, Japanned Finish.

Automatically Catches and Holds Doors Open. Quickly and Easily Applied, Simple in Operation and Extremely Durable in Use.

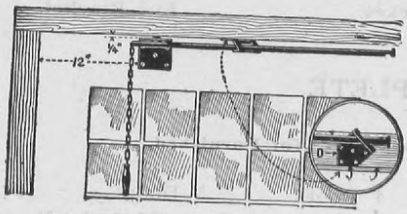
No. 3050—Rod, ½x33½ inches long.....
.....Per Single Dozen, $18.00

Packed—One-Sixth Dozen in a Package, with Screws.

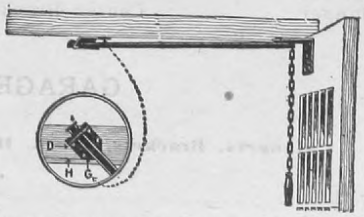
STANLEY GARAGE DOOR HOLDERS



No. 1774J Holder in Use.



No. 1774J on Square Top Door.



Door Open to more than a Right Angle.

Wrought Steel U Shaped Steel Bar, Japanned Finish.

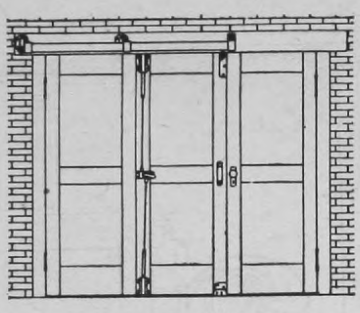
The Holder Operates Automatically. Swinging the door open starts its action. When the door is open to a little more than a right angle the notches in the end of the bar drop over the bottom of the slotted plate—locking the door open. To release, just pull the chain. Reversible for Right or Left Hand Doors.

No. 1774J—Garage Door Holders.....Per Single Dozen, $50.40

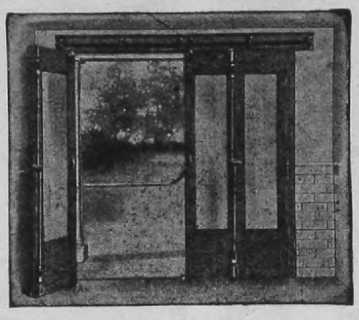
Packed—One-Sixth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

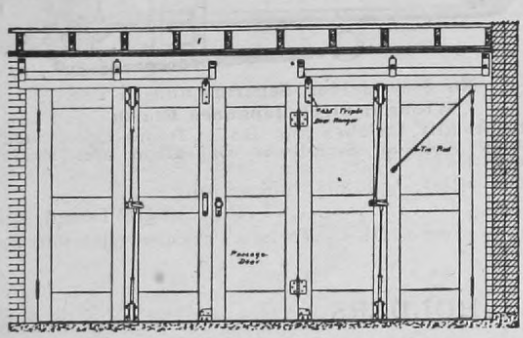
R-W GARAGE DOOR SETS
With
ROLLER-BEARING HANGERS



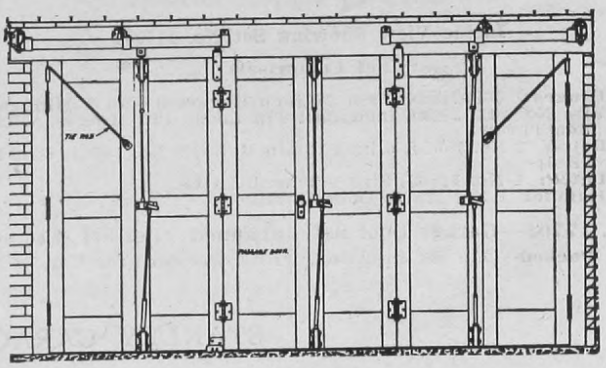
No. 435-3.



No. 435-4.



No. 435-5.



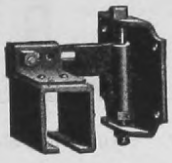
No. 435-6.

In the above illustrations Garage Openings are shown and the manner in which they are closed by the use of three, four, five or six doors and a No. 435 Slidetite Roller Bearing Hanger Set. Garage doors equipped with this fixture fold and slide inside the building, requiring only minimum space. When three, five or six doors are used the center ones swing free, making convenient entrance doors. When four doors are used they are locked from the inside only and another entrance door must be provided.

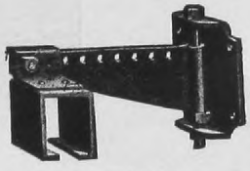
Details of Parts in Set

No. 435.
Hanger.

No. 435C.
Center Bracket.



No. 435I.
Intermediate Bracket.



No. 435E.
End Bracket.

GARAGE DOOR SETS COMPLETE

Hangers, Brackets, Track, Hinges, Bolts and Screws; Locks Are Not Furnished.

For Opening with	3 Doors		4 Doors		5 Doors		6 Doors	
Width of Opening	Up to 8 feet		Up to 12 feet		Up to 15 feet		Up to 18 feet	
For Track No.	31	33	31	33	31	33	31	33
No. 435 with No. 517-1 Bolts Per Set,	$14.50	19.00	26.00	35.00	29.00	39.00	36.00	43.00

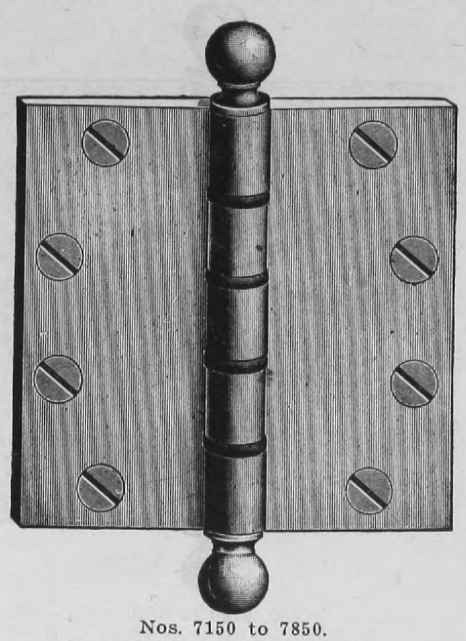
Specify carefully your requirements.

Example Order.—1 Set No. 435 Fixtures, complete with No. 517-1 Top and Bottom Bolt. Opening 8 feet 6 inches by 7 feet 10 inches. Four doors, 1¾ inches, using No. 31 Size Track. Doors swing in.

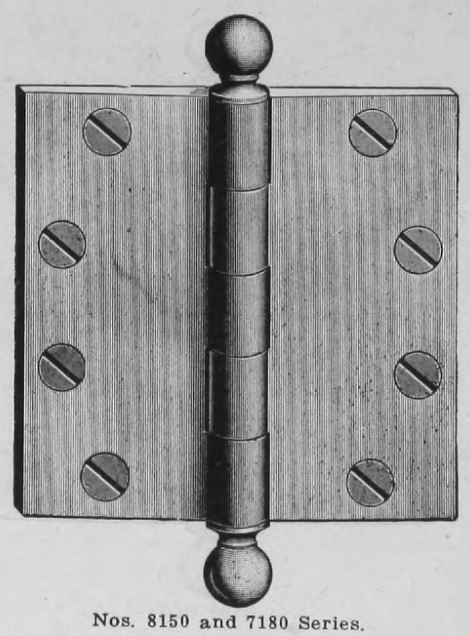
Note.—Sets listed are for doors up to 8 feet high. Sets for higher doors, quoted on request. Special Catalogs furnished if requested. For Nos. 31 and 33 Track see page 1409 and 1410. For No. 517-1 Bolt see page 1261.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

LOOSE PIN BUTTS



Nos. 7150 to 7850.
Half Size Cut of 4½x4½ inch.



Nos. 8150 and 7180 Series.
Half Size Cut of 4½x4½ inch.

Yale, Extra Heavy Pattern, "Long Service" Loose Pin, Ball Tip Butts

Cast Bronze, Brass or Iron. Fiber Washers. Hold Fast Pins.

Nos. Finishes	Inches,	4x4	4½x4½	5x5	5½x5½	6x6
7150—Plain Bronze Metal	Per Pair,	$6.25	7.75	9.40	11.90	14.35
7250—Antique Copper	Per Pair,	6.60	8.10	9.75	12.40	14.85
7450—Light Dull Brass	Per Pair,	6.60	8.10	9.75	12.40	14.85
7550—Sanded Statuary Brass	Per Pair,	6.60	8.10	9.75	12.40	14.85
7850—Bower-Barff	Per Pair,	3.30	3.65	4.45	5.35	6.65

Packed—One Pair in a Box, with Screws.

Yale, Extra Heavy Pattern, Self-Lubricating Loose Pin, Ball Tip Butts

Cast Bronze, Brass or Iron. Steel Bushed. Hold Fast Pins.

Nos. Finishes	Inches,	4x4	4½x4½	5x5	5½x5½	6x6
8150—Plain Bronze Metal	Per Pair,	$5.95	7.45	9.10	11.55	12.20
8250—Antique Copper	Per Pair,	6.30	7.80	9.45	12.05	12.70
8450—Light Dull Brass	Per Pair,	6.30	7.80	9.45	12.05	12.70
8550—Sanded Statuary Brass	Per Pair,	6.30	7.80	9.45	12.05	12.70
8850—Genuine Bower-Barff	Per Pair,	3.00	3.35	4.15	5.00	6.10

Packed—One Pair in a Box, with Screws.

Yale, Heavy Pattern, "Long Service" Loose Pin, Ball Tip Butts

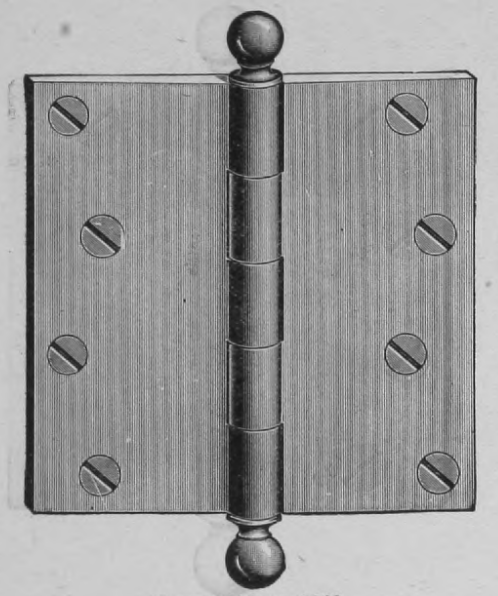
Cast Bronze, Brass or Iron. Fiber Washers. Hold Fast Pins.

Nos. Finishes	Inches,	4x4	4½x4½	5x5	5½x5½	6x6
7180—Plain Bronze Metal	Per Pair,	$4.85	6.10	6.95	9.20	11.40
7280—Antique Copper	Per Pair,	5.20	6.45	7.30	9.70	11.90
7480—Light Dull Brass	Per Pair,	5.20	6.45	7.30	9.70	11.90
7580—Sanded Statuary Brass	Per Pair,	5.20	6.45	7.30	9.70	11.90
7880—Bower-Barff	Per Pair,	2.30	2.65	3.15	4.10	5.55

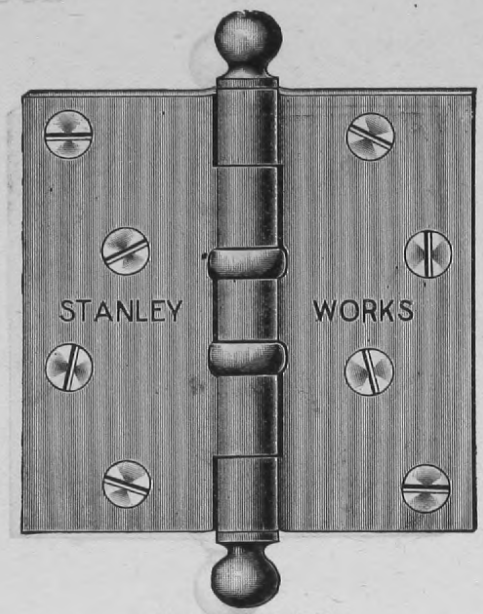
Packed—One Pair in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE PIN BUTTS



Nos. 8180 to 8880.
Half Size Cut of 4½x4½ inch.



Nos. 6150 to 6850.
Half Size Cut of 4½x4½ inch.

Yale, Heavy Pattern, Self-Lubricating Loose Pin, Ball Tip Butts

Cast Bronze, Brass or Iron, Steel Bushed.

Sizes 4x4 and larger have Hold Fast Pins.

Nos. Finishes	Inches,	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
8180—Plain Bronze	Per Pair,	$2.65	2.95	3.65	4.55	5.80	6.60	8.85	11.05
8280—Antique Copper	Per Pair,	2.85	3.15	3.85	4.90	6.15	6.95	9.35	11.55
8480—Light Dull Brass	Per Pair,	2.85	3.15	3.85	4.90	6.15	6.95	9.35	11.55
8580—Sanded Statuary Brass	Per Pair,	2.85	3.15	3.85	4.90	6.15	6.95	9.35	11.55
8880—Bower-Barff	Per Pair,	1.40	1.50	1.70	2.15	2.60	3.10	9.35	5.20

Packed—3x3 and Under, Six Pairs; Larger, One Pair in a Box, with Screws.

Yale, Medium Pattern, Self-Lubricating Loose Pin, Ball Tip Butts

Cast Bronze or Brass Metal, Steel Bushed.

Nos. Finishes	Inches,	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5
4169—Plain Bronze	Per Pair,	$2.00	2.50	2.80	3.30	4.15	4.95
4269—Antique Copper	Per Pair,	2.20	2.70	3.00	3.65	4.50	5.30
4469—Light Dull Brass	Per Pair,	2.20	2.70	3.00	3.65	4.50	5.30
4569—Sanded Statuary Brass	Per Pair,	2.20	2.70	3.00	3.65	4.50	5.30

Packed—3x3 and Under, Six Pairs; Larger, One Pair in a Box, with Screws.

Heavy Pattern "Ball Bearing" Loose Pin, Ball Tip Butts

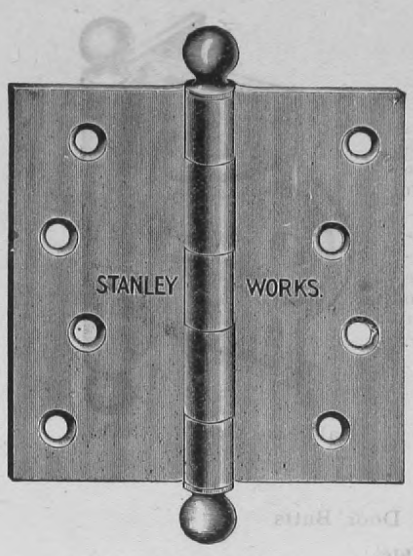
Wrought Steel, "Polished."

Nos. Finishes	Inches,	4x4	4½x4½	5x5	5½x5½	6x6
6150—Plain Bronze Plated	Per Pair,	$1.37	1.52	1.74	2.12	2.34
6250—Antique Copper	Per Pair,	1.41	1.56	1.78	2.15	2.38
6450—Light Dull Brass	Per Pair,	1.41	1.56	1.78	2.15	2.38
6550—Sanded Statuary Brass	Per Pair,	1.45	1.60	1.82	2.19	2.42
6850—Bower-Barff	Per Pair,	1.48	1.63	1.86	2.23	2.45

Packed—One Pair in a Box, with Screws.

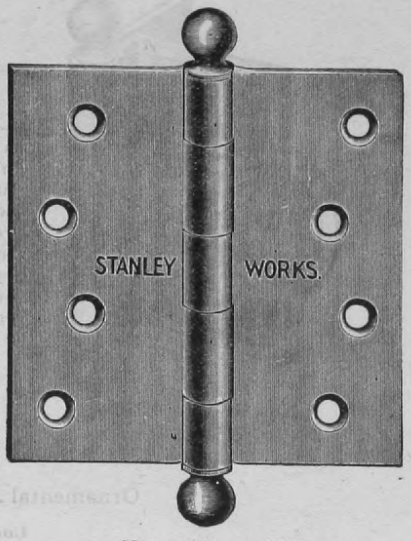
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE PIN BUTTS



Nos. 6139 to 6839.

Half Size Cuts of 4x4 Inch.



Nos. 6080 to 6869.

Heavy Pattern Loose Pin Butts, Non-rising Pins, Ball Tips

Wrought Steel, "Polished."

Nos. Finishes	Inches,	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
6139—Plain Bronze Plated	Per Pair,	$0.70	.82	.96	1.12	1.30	1.50	1.85	2.04
6239—Antique Copper	Per Pair,	.74	.86	1.00	1.15	1.34	1.52	1.89	2.08
6439—Light Dull Brass	Per Pair,	.74	.86	1.00	1.15	1.34	1.52	1.89	2.08
6539—Sanded Statuary Brass	Per Pair,	.78	.89	1.04	1.19	1.38	1.56	1.93	2.12
6839—Bower-Barff	Per Pair,	.93	1.08	1.34	1.52	2.00	2.40	3.04	3.63

Packed—2½x2½ Three Pairs; 3x3 and Over, One Pair in a Box, with Screws.

Heavy Pattern Loose Pin Butts, Ball Tips

Wrought Steel, "Polished."

Nos. Finishes	Inches,	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
6080—Nickel Plated	Per Pair,	$0.89	.93	1.00	1.25	1.50	1.90	2.17
6180—Plain Bronze Plated	Per Pair,	.71	.74	.82	1.07	1.27	1.67	1.94
6280—Antique Copper	Per Pair,	.74	.78	.86	1.10	1.30	1.70	1.97
6480—Light Dull Brass	Per Pair,	.74	.78	.86	1.10	1.30	1.70	1.97
6880—Bower-Barff	Per Pair,	.82	.86	.95	1.17	1.37	1.77	2.04

Packed—One Pair in a Box, with Screws.

Heavy Pattern Loose Pin Butts, Ball Tips

Wrought Steel "Planished."

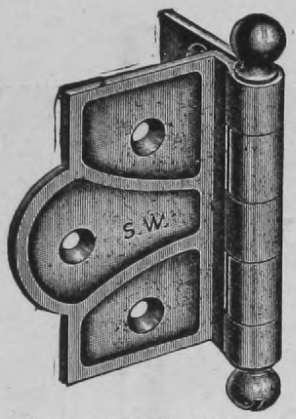
Nos. Finishes	Inches,	2x2	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
6069—Nickel Plated	Per Pair,	$0.47	.50	.55	.57	.64	.92	1.14	1.40	1.65
6169—Plain Bronze Plated	Per Pair,	.34	.35	.38	.40	.47	.74	.94	1.17	1.40
6269—Antique Copper	Per Pair,	.34	.35	.38	.40	.47	.74	.94	1.17	1.40
6469—Light Dull Brass	Per Pair,	.34	.35	.38	.40	.47	.74	.94	1.17	1.40
6569—Sanded Statuary Brass	Per Pair,	.40	.42	.45	.47	.54	.80	1.00	1.24	1.47
6869—Bower-Barff	Per Pair,	.47	.50	.55	.57	.64	.92	1.14	1.40	1.65

Packed—2½x2½ and Under, Three Pairs; 3x3 and Over, One Pair in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ORNAMENTAL SURFACE DOOR BUTTS

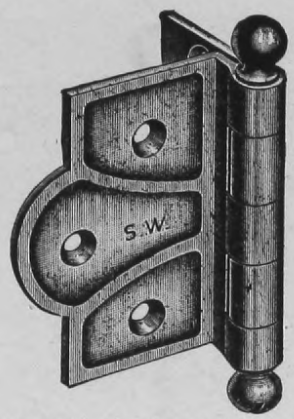
Loose Pin.



Nos. 6060 to 6860.

Note.

The hinges on this page are reversible, and can be made either right or left hand by simply unscrewing the ball tip, reversing the pin and screwing the tip in the opposite end. One tip is slotted to enable it to be taken out easily with a screwdriver.



Half Size Cut of 3 inch.

Ornamental Wrought Steel Surface Door Butts

Loose Pin, Ball Tip, Reversible.

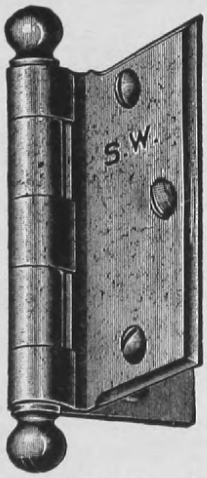
Nos. Finishes	Joint, Inches,	2	2½	3	3½	4	4½
6060—Nickel Plated	Per Pair,	$0.46	.51	.62	.70	.83	1.05
6260—Antique Copper	Per Pair,	.35	.40	.48	.54	.67	.89
6460—Light Dull Brass	Per Pair,	.35	.40	.48	.54	.67	.89
6560—Sanded Statuary Brass	Per Pair,	.40	.46	.54	.59	.73	.94
6860—Bower-Barff	Per Pair,	.40	.46	.57	.62	.76	.97

Packed—With Oval Head Screws for Surface Flap and Flat Head for the Mortise Leaf 2 and 2½ inch, Three Pairs; Larger Sizes, One Pair in a Box.

Nos. 6065 to 6865.

Note.

Time and labor are saved in hanging doors with these hinges, as the casement only is mortised, the door put in place and the ornamental leaf screwed to the surface of door.



Half Size Cut of 3½ inch.

Bevel Edge Wrought Steel Surface Door Butts

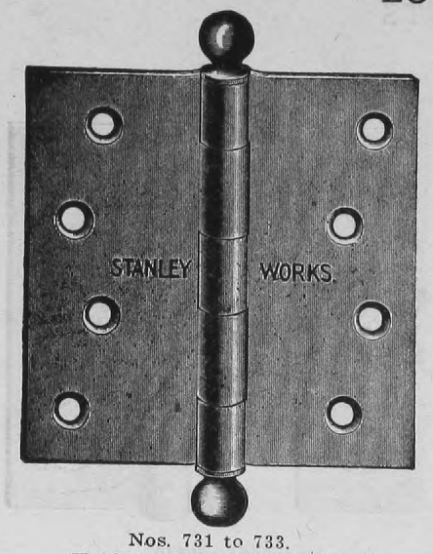
Loose Pin, Ball Tip, Reversible.

Nos. Finishes	Joint, Inches,	2	2½	3	3½	4	4½	5
6065—Nickel Plated	Per Pair,	$0.54	.60	.78	.86	.98	1.22	1.62
6265—Antique Copper	Per Pair,	.42	.48	.63	.69	.80	1.04	1.40
6465—Light Dull Brass	Per Pair,	.42	.48	.63	.69	.80	1.04	1.40
6565—Sanded Statuary Brass	Per Pair,	.48	.54	.69	.75	.86	1.10	1.50
6865—Bower-Barff	Per Pair,	.48	.54	.72	.78	.89	1.13	1.53

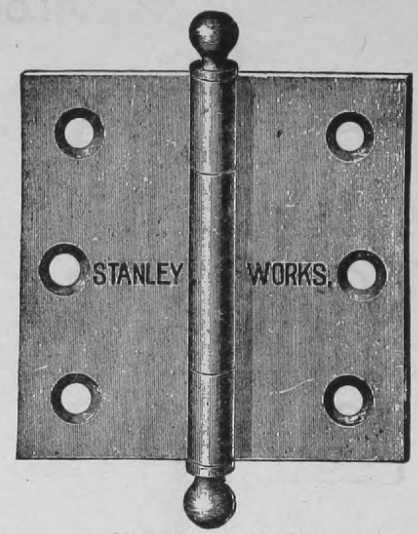
Packed—With Round Head Screws for Surface Flap and Flat Head for Mortise Leaf. 2 and 2½ inch, Three Pairs; Larger Sizes, One Pair in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE PIN BUTTS



Nos. 731 to 733.
Half Size Cut of 4x4 inch.



Nos. 6089½ to 6889.
Full Size Cut of 2x2 inch.

Heavy Loose Pin Butts, Ball Tips

Wrought Steel, Japanned. "Without Screws."

No. 731—Japanned ..... In.,	2x2	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
Size of Screw..... Nos.,	7	8	9	10	10	11	12	14	14
Screw Holes..... Each,	4	6	6	6	8	8	8	8	8
Per Dozen Pairs.....	$1.70	2.00	2.15	2.40	2.90	4.00	5.50	7.60	9.20

Packed—4x4 and Under, Half Dozen Pairs; 4½x4½ and Over, Quarter Dozen Pairs in a Box.

Heavy Loose Pin Butts, Ball Tips

Wrought Steel, Japanned. "With Screws."

No. Finish Inches,	2x2	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5	5½x5½	6x6
731½—Japanned .. Per Pair,	$0.19	.22	.23	.25	.31	.42	.60	.82	1.00

Packed—2½x2½ and Under, Three Pairs; 3½x3½ and Over, One Pair in a Box, with Screws.

Heavy Loose Pin Butts, Ball Tips

Wrought Steel, Japanned "Dead Black." With Screws.

No. Finish Inches,	2x2	2½x2½	3x3	3½x3½	4x4	4½x4½	5x5
733—Japanned "Dead Black". Per Pair,	$0.22	.25	.26	.27	.34	.47	.64

Packed—2½x2½ and Under, Three Pairs; 3x3 and Over, One Pair in a Box, with Screws.

Light Loose Pin "Cabinet" Butts, Ball Tips

Wrought Steel, "Polished."

Nos. Finish Inches,	2x2	2½x2	2½x2½	3x3
6089½—Nickel Plated ..... Per Dozen Pairs,	$7.80	8.30	8.60	9.85
6189½—Plain Bronze Plated..... Per Dozen Pairs,	6.00	6.50	6.75	8.00
6289½—Antique Copper ..... Per Dozen Pairs,	6.45	6.95	7.20	8.45
6489½—Light Dull Brass..... Per Dozen Pairs,	6.45	6.95	7.20	8.45

Packed—Half Dozen Pairs in a Box, with Screws.

Light Loose Pin "Cabinet" Butts, Ball Tips

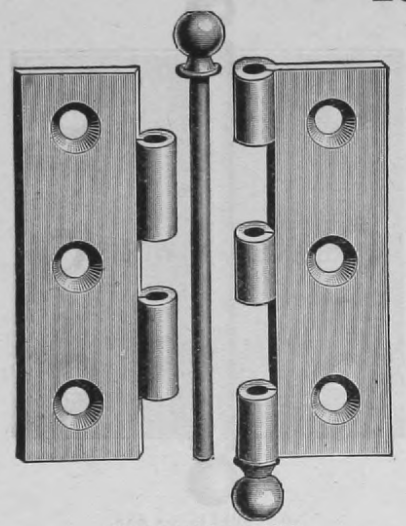
Wrought Steel, "Planished."

Nos. Finish Inches,	2x2	2½x2	2½x2½	3x3
6089—Nickel Plated ..... Per Dozen Pairs,	$5.80	5.95	6.05	6.85
6189—Plain Bronze Plated ..... Per Dozen Pairs,	4.00	4.15	4.25	5.00
6289—Antique Copper ..... Per Dozen Pairs,	4.45	4.60	4.70	5.45
6489—Light Dull Brass..... Per Dozen Pairs,	4.45	4.60	4.70	5.45
6589—Sanded Statuary Brass..... Per Dozen Pairs,	4.90	5.05	5.15	5.90
6889—Bower-Barff ..... Per Dozen Pairs,	5.10	5.25	5.35	6.10

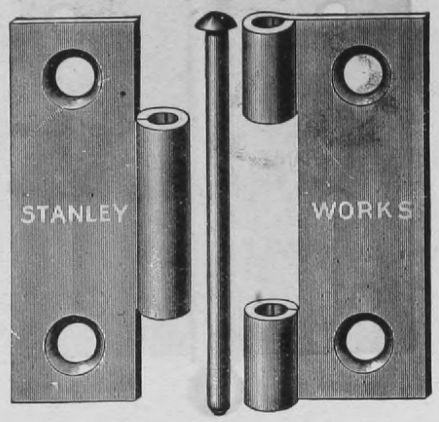
Packed—Half Dozen Pairs in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE PIN BUTTS



Nos. 4095 to 4595.
Full Size Cut of 2x1 9/16 inch.



Nos. 6086 to 840.
Full Size Cut of 2x1 9/16 inch.

Light Narrow Loose Pin "Cabinet" Butts, Ball Tip

Wrought Bronze Metal.

Nos. Finishes	Inches,	2x1 9/16	2 1/2x1 3/4	3x2
4095—Nickel Plated	Per Dozen Pairs,	$10.00	12.50	15.70
4195—Plain Bronze Metal	Per Dozen Pairs,	9.00	11.30	13.90
4295—Antique Copper	Per Dozen Pairs,	9.00	11.30	13.90
4495—Light Dull Brass	Per Dozen Pairs,	9.00	11.30	13.90
4595—Sanded Statuary Brass	Per Dozen Pairs,	9.50	11.90	15.10

Packed—One Dozen Pairs in a Box, with Screws.

Wrought Steel, Planished and Plated.

Nos. Finishes	Inches,	2x1 3/4	2 1/2x1 3/4	3x2
6095—Nickel Plated	Per Dozen Pairs,	$5.40	5.70	6.40
6195—Plain Bronze Plated	Per Dozen Pairs,	3.60	3.90	4.60
6295—Antique Copper	Per Dozen Pairs,	4.05	4.35	5.05
6495—Light Dull Brass	Per Dozen Pairs,	4.05	4.35	5.05
6595—Sanded Statuary Brass	Per Dozen Pairs,	4.50	4.80	5.50
6895—Bower-Barff	Per Dozen Pairs,	6.00	7.65	9.40

Packed—Half Dozen Pairs in a Box, with Screws.

Light Narrow Loose Pin Butts

Wrought Steel, Planished and Plated.

Nos. Finishes	Inches,	1 1/2x1 7/16	2x1 9/16	2 1/4x1 11/16	2 1/2x1 11/16	3x2
6086—Nickel Plated	Per Dozen Pairs,	$2.85	3.10	3.25	3.40	4.00
6186—Plain Bronze Plated	Per Dozen Pairs,	1.05	1.30	1.44	1.57	1.75
6286—Antique Copper	Per Dozen Pairs,	1.37	1.62	1.75	1.90	2.40
6486—Light Dull Brass	Per Dozen Pairs,	1.37	1.62	1.75	1.90	2.40
6886—Bower-Barff	Per Dozen Pairs,	1.85	2.10	2.25	2.35	3.00

Packed—One Dozen Pairs in a Box, with Screws.

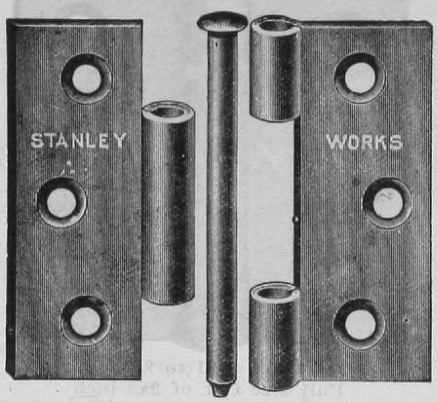
Wrought Steel, Bright.

No. 840—Bright Inches,	1 1/2x1 7/16	1 3/4x1 7/16	2x1 9/16	2 1/2x1 11/16	3x2
Size of Screw, Nos.	5	5	6	6	7
Screw Holes, each	4	4	4	6	6
Per Dozen Pairs	$0.90	1.00	1.10	1.45	1.80

Packed—One Dozen Pairs in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

LOOSE PIN AND FAST JOINT BUTTS



No. 804.
Full Size Cut of 2x2 inch.

Nos. 6084 to 838.
Full Size Cut of 2x1 9/16 inch.

Broad Reversible Loose Pin Butts

Wrought Steel, Bright.

No. 804—Bright .....Inches,	2x2	2x2 ½	2 ½x2	2 ½x2 ½	3x2 ½	3x3
Size of Screw	7	7	8	8	9	9
Screw Holes, each.....	4	4	6	6	6	6
Per Dozen Pairs.....	$1.40	1.50	1.60	1.80	2.40	2.60
No. 804—Bright.....Inches,	3x3 ½	3 ½x3	3 ½x3 ½	4x4	4 ½x4 ½	5x5
Size of Screw.....	9	10	10	10	11	12
Screw Holes, each.....	6	6	6	8	8	8
Per Dozen Pairs.....	$3.00	3.60	3.80	4.70	5.90	7.70

Packed—3x3 ½ and under, One Dozen Pairs; 3 ½x3 and over, Half Dozen Pairs in a Box.

Light Narrow Riveted Pin Butts

Wrought Steel, Planished.

Nos. Finishes	Inches,	2x1 9/16	2 ¼x1 11/16	2 ½x1 11/16	3x2
6084—Nickel Plated.....	Per Dozen Pairs,	$2.85	2.95	3.05	3.95
6184—Plain Bronze Plated.....	Per Dozen Pairs,	.92	1.03	1.13	1.25
6284—Antique Copper	Per Dozen Pairs,	1.25	1.35	1.45	1.85
6484—Light Dull Brass.....	Per Dozen Pairs,	1.25	1.35	1.45	1.85
6584—Sanded Statuary Brass.....	Per Dozen Pairs,	1.60	1.70	1.80	2.50
6884—Bower-Barff	Per Dozen Pairs,	1.72	1.83	1.95	2.55

Packed—One Dozen Pairs in a Box, with Screws.

Light Narrow Riveted Pin Butts

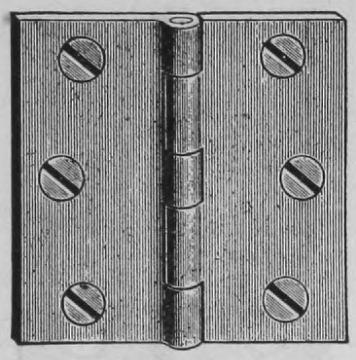
Wrought Steel, Bright.

No. 838—Bright.....Inches,	1x1	1 ¼x1 1/16	1 ½x1 7/16	1 ¾x1 7/16	2x1 9/16	2 ½x1 11/16	3x2
Size of Screw.....	3	4	5	5	6	6	7
Screw Holes, each.....	4	4	4	4	4	6	6
Per Dozen Pairs.....	$0.40	.50	.65	.80	.90	1.10	1.45

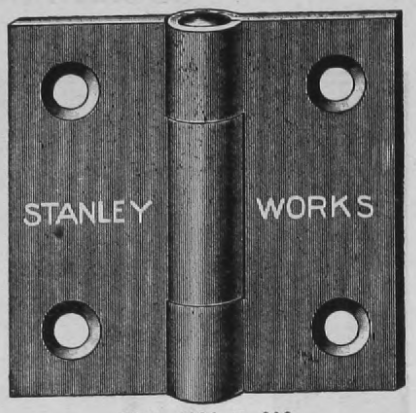
Packed—One Dozen Pairs in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FAST JOINT BUTTS



Nos. 4091 to 4491.
Half Size of 3½x3½ inch.
All Sizes have Five Knuckles in the joint.



Nos. 6091 to 808.
Full Size Cut of 2x2 inch.
Sizes 3½x3 inch and Larger have Five Knuckles in the joint.

Broad Transom and Shutter Butts, Riveted Pins

Cast Bronze Metal.

Nos. Finishes	Inches,	2½x2½	3x3	3½x3½
4091—Nickel Plated	Per Dozen Pairs,	$12.50	18.35	25.00
4191—Plain Bronze Metal	Per Dozen Pairs,	10.85	16.70	23.35
4291—Antique Copper	Per Dozen Pairs,	12.50	18.35	25.00
4491—Light Dull Brass	Per Dozen Pairs,	12.50	18.35	25.00

Packed—2½x2½, Half Dozen Pairs; 3x3 and over, One-Twelfth Dozen Pairs in a Box, with Screws.

Wrought Steel, Planished.

Nos. Finishes	Inches,	2x2	2½x2½	3x3	3½x3½	4x4
6091—Nickel Plated	Per Dozen Pairs,	$3.00	3.70	4.70	5.30	6.00
6191—Plain Bronze Plated	Per Dozen Pairs,	1.70	2.30	2.70	3.35	4.10
6291—Antique Copper	Per Dozen Pairs,	2.05	2.65	3.40	4.05	4.80
6491—Light Dull Brass	Per Dozen Pairs,	2.05	2.65	3.40	4.05	4.80
6591—Sanded Statuary Brass	Per Dozen Pairs,	2.40	3.00	4.10	4.75	5.50
6891—Bower-Barff	Per Dozen Pairs,	2.60	3.20	4.10	4.75	5.50

Packed—Half Dozen Pairs in a Box, with Screws.

Wrought Steel, Japanned.

No. 747—Japanned Inches,	2x2	2½x2½	3x3	3½x3½	4x4
Per Dozen Pairs	$0.95	1.20	1.75	2.50	3.10

Packed—Half Dozen Pairs in a Box, with Screws.

Wrought Steel, Bright.

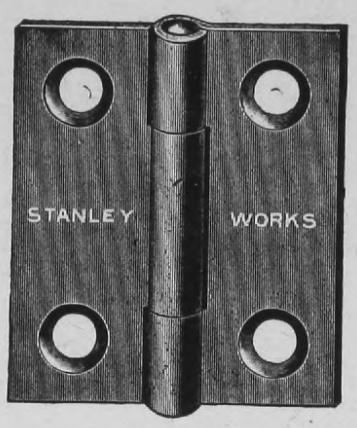
No. 808—Bright Inches,	2x2	2x2½	2½x2½	3x2½	3x3
Size of Screw, Nos.	7	7	8	9	9
Screw Holes, each	4	4	6	6	6
Per Dozen Pairs	$1.20	1.25	1.60	2.05	2.40

No. 808—Bright Inches,	3x3½	3½x3	3½x3½	4x4	4½x4½	5x5
Size of Screw, Nos.	9	10	10	10	11	12
Screw Holes, each	6	6	6	8	8	8
Per Dozen Pairs	$2.70	3.20	3.50	4.30	5.60	6.90

Packed—3x3½ and under, One Dozen Pairs; 3½x3 to 4½x4½, Half Dozen Pairs; 5x5, Quarter Dozen Pairs in a Box.

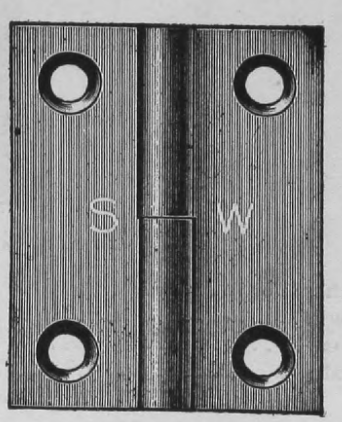
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FAST AND LOOSE JOINT BUTTS



No. 800.

Full Size Cut of 2x1 11/16 inch.



No. 837—Left Hand.

Full Size Cut of 2x1½ inch.

Regular Narrow, Riveted Pin Butts

Wrought Steel, Bright.

No. 800—Bright.....Inches,	1x1 3/16	1¼x1 5/16	1½x1 7/16	1¾x1 9/16	2x1 11/16	2¼x1¾
Size of Screws, Nos.....	5	6	6	6	7	7
Screw Holes, each.....	4	4	4	4	4	6
Per Dozen Pairs.....	$0.40	.50	.65	.80	.90	1.05
No. 800—Bright.....Inches,	2½x1⅞		2¾x2	3x2⅛	3½x2½	4x2⅞
Size of Screws, Nos.....	7		8	8	9	9
Screw Holes, each.....	6		6	6	6	8
Per Dozen Pairs	$1.10		1.30	1.45	2.00	2.85

Packed—3½x2½ and Under, One Dozen Pairs; 4x2⅞, Half Dozen Pairs in a Box.

"Loose Joint" Narrow Butts, For Window Screens, Etc.

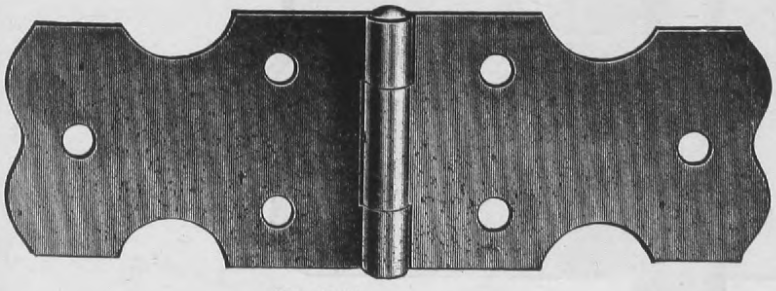
Wrought Steel, Bright.

Not Reversible; **Order** Right or Left Hand as wanted. Illustration shows Left Hand Butt.

No. 837—Bright .....Inches,	2x1½	2½x1¾
Size of Screws, Nos.	6	6
Screw Holes, each	4	6
Per Dozen Pairs	$1.10	1.45

Packed—One Dozen Pairs in a Box.

LIGHT TRUNK HINGES



No. 1830.

Full Size Cut of 4 inch.

Light Trunk Hinges, Wrought Steel, Plain

No. 1830—Plain, Size Open, inches.....	4
Per Gross Pairs	$2.80

TRUNK OR BAG HINGES

No. 1832.

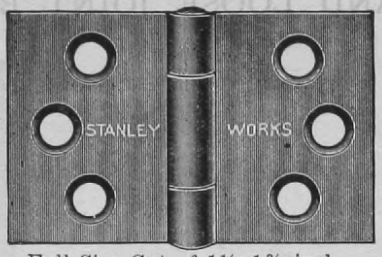
Full Size Cut of 1¼ inch.

Trunk or Bag Hinges, Wrought Steel, Plain

No. 1832—Plain, Length of Joint, in.,	1	1¼
Per Gross Pairs.....	$1.75	2.65

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

FAST JOINT BUTTS



Full Size Cut of 1⅛x1¾ inch.

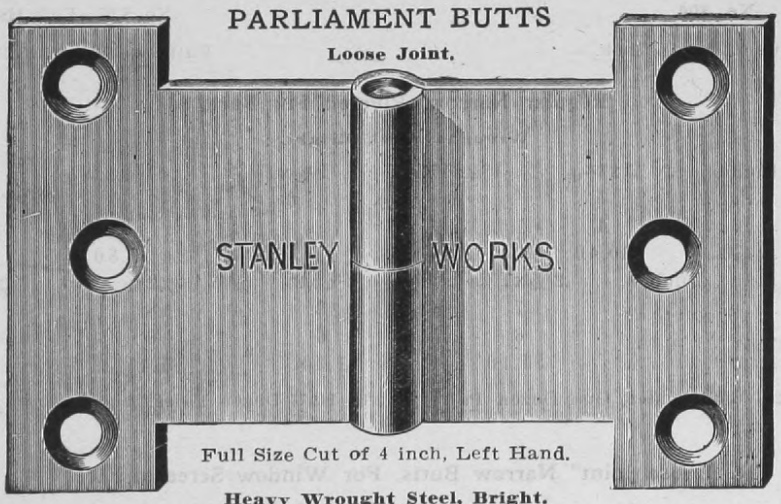
Light Inside Blind Butts. Wrought Steel, Planished. Bright Steel.

No. 842—Inches	1⅛x1¾	1¼x1⅞	1½x2⅛
Size of Screw	5	5	5
Screw Holes, each	6	6	6
Per Dozen Pairs	$0.65	.70	.80

Packed—One Dozen Pairs in a Box.

PARLIAMENT BUTTS

Loose Joint.



Full Size Cut of 4 inch, Left Hand.

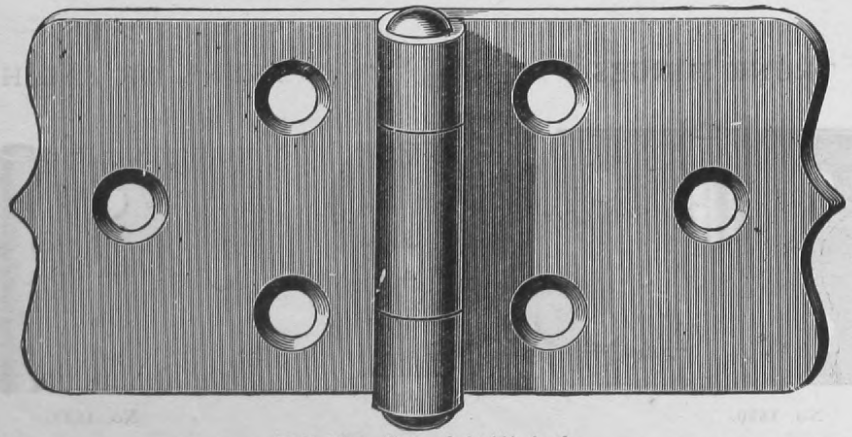
Heavy Wrought Steel, Bright.

Not Reversible, **Order** Right or Left Hand as wanted. Illustration shows Left Hand Butt.

No. 830—Width, Open, In.	2½	3	3½	4	4½	5	5½	6	8
Size of Screw	8	8	9	9	9	9	9	10	11
Screw Holes, each	6	6	6	6	6	6	6	6	6
Per Dozen Pairs	$1.70	2.00	2.20	2.50	3.10	3.40	4.00	4.30	7.10

Packed—5 Inch and Under, One Dozen Pairs; Larger Sizes, Half Dozen Pairs in a Box.

ORNAMENTAL FLAP HINGES



Full Size Cut of 2x4¼ inch.

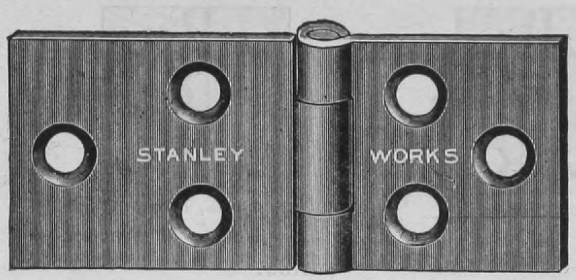
Wrought Steel, Galvanized, with Brass Pins.

No. 1312—Galvanized.....Inches,	1½x2¾	1¾x3⅛	2x2¼
Per Dozen Pairs	$2.25	2.70	3.25

Packed—One Dozen Pairs in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TABLE HINGES



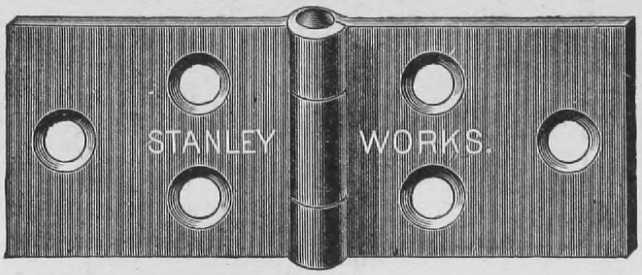
No. 810.
Full Size Cuts of 1¼x2⅞ inch.

Table Hinges, Flush Riveted Pin. Wrought Steel, Bright.

No. 810—Bright ..... Inches,	1x2⅝	1⅛x2¾	1¼x2⅞	1⅜x2 13/16	1½x3⅛
Size of Screw.....	6	7	7	7	8
Screw Holes, each.....	6	6	6	6	6
Per Dozen Pairs.....	$0.75	.80	.90	1.00	1.05

Packed—One Dozen Pairs in a Box.

BACK FLAPS



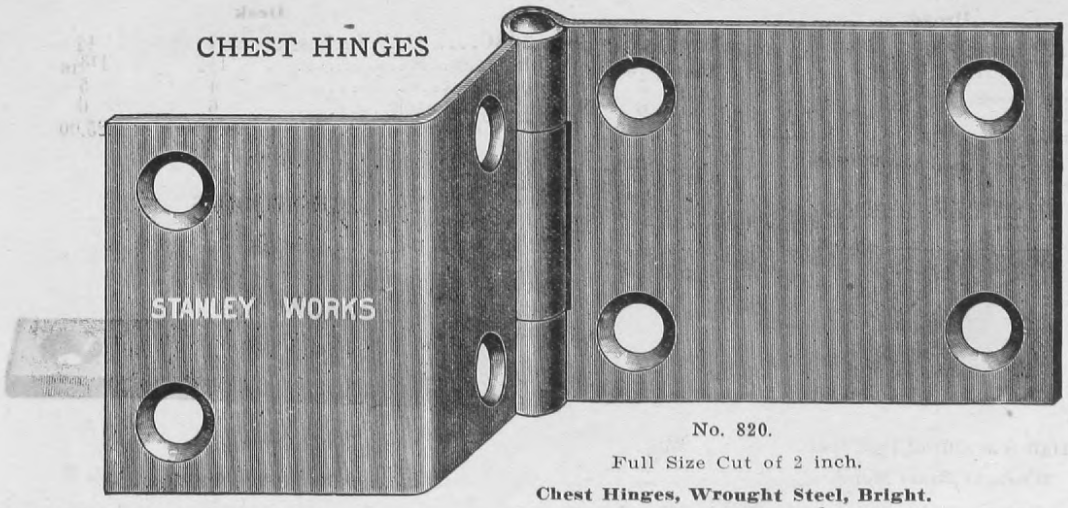
No. 814.
Full Size Cut of 1¼x3 3/16 inch.

Back Flap Hinges, Riveted Pin. Wrought Steel, Bright.

No. 814—Bright ..... Inches,	1x2⅞	1⅛x3	1¼x3 3/16	1⅜x3 3/16	1½x3 7/16
Size of Screw.....	6	6	7	7	8
Screw Holes, each.....	6	6	6	6	6
Per Dozen Pairs.....	$0.80	.90	1.00	1.10	1.20

Packed—One Dozen Pairs in a Box.

CHEST HINGES



No. 820.
Full Size Cut of 2 inch.

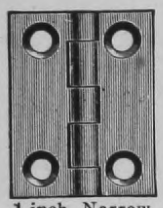
Chest Hinges, Wrought Steel, Bright.

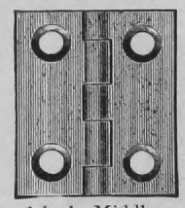
No. 820—Bright, Width of Joint..... Inches,	1½	2
Inside of Bend to Center of Pin..... Inches,	⅞	⅞
Size of Screw..... No.,	7	8
Screw Holes ..... Each	8	8
Price ..... Per Dozen Pairs,	$1.35	1.90

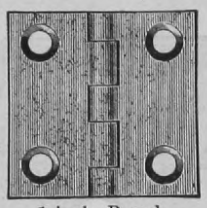
Packed—One Dozen Pairs in a Box.

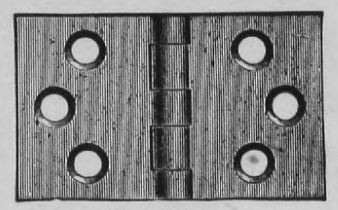
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WROUGHT BRASS BUTTS


1 inch, Narrow


1 inch, Middle


1 inch, Broad


1 inch, Desk

Narrow.

Narrow.....Inches,	½	¾	⅞	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Width, Open.....	½	11/16	⅝	23/32	25/32	⅞	1	1 1/32	1 7/32	1 13/32	1⅜	1⅝
Size of Screw.....	0	1	1	2	3	4	4	5	5	6	6	7
Screw Holes, each.....	4	4	4	4	4	4	6	6	6	6	6	6
Per Dozen Pairs.....	$0.24	.28	.30	.32	.46	.52	.68	.80	1.12	1.40	2.00	2.50

Middle.

Middle.....Inches,	½	¾	⅞	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Width, Open.....	9/16	¾	13/16	27/32	⅞	1	1 3/32	1 3/16	1 11/32	1 9/16	1 19/32	1 25/32
Size of Screw.....	0	1	1	2	3	4	4	5	5	6	6	7
Screw Holes, each.....	4	4	4	4	4	4	6	6	6	6	6	6
Per Dozen Pairs.....	$0.26	.30	.34	.38	.48	.60	.76	.92	1.30	1.70	2.30	3.00

Broad.

Broad.....Inches,	¾	⅞	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Width, Open.....	15/16	1	1	1 1/32	1¼	1¼	1⅜	1 7/16	1¾	1¾	1 29/32
Size of Screw.....	1	1	2	3	4	4	5	5	6	7	7
Screw Holes, each.....	4	4	4	4	4	6	6	6	6	6	6
Per Dozen Pairs.....	$0.32	.36	.40	.54	.68	.84	1.04	1.50	2.00	2.60	3.50

Desk.

Desk.....Inches,	¾	⅞	1	1⅛	1¼	1⅜	1½
Width, Open.....	1 11/32	1⅜	1⅝	1¾	1⅞	2	2⅛
Size of Screw.....	2	2	4	4	4	4	5
Screw Holes, each.....	6	6	6	6	6	6	6
Per Dozen Pairs.....	$0.40	.50	.60	.72	.84	1.10	1.20

Packed—One Dozen Pairs in a Box.

"BRASS PLATED" WROUGHT STEEL BUTTS

Broad

No. 300C.....Inches,	1	1¼	1½	1¾	2
Width, Open.....	1	1	1¼	1 9/16	1⅜
Size of Screw.....	3	4	4	5	5
Screw Holes, each.....	4	4	4	6	6
Per 100 Dozen Pairs.....	$15.00	20.00	22.00	32.00	32.00

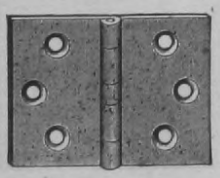
In Bulk

Desk

No. 308C.....Inches,	1	¼	1½
Width, Open.....	1½	1 13/16	2
Size of Screw.....	4	5	5
Screw Holes, each.....	6	6	6
Per 100 Dozen Pairs.....	$20.50	25.00	30.00

In Bulk

SHUTTER BUTTS

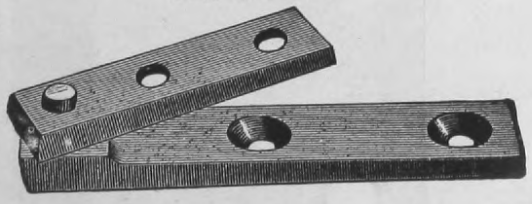

Half Size Cut of 1½x2 inch.

Wrought Brass Metal.

Shutter.....Inches,	1¼ x 1¾	1½ x 1½	1½ x 2
Size of Screw.....	4	5	5
Screw Holes, each.....	6	6	6
Per Dozen Pairs.....	$0.84	1.10	1.40

Packed—One Dozen Pairs in a Box.

PIN HINGES


No. 500

Cast Brass Metal.

No. 500.....Inches,	2	3
Size of Screw.....	8	8
Screw Holes, each.....	4	4
Per Dozen Pairs.....	$6.00	7.00

Packed—Two Dozen Pairs in a Box.

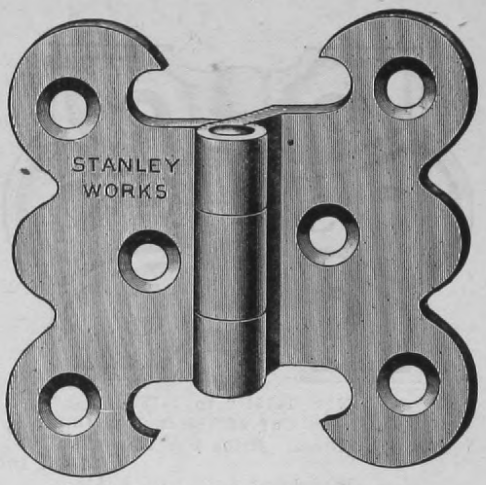
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ORNAMENTAL WROUGHT HINGES

Nos. 1420A to 1421¼. Full Size Cut.
Wrought Brass and Steel—2½x2½ inches.

Nos.	Finishes	Per Dozen Pairs
1420A	—Plain Bronze Plated, Steel	$2.20
1420D2	—Antique Copper Finish, Steel	2.55
1420F	—Light Dull Brass Finish, Steel	2.55
1421N	—Nickel Plated Brass	5.20
1421¼	—Polished Brass	5.00

Packed—One Dozen Pairs in a Box, with Screws.



Nos. 1422A to 1423¼. Full Size Cut.
With ⅜ inch **Offset,** for Refrigerators.

Nos.	Finishes	Per Dozen Pairs
1422A	—Plain Bronze Plated, Steel	$2.30
1422D2	—Antique Copper Finish, Steel	2.65
1422F	—Light Dull Brass Finish, Steel	2.65
1423N	—Nickel Plated Brass	5.60
1423¼	—Polished Brass	5.70

Packed—One Dozen Pairs in a Box, with Screws.

Nos. X75 to 1490D2. Full Size Cut.
Clover Leaf Pattern. Length of Joint, 1 inch; extreme width when open, 3 inches.

Wrought Brass.

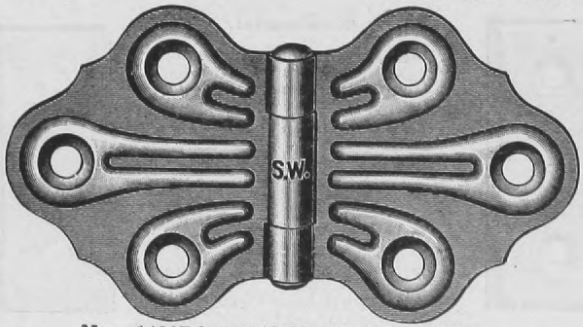
Nos.	Finishes	Per Dozen Pairs
X75	—Natural Brass, Polished	$1.80
X75C	—Antique Copper	2.20

Packed—Three Dozen Pairs in a Box, with Screws.

Wrought Steel.

Nos.	Finishes	Per Dozen Pairs
1490C	—Plain Brass Plated	$1.50
1490D2	—Antique Copper	1.50

Packed—One Dozen Pairs in a Box, with Screws.



Nos. 1430D2 to 1431N. Full Size Cut.
Butterfly Pattern. Length of Joint, 1¼ inches; extreme width when open, 3 inches.

Wrought Brass.

Nos.	Finishes	Per Dozen Pairs
1430D2	—Antique Copper	$3.00
1430F	—Light Dull Brass	3.00
1430N	—Nickel Plated	4.15

Packed—One Dozen Pairs in a Box, with Screws.

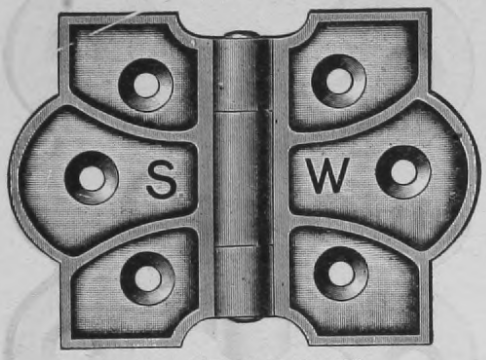
Wrought Steel.

Nos.	Finishes	Per Dozen Pairs
1431D2	—Antique Copper	$2.10
1431F	—Light Dull Brass	2.10
1431N	—Nickel Plated	2.40

Packed—One Dozen Pairs in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ORNAMENTAL WROUGHT HINGES



Nos. 1475D2 to 1475N.
Full Size Cut of 1½ inch open.
Wrought Steel. Price Per Dozen Pairs.

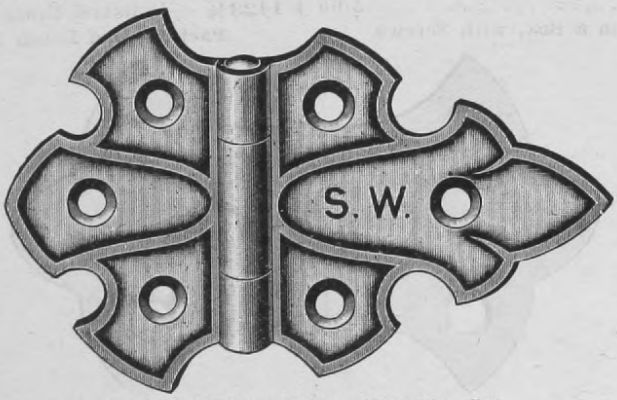
Nos. Finishes	Joint Inches. 1½	2
1475 D2—Antique Copper	$2.10	$2.85
1475 F —Dull Brass	2.10	2.85
1475SF4—Sanded Statuary Brass	2.40	3.15
1475 H —Bower-Barff	2.40	3.15
1475 N —Nickel Plated	2.40	3.15

Packed—One Dozen Pairs in a Box, with Oval Head Screws.

Nos. 1478D2 to 1478N.
Full Size Cut.
Wrought Steel. 1½x2½ inches open.
Lotus Pattern.

Nos. Finishes	Per Dozen Pairs
1478 D2—Antique Copper	$2.10
1478 F —Dull Brass	2.10
1478SF4—Sanded Statuary Brass	2.40
1478 H —Bower-Barff	2.40
1478 N —Nickel Plated	2.40

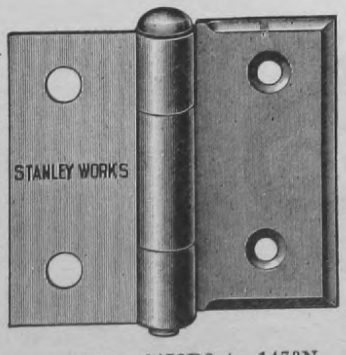
Packed—One Dozen Pairs in a Box, with Oval Head Screws.



Nos. 1480D2 to 1480N. Full Size Cut.
Lotus Pattern, Wrought Steel. Length of joint, 1½ inches; Width when open 3⅛ inches.

No. 1480D2—Antique Copper Finish ..... Per Dozen Pairs $2.10
No. 1480F —Light Dull Brass Finish ..... Per Dozen Pairs 2.10
No. 1480N —Nickel Plated Finish ..... Per Dozen Pairs 2.40

Packed—One Dozen Pairs in a Box, with Oval Head Screws.



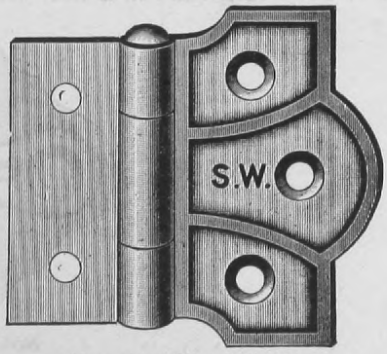
Nos. 1473D2 to 1473N.
Beveled Edge. Wrought Steel.

Nos. Finishes	Per Dozen Pairs
1473D2—Antique Copper	$3.24
1473F —Light Dull Brass	3.24
1473N —Nickel Plated	4.68

Packed—One Dozen Pairs in a Box, with Oval Head Screws for Surface Leaf and Flat Head for the other half.

Ornamental,
"Half Surface Hinges."
With Loose Pins.

Length of Joint, 1½ inches.
Full Size Cuts.

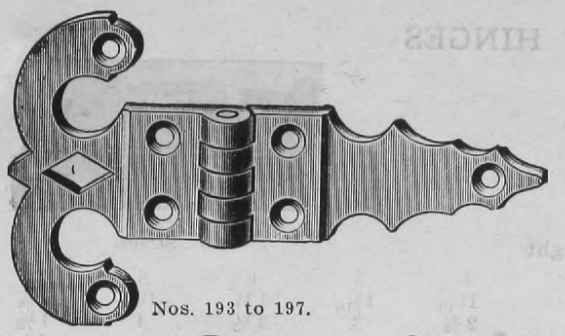


Nos. 1474D2 to 1474N
Ornamental. Wrought Steel.

Nos. Finishes	Per Dozen Pairs
1474D2—Antique Copper	$2.10
1474F —Light Dull Brass	2.10
1474N —Nickel Plated	2.40

Packed—One Dozen Pairs in a Box, with Oval Head Screws for the Surface Leaf and Flat Head for the other half.

UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN



Nos. 193 to 197.

Reduced Size Cuts.

REFRIGERATOR HINGES

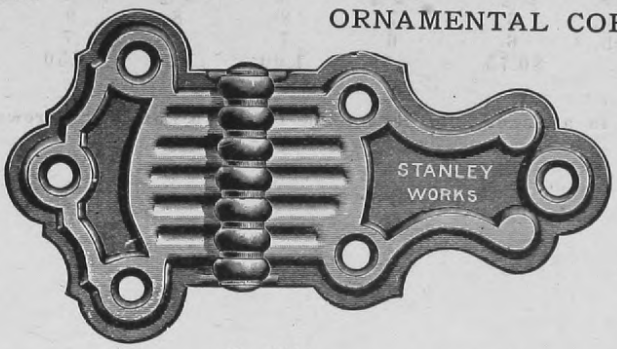
Heavy Cast Brass, Polished.

Diamond Pattern, Seven Screw Holes Each.

Nos.	193	195	196	197
Length over all, inches	5	6¼	7½	8½
For Screws, No.	8	10	11	12
Per Dozen Pairs	$8.90	14.70	20.00	23.30

Packed—Half Dozen Pairs in a Box.

ORNAMENTAL CORRUGATED HINGES



No. 1404.

No. 1408.

Wrought Brass Metal, Polished

Joint 1¾ inches, Width open 4⅞ inches.

Regular Style for Flush Doors.

No. 1404—Polished Brass .....Per Dozen Pairs, $6.00

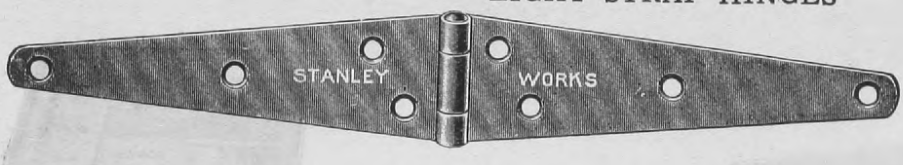
Joint 1¾ inches, Width open 4⅝ inches.

Refrigerator Style with ⅜ inch Offset in Short Leaf.

No. 1408—Polished Brass.....Per Dozen Pairs, $6.20

Packed—Half Dozen Pairs in a Box, with Oval Head Screws.

LIGHT STRAP HINGES



No. 900.

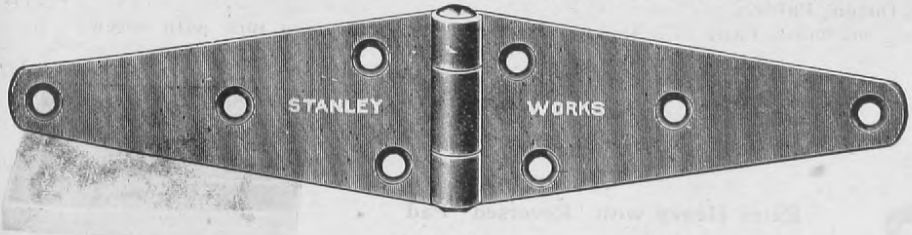
No. SC900.

Light Wrought Steel Strap Hinges

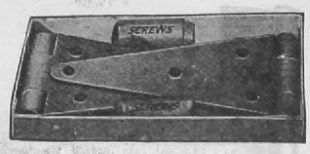
Length of each Leaf.....Inches,	3	4	5	6	8
Width at Joint.....Inches,	1⅛	1⅛	15/16	1 9/16	1⅞
Size of Screws.....Nos.,	6	7	8	9	10
Screw Holes .....Each,	6	6	8	8	8
No. 900—Per Dozen Pairs.....	$0.85	1.10	1.35	1.70	2.40
No. SC900—Per Dozen Pairs.....	.....	....	....	....	....

Packed—No. 900 Three Pairs in a Bundle; No. SC900 One Pair in a Box, with Screws.

HEAVY STRAP HINGES



No. 902.



No. SC902.

Heavy Wrought Steel Strap Hinges

Length of each Leaf.....Inches,	4	5	6	8	10	12	14	16
Width at Joint.....Inches,	1 9/16	1 13/16	2½	3	3 7/16	4	½	4⅝
Size of Screws.....Nos.,	9	9	11	12	13	14	16	16
Screw Holes .....Each	6	8	8	8	8	10	10	10
No. 902—Per Dozen Pairs.....	$1.60	2.15	2.80	4.50	6.80	10.40	12.20	14.00
No. SC902—Per Dozen Pairs....	.....	....	....	....	....	.....	.....	.....

Packed—No. 902 Three Pairs in a Bundle; No. SC902 One Pair in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

WROUGHT STEEL T HINGES

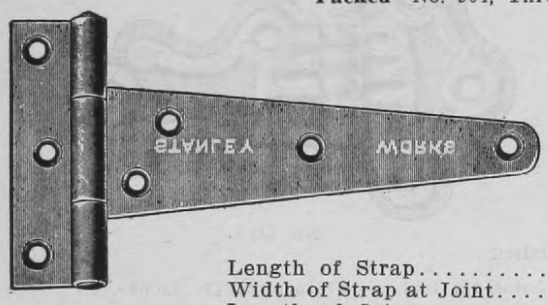
No. 904.

No. SC904.

Light

Length of Strap.....Inches,	3	4	5	6	8	10
Width of Strap at Joint.....Inches,	1 1/16	1 1/16	1 3/16	1 1/4	1 9/16	1 3/4
Length of Joint.....Inches,	2 1/2	2 3/4	3	3 1/2	4	4 1/2
Size of Screws.....Nos.,	6	7	8	8	9	10
Screw Holes .....Each,	6	6	7	7	7	8
No. 904—Per Dozen Pairs.....	$0.75	.80	1.00	1.20	1.50	2.20
No. SC904—Per Dozen Pairs.....	.....	....	....	....	....	....

Packed—No. 904, Three Pairs in a Bundle; No. SC 904 One Pair in a Box, with Screws.



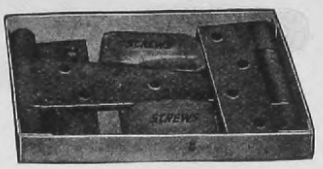
No. 906.

Heavy

Length of Strap.....Inches.	4	5	6	8	10	12
Width of Strap at Joint.....Inches,	1 5/16	1 3/8	1 9/16	1 3/4	2	2 7/16
Length of Joint.....Inches,	3	3 1/2	3 1/2	4	4 1/2	5 1/2
Size of Screws.....Nos.,	8	8	9	10	11	12
Screw Holes .....Each,	6	7	7	7	8	8
No. 906—Per Dozen Pairs.....	$0.90	1.05	1.25	1.55	2.30	3.20

Packed—Three Pairs in a Bundle.

No. 908.



No. SC908.

Extra Heavy

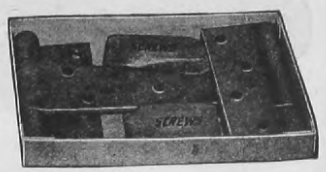
Length of Strap.....Inches,	5	6	8	10	12	14	16
Width of Strap at Joint...In.,	1 13/16	2 5/16	2 5/8	3 1/8	3 3/8	3 3/8	3 3/8
Length of Joint.....Inches,	4	4 1/2	5 1/2	7	7 3/4	7 3/4	7 3/4
Size of Screw.....Nos.,	10	11	13	14	14	16	16
Screw Holes .....Each,	8	8	8	9	10	10	10
No. 908—Per Dozen Pairs....	$2.45	3.00	5.00	7.40	10.70	11.80	12.60
No. SC908—Per Dozen Pairs.	....	....	....	....	.....	.....	.....

Packed—No. 908 Three Pairs in a Bundle; No SC908 One Pair in a Box, with Screws.

No. SC963J.

Extra Heavy with "Reversed" Pad

Black Japanned.



No. SC963J.

Length of Strap.....Inches,	10	12	14	16
Width of Strap at Joint.....Inches,	3 1/8	3 3/8	3 3/8	3 3/8
Length of Joint.....Inches,	7	7 3/4	7 3/4	7 3/4
Size of Screw .....Nos.	14	14	16	16
Screw Holes .....Each,	9	10	10	10
No. SC963J—Per Dozen Pairs.....	$....	....	....	....

Packed—One Pair in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HEAVY GARAGE HINGES

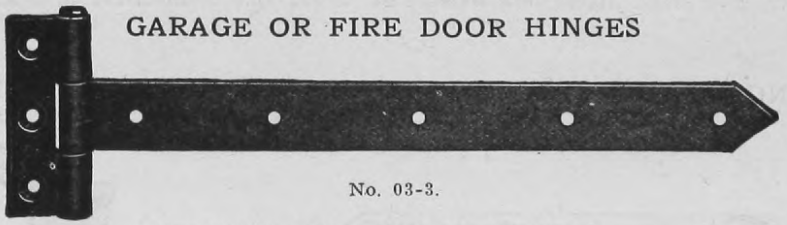
No. 1457J.

Wrought Steel, With "Ball Bearing" Washers.
Width of T, 2¾ inches; Length of Joint, 7 inches; Width of Strap at Joint, 3 inches.

No. 1457J—Japanned, with Screws..... { Length of Strap **10** inches.....Per Pair $4.20
Length of Strap **24** inches.....Per Pair 4.50

Packed—One Pair in a Package, with Screws.

GARAGE OR FIRE DOOR HINGES



No. 03-3.

Wrought Steel Strap, Malleable Iron Pintle.
Size of T, 2¼x7 inches. Size of Strap, 5/16x2½ inches.

Length of Strap.....Inches,	18	24	30	36
Weight Per Pair.....Pounds,	14	17	20	23
No. 03-3—Per Pair.....	$2.30	2.40	2.70	3.00

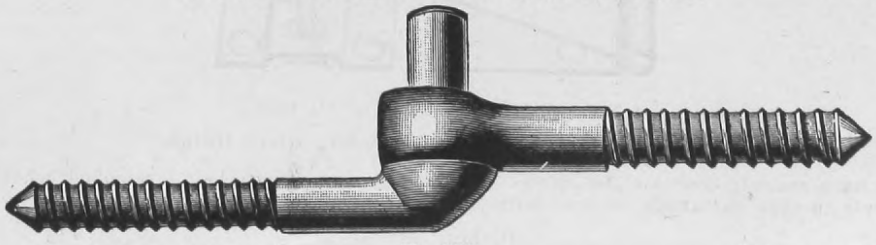
SCREW HOOK AND STRAP HINGES

No. 821.

Wrought Steel Screw Hook and Strap Hinges. With Lap Joint.

Length of Strap.....Inches,	8	10	12	14	16	18	20	22	24
Avg. Wt. Per Doz. Pairs...Lbs.	26	40¼	57	70¼	76¼	92	113	116	123½
No. 821—Per Pound..... $	.....			.....				.....	

SCREW HOOK AND EYE HINGES



No. 823.

Wrought Steel Screw Hook and Eye Hinges.

Diameter of Screw.....Inch,	½	⅝	¾
Average Weight per Dozen Pairs.....Pounds,	13½	25¼	42½
No. 823—Per Pound..... $	.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HINGE HASPS

No. 912. Half Size Cut of 4½ inch.

Plain, Wrought Steel Hinge Hasps.

Length of Strap	Inches,	3	4½	6	8	10
Width at Joint	Inches,	1⅛	1⅛	1½	1⅞	2 3/16
Size of Screws	Nos.,	6	7	9	10	10
Screw Holes	Each,	7	7	8	8	8
No. 912	Per Single Dozen,	$0.50	.60	.80	1.05	1.50
No. SC912. One in a Box	Per Single Dozen,	.....	.....	.....	.....	.....

Packed—No. 912, Two Single Hasps in a Bundle; No. SC912, One Single Hasp in a Box, with Screws.

HINGE HASPS

No. 1356. Half Size Cut.

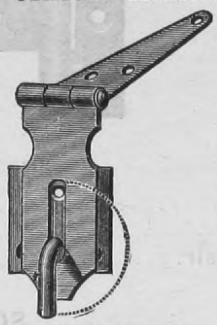
Extra Heavy Wrought Steel.

7½ inches long, 1¾ inches wide, ⅛ inch thick.

No. 1356—Hinge Hasps, **Galvanized**. . Per Dozen, **$10.00**

Packed—One Dozen in a Box, with **Screws.**

CRATE HASPS



No. 12. One-Third Size Cut.

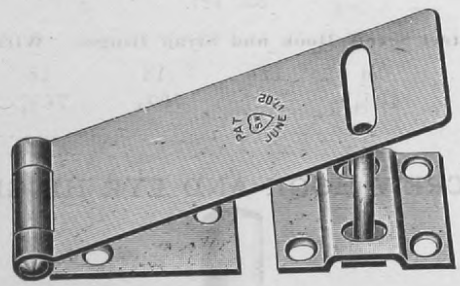
Wrought Steel with Single Swivels.

Length of Strap, 3 inches; Width at Joint, 1⅛ inches. Takes **Six** No. 6 Screws.

No. 12—Crate Hasps. . . . . Per Single Dozen, $1.00

Packed—One Dozen in a Package.

SAFETY HINGE HASPS



No. 915. Half Size Cut of 4½ inch.

Stanley, Plain Wrought Steel Safety Hinge Hasps.

When closed, the hasp entirely conceals the screws and prevents same from being removed when the hasp is locked. Also has movable staple to take shrinkage of door without resetting plate.

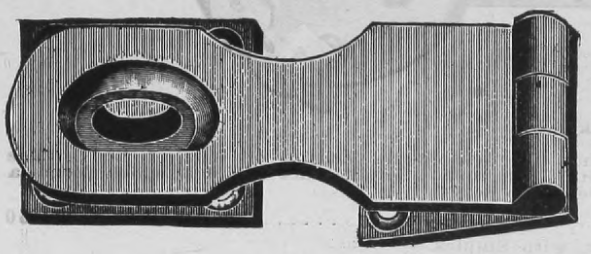
Length of Strap	Inches,	3	4½	6
Width at Joint	Inches,	1½	1½	1⅞
Size of Screws	Nos.,	7	7	8
Screw Holes	Each,	7	7	9
No. 915	Per Dozen,	$0.90	1.20	1.70
No. SC915—One in a box	Per Dozen,	.....	.....	.....

Packed—No. 915, Half Dozen in a Box, without Screws; No. SC915, One in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRASS HINGE HASPS

Full Size Cuts.



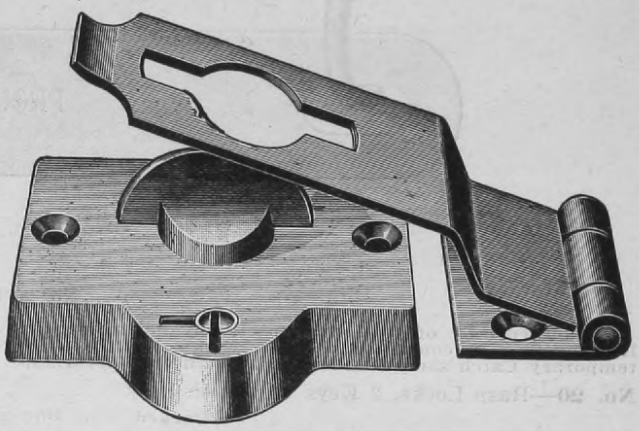
No. 873.

Cast Brass Metal.

Full Polished and Lacquered.
When closed all screws are concealed.
Each Hasp requires Eight No. 5 Screws.

No. 873—1¼x3¼ inches .....Per Dozen, $7.00

Packed—One Dozen in a Box.



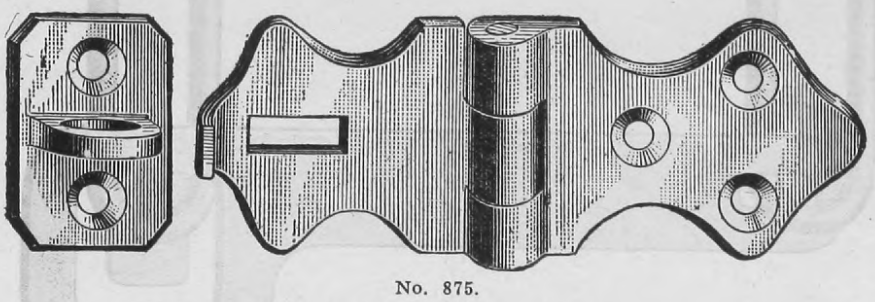
No. 100½.

Eclipse Cast Brass Hasp Locks.

Spring Locking Combination Hasp and Lock.
Four Secure Levers, Two Flat Steel Keys.
When locked all screws are concealed.

No. 100½—2x3¼ inches .....Per Dozen, $12.00

Packed—Half Dozen in a Box, with Screws.



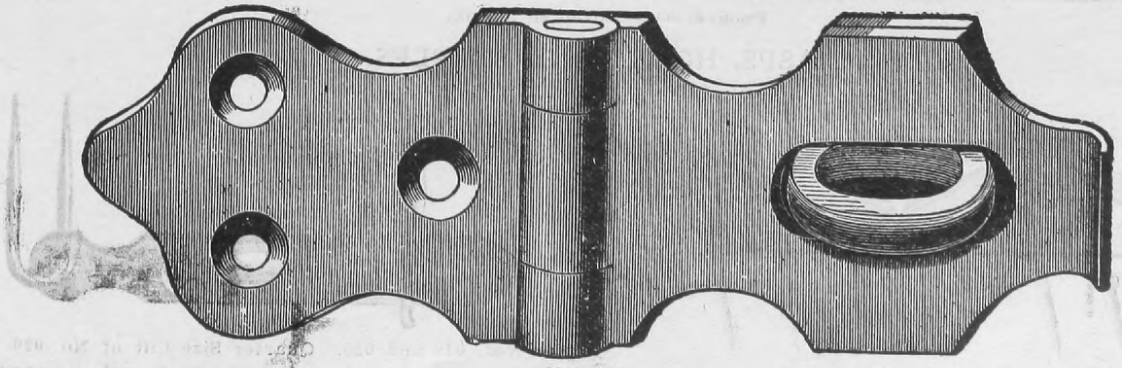
No. 875.

Fancy Shape, Cast Brass Metal.

Length over all, 3¼ inches. Five No. 6 Screws are required.

No. 875—Hinge Hasps, Highly Polished and Lacquered.....Per Dozen, $7.00

Packed—One Dozen in a Box.



No. 876.

Fancy Pattern, Heavy, Cast Brass Metal.

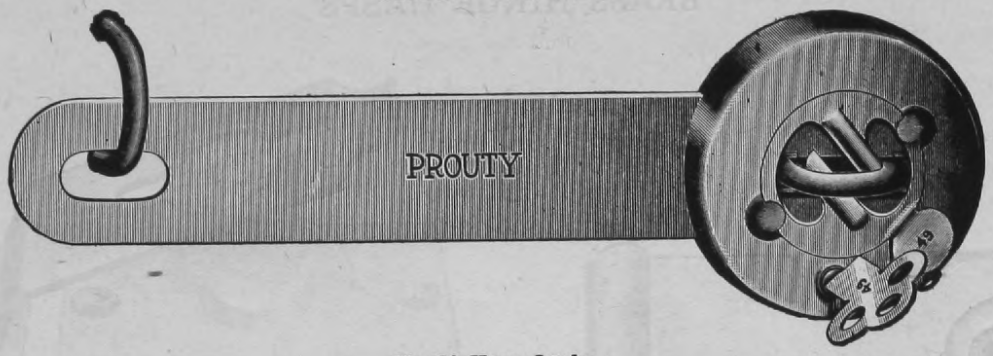
Length over all, 5 inches. Five No. 7 Screws are required.

No. 876—Brass Hinge Hasps, Highly Polished and Lacquered .....Per Dozen, $10.50

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HASP LOCKS



No. 20 Hasp Locks.

Made entirely of steel, and practically indestructible. Self-locking by pressing the Button on side of Lock. The Locking Bar is contained entirely within the Lock. Provided with Hasp Button on the face of Lock which forms a temporary Catch same as the Hook on an ordinary Hasp. All different in a dozen.

No. 20—Hasp Locks, 2 Keys with each Lock.....Per Dozen, $5.50

Packed—One Dozen in a Box, with Staples.

HASPS AND STAPLES

PERFECT

No. 850. Half Size Cut.

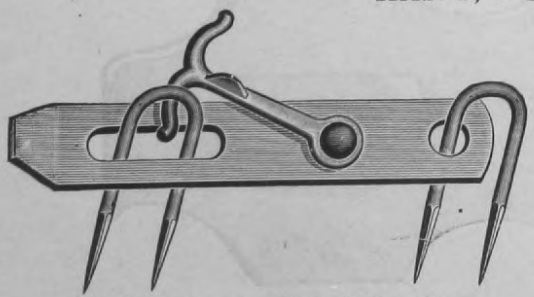
"Perfect" Wrought Hasps and Staples.

Cannot open accidentally as the weight of the Head and shape of the slot hold it securely in place; easily operated with one hand, and secured with Padlock same as old style Hasp. For right or left hand.

No. 850—Wrought Steel, Length of Hasp 8 inches.....Per Dozen, $1.10

Packed—One Dozen in a Box.

HASPS, HOOKS AND STAPLES

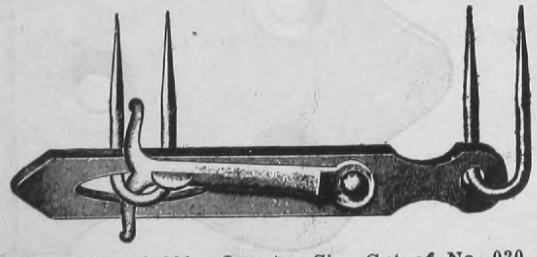


No. 30. Quarter Size of 10 inch.

Plain Wrought Steel Hasps, Hooks and Staples.

Inches	6	8	10
No. 30—Per Dozen.....	$1.40	1.80	2.50

Packed—One Dozen in a Box.



Nos. 018 and 020. Quarter Size Cut of No. 020.

Extra Heavy, Plain Wrought Steel Hooks, Hasps and Staples.

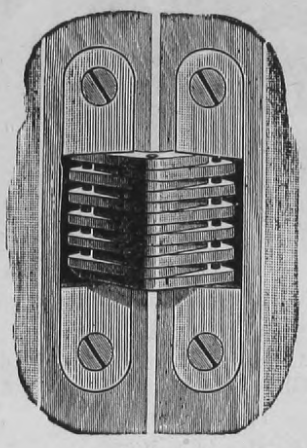
No. 018—Hasps, 8 inches long, 1x1¼ inch Steel.. .....Per Dozen, $4.00

No. 020—Hasps, 10 inches long, 1x1¼ inch Steel.. .....Per Dozen, 5.00

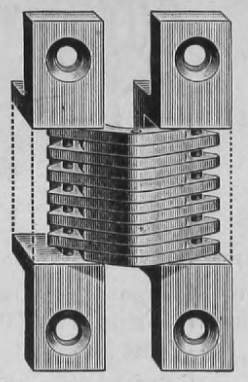
Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

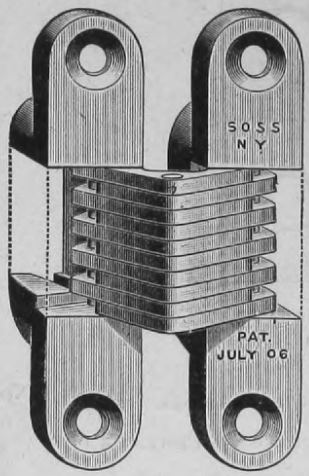
SOSS INVISIBLE HINGES



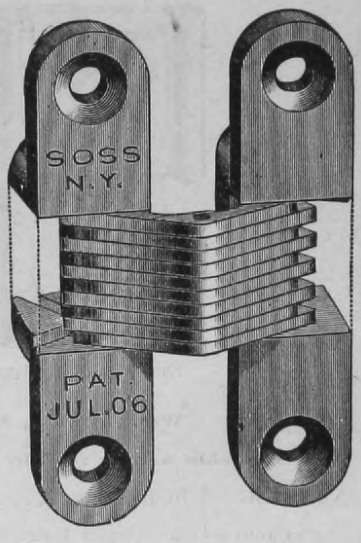
No. 101 Mounted.



No. 102.



No. 104.



No. 108.

Finest Cast Bronze Metal.

These Hinges are absolutely concealed except when the door is open; door will not warp or sag, and when closed makes a joint that is dust, air, and sound proof.

Suitable for hanging Doors from the lightest in Cabinet work to those of the heaviest character up to 1000 pounds. Working parts made from frictionless Metal, will outwear the door. In use in all manner of openings from jewel case covers to bronze entrance doors and can be installed by any carpenter. Soss Invisible Hinges have roller bearings and run as smoothly as a ball-bearing hinge.

It is difficult to say that a certain size hinge will carry a door of a certain thickness, as without respect to the thickness, doors may vary greatly in weight, but the following will be found to apply generally—

Style of Finish—Soss invisible hinges are made in two styles, **Blunt** and **Polished. Blunt** finished hinges are simply assembled and plated. **Polished** hinges have the center section highly ground and polished, adding to their appearance. There is no difference in the relative strength. Hinges of either finish are equally strong.

Soss Invisible Hinges, "Blunt Finish"

Length Inches	Width of Plate	Depth of M'tse	Minimum Thickness of Wood	For Doors Up to	Plain Bronze Nos.	Plain Bronze Per Pair	Light Dull Brass Nos.	Light Dull Brass Per Pair	Nickel Plated Nos.	Nickel Plated Per Pair
1″	⅜″	½″	½″	.....	**B100**	$0.28	**B4100**	$0.28	**B2000**	$0.28
1 1/16″	⅜″	½″	½″	3′x1½′x⅞″	**B101**	.40	**B4101**	.40	**B2101**	.40
1 3/16″	⅜″	½″	½″	3′x1½′x⅞″	**B102**	.40	**B4102**	.40	**B2002**	.40
2⅜″	½″	⅝″	¾″	5′x2′x⅞″	**B104**	.75	**B4104**	.75	**B2004**	.75
2¾″	⅝″	¾″	1″	6′x2½′x1⅛″	**B108**	1.10	**B4108**	1.10	**B2008**	1.10
3½″	¾″	⅞″	1⅛″	6′x2½′x1⅛″	**B112**	1.90	**B4112**	1.90	**B2012**	1.90
4⅜″	1″	1 3/16″	1⅜″ to 2½″ thick		**B116**	2.60	**B4116**	2.60	**B2016**	2.60

Soss Invisible Hinges, "Polished Finish"

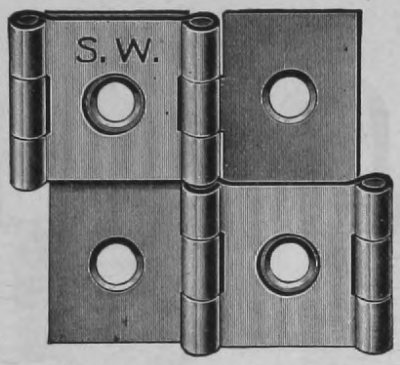
Length Inches	Width of Plate	Depth of M'tse	Minimum Thickness of Wood	For Doors Up to	Plain Bronze Nos.	Plain Bronze Per Pair	Light Dull Brass Nos.	Light Dull Brass Per Pair	Nickel Plated Nos.	Nickel Plated Per Pair
1 1/16″	⅜″	½″	½″	3′x1½′x⅞″	**101**	$0.50	**4101**	$0.50	**2101**	$0.50
1 3/16″	⅜″	½″	½″	3′x1½′x⅞″	**102**	.50	**4102**	.50	**2002**	.50
1½″	½″	⅝″	¾″	.....	**103**	.42	**4103**	.42	**2003**	.42
2⅜″	½″	⅝″	¾″	5′x2′x⅞″	**104**	1.00	**4104**	1.00	**2004**	1.00
2¾″	⅝″	¾″	1″	6′x2½′x1⅛″	**108**	1.50	**4108**	1.50	**2008**	1.50
3½″	¾″	⅞″	1⅛″	6′x2½′x1⅛″	**112**	2.50	**4112**	2.50	**2012**	2.50
4⅜″	1″	1 3/16″	1⅜″ to 2½″ thick		**116**	3.60	**4116**	3.60	**2016**	3.60

Note.—No. 102 has the same carrying capacity as No. 101 but has square corners. Nos. 101 and 102 are used for all piano and furniture work, etc.

Packed—Nos. 101 to 104, Twelve Pairs; Nos. 108 to 116, One Pair in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SCREEN HINGES



No. 875C. Reduced Size Cut.

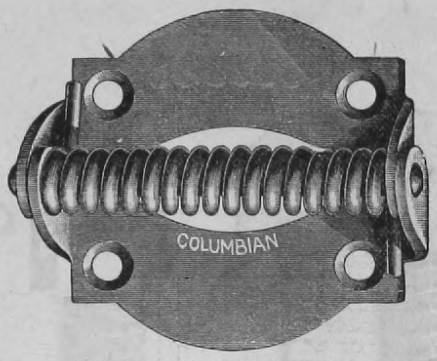
Wrought Steel, Brass Plated.

Double Acting, for Fire and Other Screens.

No. 875C—2 inch Joint.....Per Dozen Pairs, $4.60

Packed—One Dozen Pairs in a Box, with Screws.

SHOW CASE HINGES



Nos. 1 and 6. Full Size Cut.

Show Case Spring Hinges, 1¾x1¾ inches.

Well adapted for light doors on cabinets, etc.

No. 1—Wrought Steel, Japanned. Per Doz. Pairs, $1.00

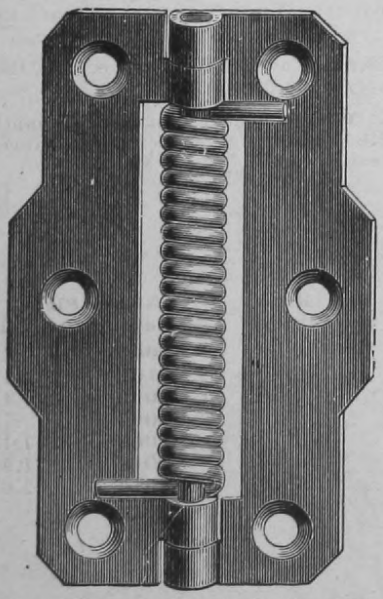
No. 6—Wrought Brass, Polished. Per Doz. Pairs, 2.50

Four Screw Holes each, for No. 6 Screws.

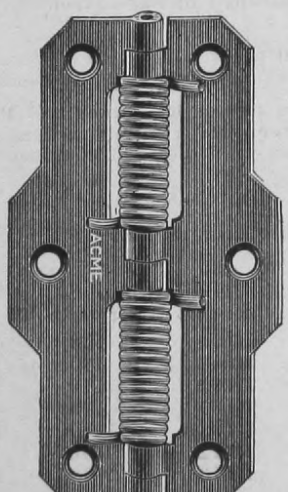
Packed—One Dozen Pairs in a Box.

ACME SPRING HINGES

SINGLE ACTING

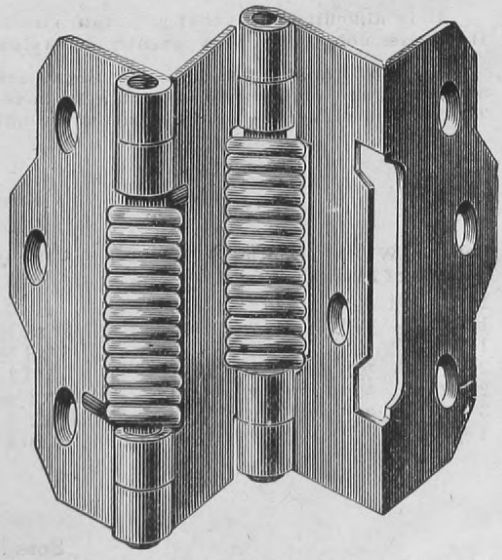


Nos. 702 and 703. Full Size Cut of 3 inch.



No. 705. Half Size Cut.
This Cut shows Hinge with Double Springs.

DOUBLE ACTING



Nos. 712 and 713. Full Size Cut of 2½ inch.

Wrought Brass with Brass Spring Wire Springs. For Screen, Cabinet, and Show Case Doors. The quick, positive action of the evenly coiled spring will swing the door quickly and quietly from any angle.

Single Acting.

No. 702—2½ inch .....Per Dozen Pairs, $2.00

No. 703—3 inch .....Per Dozen Pairs, 2.75

No. 705—5 inch with Double Springs.....Per Dozen Pairs, 4.65

Packed—Half Dozen Pairs in a Box.

Double Acting.

No. 712—2½ inch .....Per Dozen Pairs, $4.10

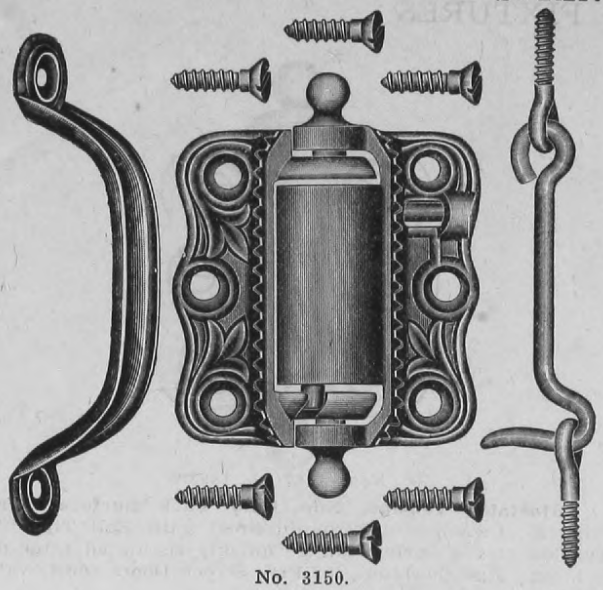
No. 713—3 inch .....Per Dozen Pairs, 5.10

No. 715—5 inch with Double Springs.....Per Dozen Pairs, 10.20

Packed—Half Dozen Pairs in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SPRING HINGES

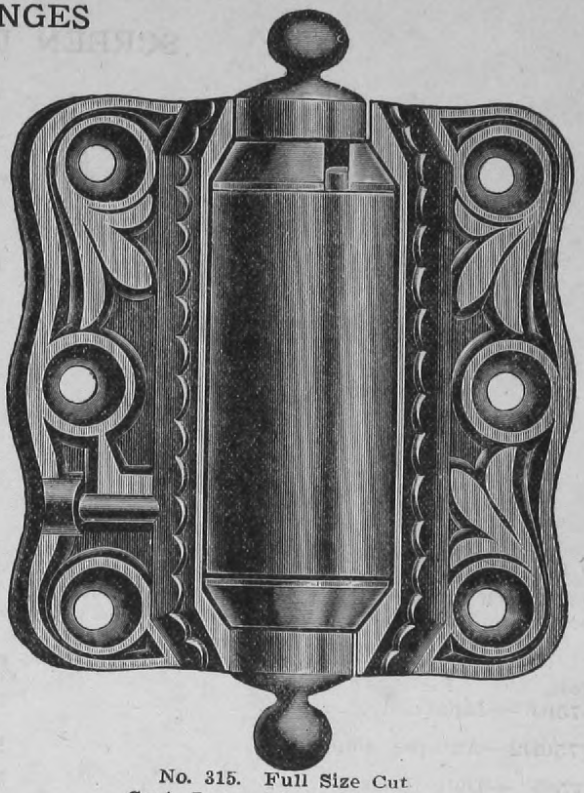


No. 3150.

Champion Screen Door Sets, consisting of One Pair 3 inch Champion Cast Japanned Hold Back Spring Hinges. One 2½ inch Bright Wire Hook and Eye, and One 4½ inch Japanned Door Pull, with Screws to match.

No. 3150—In Sets..... { Per Dozen Sets, $..... Per Gross Sets, ...

Packed—Each Set in a Separate Carton.
One Dozen Sets in a Box.

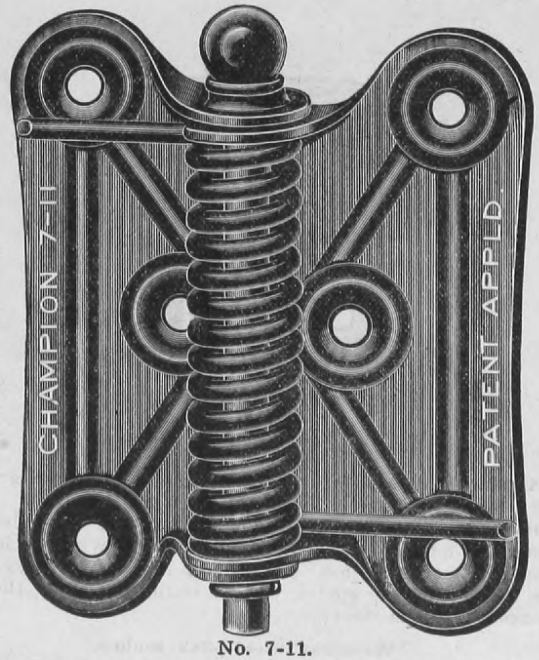


No. 315. Full Size Cut
Cast, Japanned, Steel Spring.

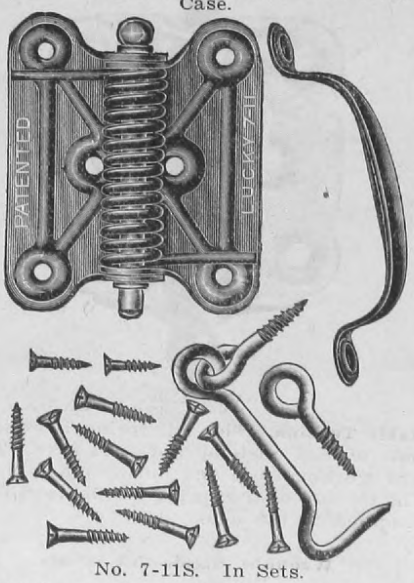
Champion Single Acting Hold Back Spring Hinges. The action of the spring is always direct, active and most powerful at the closing point.

No. 315—3 inch..... { Per Dozen Pairs, $..... Per Gross Pairs, ...

Six Screw Holes each, for No. 11 Screws.
Packed—Half Dozen Pairs in a Box; Half Gross Pairs in a Case.



No. 7-11.



No. 7-11S. In Sets.

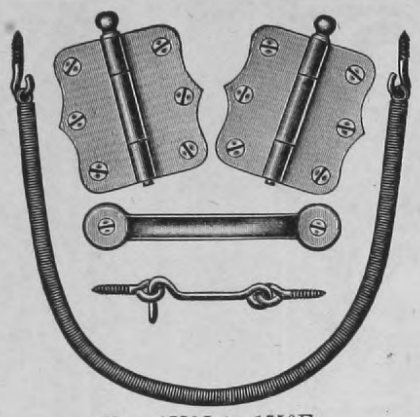
"Loose Pin" Detachable Spring Hinges. Wrought Steel, 3x2¾ inches. With Strong, Quick Action, Tempered Steel Springs.

Nos.	Finishes	Per Dozen Pairs.	Per Gross Pairs.
7-11	—Dead Black, without Screws.....	$.....	.....
7-11B	—Antique Copper, Polished, with Screws.....	.....	.....
7-11C	—Light Dull Brass, Polished, with Screws.....	.....	.....
		Per Dozen Sets.	Per Gross Sets.
7-11S	—Dead Black, In Sets.....	$.....	.....

Packed—Nos. 7-11, 7-11B and 7-11C, One Dozen Pairs in a Carton; One Gross Pairs in a Case.
No. 7-11S One Set in a Carton, Half Gross Sets in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SCREEN DOOR FIXTURES



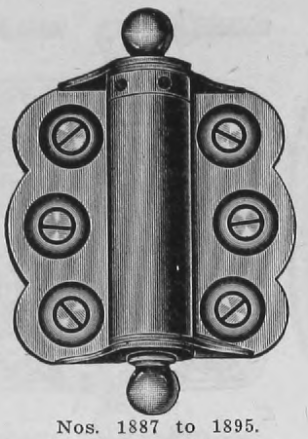
Nos. 1750J to 1750F.

Ornamental Screen Door Sets, consisting of One Pair 3x3 inch Wrought Steel Hinges with Ball Tip Loose Pins, One 5 inch Pressed Steel Door Pull, One No. 3 Coiled Wire Door Spring and One 2½ inch Hook and Eye, with screws.

Wrought Steel—3x3 inches.

Nos.	Finishes	Per Dozen Sets	Per Gross Sets
1750J	—Japanned	$.....	35.50
1750D2	—Antique Copper	.....	42.60
1750F	—Dull Brass	.....	42.60

Packed—One Set in a Carton, One Gross Sets in a Case.



Nos. 1887 to 1895.

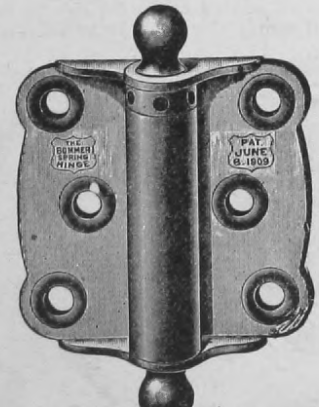
Adjustable Tension, Non Hold Back Surface Spring Hinges. Ornamental Wrought Steel with Ball Tips. The Tension of the Spring can be quickly regulated after door is hung. Just the hinge for Fine Screen Doors and Lavatory Work.

Wrought Steel—3x3 inches.

Nos.	Finishes	Per Dozen Pairs
1887	—Japanned	$15.50
1889	—Antique Copper	17.00
1891	—Im. Bower-Barff	17.00
1893	—Light Dull Brass	17.00
1895	—Nickel Plated	24.00

Packed—One Pair in a Box, with Screws.

BOMMER SPRING HINGES



No. 2100.

Adjustable Tension. The coil spring is entirely enclosed and is made of best oil-tempered steel wire. This hinge is of excellent workmanship and finish, and is made of heavy metal. The tension of the spring can be regulated after the hinge is applied to the door.

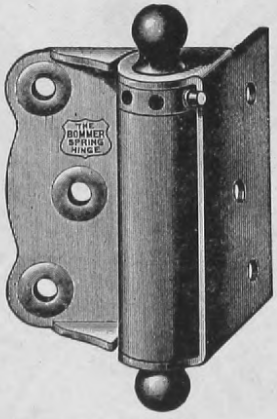
Wrought Steel—3x3 inches.

Nos.	Finishes	Per Pair
2100	—Japanned	$0.60
2102	—Antique Copper	.90
2103	—Light Dull Brass	.90

Wrought Brass Metal.

Nos.	Finishes	Per Pair
2111	—Antique Copper	$1.80
2112	—Light Dull Brass	1.80
2113	—Nickel Plated	1.80

Packed—One Pair in a Box, with Screws.



No. 2200.

A Time Saver. One leaf is fastened to the casing, the other leaf is fastened to the surface of the door.

Has adjustable tension. The coil spring is entirely enclosed and made of best oil_tempered steel wire. A hinge of excellent workmanship and finish, made of heavy metal. The tension of the spring can be regulated after the hinge is applied to the door.

Wrought Steel—3x3 inches.

Nos.	Finishes	Per Pair
2200	—Japanned	$0.60
2202	—Antique Copper	.90
2203	—Light Dull Brass	.90

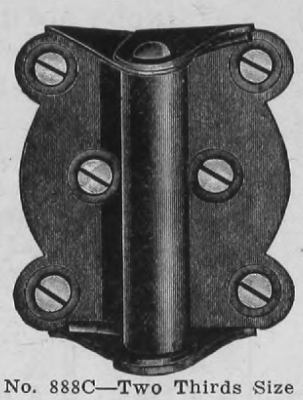
Wrought Brass Metal.

Nos.	Finishes	Per Pair
2211	—Antique Copper	$1.80
2212	—Light Dull Brass	1.80
2213	—Nickel Plated	1.80

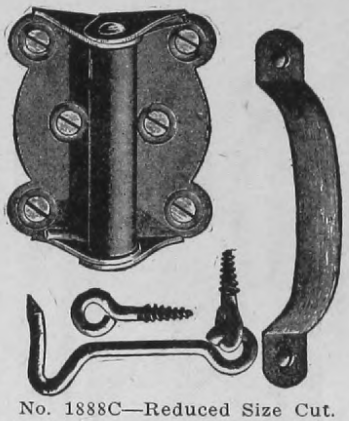
Packed—One Pair in a Box, with Screws.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

SPRING HINGES



No. 888C—Two Thirds Size Cut.



No. 1888C—Reduced Size Cut.

Non Hold Back, with Curved Spring.

Shelby Wrought Steel, Non Hold Back, Screen Door Spring Hinges.

No. 888C—Japanned Finish, In Pairs..... { Per Dozen Pairs, $..... / Per Gross Pairs.....

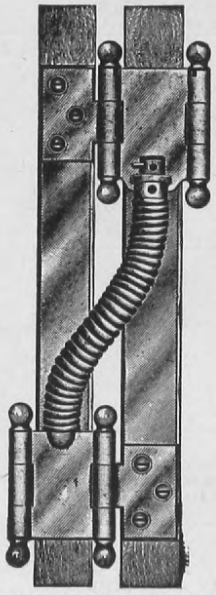
No. 1888C—Japanned Finish, In Sets as illustrated..... { Per Dozen Sets..... / Per Gross Sets.....

Sets consist of One Pair Hinges, One Pull and One 2½ inch Hook and Eye, complete with Screws.

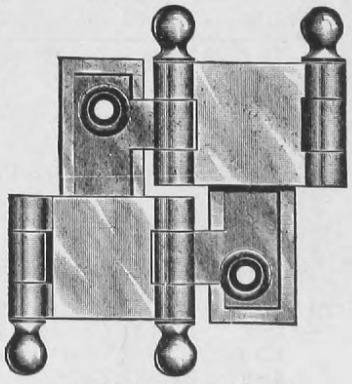
Packed—No. 888C, One Pair in a Carton, Six Pairs in a Box, Half Gross in a Case.
No. 1888C, One Set in a Carton, Six Pairs in a Box, Half Gross in a Case.

CHICAGO DOUBLE ACTING BUTTS

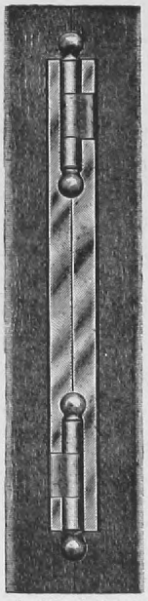
Reversible, with Ratchet Adjustment.



Double Acting Spring Butt.
Open.



Double Acting Blank.
Open.



Double Acting Spring Butt.
Closed.

Wrought Steel, Planished.

To economize for light narrow doors, put a Spring Butt at the top and a Blank Butt at the bottom of the door. Never use a Blank on outside doors as it takes the full power of two springs to hold door against the draft, and always put the blank below the spring butt.

Chicago Double Acting Spring Butts

No. 1½—Japanned, Dead Black.	Per Pair
For Doors, ⅞ to 1 inch	$1.30
For Doors, 1⅛ to 1¼ inch	1.60
For Doors, 1⅜ to 1½ inch	2.60
For Doors, 1¾ to 2 inch	4.00

Packed—One Pair in a Box, with Screws.

Chicago Double Acting Blank Butts

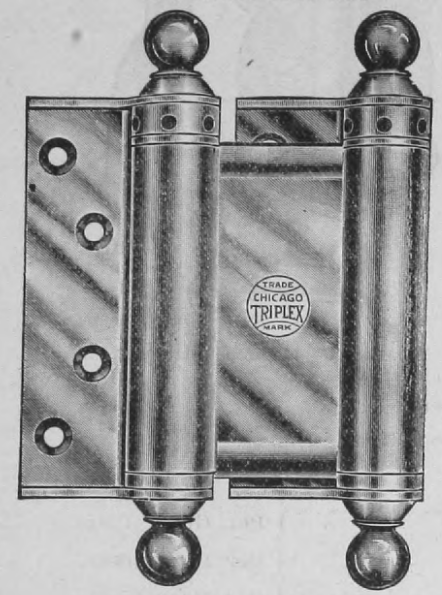
No. 3½—Japanned, Dead Black.	Per Pair
For Doors, ⅞ to 1 inch	$0.65
For Doors, 1⅛ to 1¼ inch	.80
For Doors, 1⅜ to 1½ inch	1.30
For Doors, 1¾ to 2 inch	2.00

Packed—One Pair in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CHICAGO "TRIPLEX" SPRING BUTTS

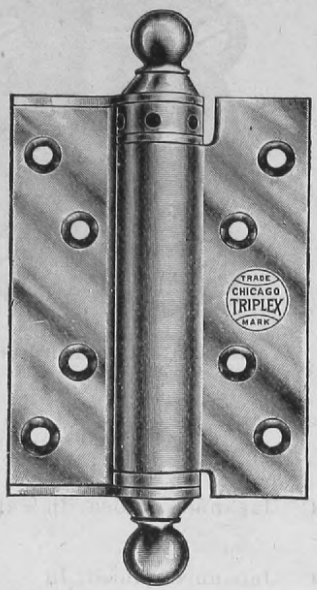
DOUBLE ACTING



Nos. 2001 to 2221.

These Hinges are secured against unscrewing while in use by a ratchet locking device, but can be taken apart when necessary by unscrewing the ball tip with a vise or pair of pliers

SINGLE ACTING



Nos. 2002 to 2222.

Double Acting—Price Per Pair

Length of Flange Inches	Planished Steel: For Doors Inches	No. 2001 Japanned Dead Black	No. 2131 Plain Bronze Plated	No. 2171 Antique Copper	No. 2281 Light Dull Brass	No. 2182AB Sanded Statuary Brass	No. 2211 Nickel Plated	Bronze Metal No. 2221 Nickel Plated
3	¾ to 1	$2.00	$2.50	$2.75	$2.75	$3.75	$3.75	$10.15
4	⅞ to 1¼	2.50	3.00	3.50	3.50	4.75	4.75	11.75
5	1⅛ to 1½	3.15	3.90	4.40	4.40	6.00	6.00	14.00
6	1¼ to 1¾	4.40	5.40	6.10	6.10	7.90	7.90	17.10
7	1⅜ to 2	5.60	6.90	7.90	7.90	10.10	10.10	21.90
8	1½ to 2¼	8.10	10.00	11.25	11.25	14.00	14.00	28.10
10N	1¾ to 2½	11.25	13.75	15.50	15.50	19.10	19.10	37.50
10W	2¼ to 2¾	13.10	15.85	18.10	18.10	21.85	21.85	41.25
12	2¼ to 3	15.00	18.15	20.60	20.60	24.75	24.75	50.25

Extra Springs	For Hinge, inches	3	4	5	6	7	8	10	12
	Per Dozen.....$								

Single Acting—Price Per Pair

Length of Flange Inches	Planished Steel: For Doors Inches	No. 2002 Japanned Dead Black	No. 2132 Plain Bronze Plated	No. 2172 Antique Copper	No. 2282 Light Dull Brass	No. 2181AB Sanded Statuary Brass	No. 2212 Nickel Plated	Bronze Metal No. 2222 Nickel Plated
3	¾ to 1	$1.00	$1.25	$1.50	$1.50	$2.00	$2.00	$5.60
4	⅞ to 1¼	1.25	1.50	1.75	1.75	2.40	2.40	6.25
5	1⅛ to 1½	1.60	2.00	2.25	2.25	3.00	3.00	7.50
6	1¼ to 1¾	2.25	2.75	3.10	3.10	4.00	4.00	9.25
7	1⅜ to 2	2.90	3.50	4.00	4.00	5.00	5.00	11.60
8	1½ to 2¼	4.10	5.00	5.60	5.60	7.00	7.00	15.10
10	1¾ to 2¾	5.60	6.85	7.75	7.75	9.60	9.60	20.10
12	2¼ to 3	7.50	9.10	10.40	10.40	12.40	12.40	26.90

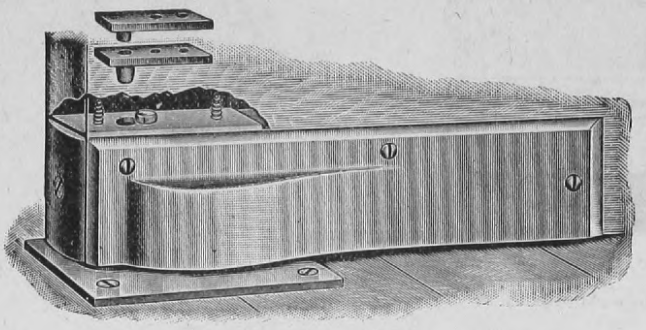
Extra Springs	For Hinge, inches	3	4	5	6	7	8	10	12
	Per Dozen.....$								

Packed—One pair in a box, with Screws. **In ordering,** state Number and Size.

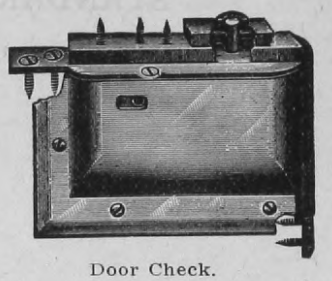
Note.—Thickness given is for doors of medium weight and width. If heavy or wide use as large a hinge as thickness of door will permit.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

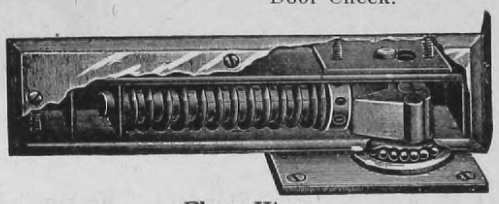
SHELBY CHIEF SPRING FLOOR HINGES



Nos. 2 to 49.
Cut Showing Hinge Attached



Door Check.



Floor Hinge.
Nos. 4002 to 4033.

The New Shelby "Chief" Double-Acting "Ball Bearing" Floor Hinge

The Original Shelby "Chief" Improved.

Wrought Steel, Planished.

No mortising required, lower Hinge secured to surface of floor, no metal box required for cement, concrete or tile floors; water cannot reach the working parts. Notch the door at the bottom to receive the hinge. Tension of Spring easily adjusted by removing Side Plate.

Finishes. For Doors	Japanned Dead Black Nos.	Per Set.	Plain Bronze Plated. Nos.	Per Set.	Antique Copper. Nos.	Per Set.	Light Dull Brass Nos.	Per Set.	Sanded Statuary Brass. Nos.	Per Set.	Nickel Plated. Nos.	Per Set.
1⅛ to 1½ inch	2	$2.80	12	$3.75	42	$3.75	15	$3.75	31	$4.45	47	$4.45
1½ to 2 inch	4	3.50	14	4.55	44	4.55	17	4.55	33	4.70	49	4.70

Packed—One Set in a Box, with Screws.

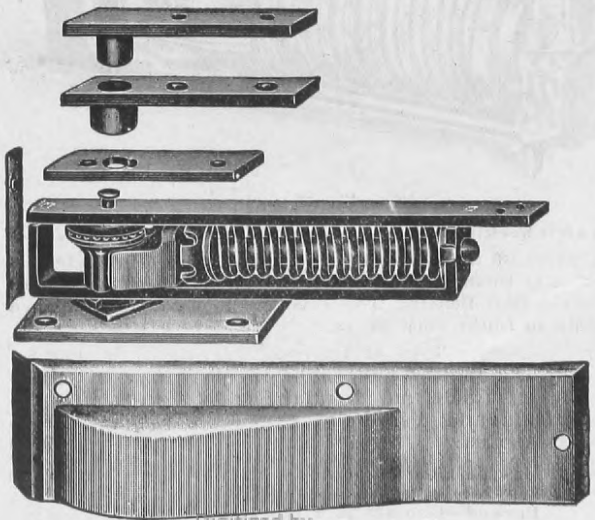
The Shelby "Chief" Double-Acting "Door Check" and Floor Hinge

Wrought Steel, Planished, Ball Bearing.

This new combination is used for operating and controlling double-acting doors. It consists of a double-acting ball-bearing surface floor hinge, which goes on the lower corner of the door, and a compact liquid check which is placed on the upper corner of the door, serving for a pivot as well as a check. The installation of this new check and hinge is very simple, as per directions on opposite page. There is no mortising or cutting whatever in the floor. The closing speed is easily adjusted after the door is hung.

The check is of the liquid type, has a heavy oil-proof cast bowl, which contains all the working parts. The parts are made from the finest material, and as they are constantly working in oil, which will prevent friction and wear, will give many years of service. The check also has the deep beveled edge cover plates to correspond with the hinge.

Finishes. For Doors	Japanned Dead Black. Nos.	Per Set.	Antique Copper. Nos.	Per Set.	Light Dull Brass Nos.	Per Set.	Sanded Statuary Brass. Nos.	Per Set.
1⅛ to 1½ inch	4002	$11.80	4042	$13.75	4015	$13.75	4031	$15.45
1¾ to 2 inch	4004	13.50	4044	15.55	4017	15.55	4033	16.70



STANDARD FLOOR HINGES

Double Acting Spring.

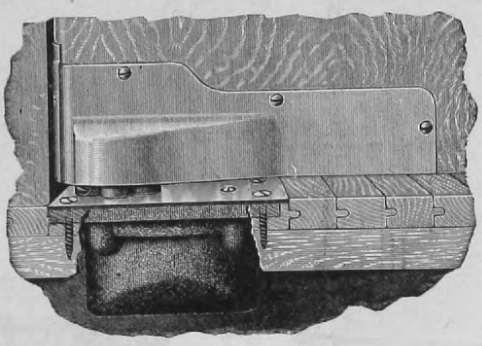
Wrought Steel with Ball Bearings and Oil-Tempered Springs. No mortising required, lower hinge secured to surface of floor. Simple and Compact in construction, Strong and Durable in operation.

Finishes. For Doors	Japanned.	Antique Copper.	Dull Brass.	Sanded Statuary Brass.
1¼ to 1¾ in.	No. A1	No. A4	No. A5	No. A9
Per Set	$1.60	1.60	1.60	1.90

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STANDARD CHECKING SPRING FLOOR HINGE



Nos. D1 to D6.

Cut Showing Hinge Applied.

Standard "Checking" Double Acting Spring Floor Hinge

For Doors 1¼ to 1¾ inches thick, not over 34 inches by 7 feet. Steel Side Plates. Brass Metal Floor Plate.

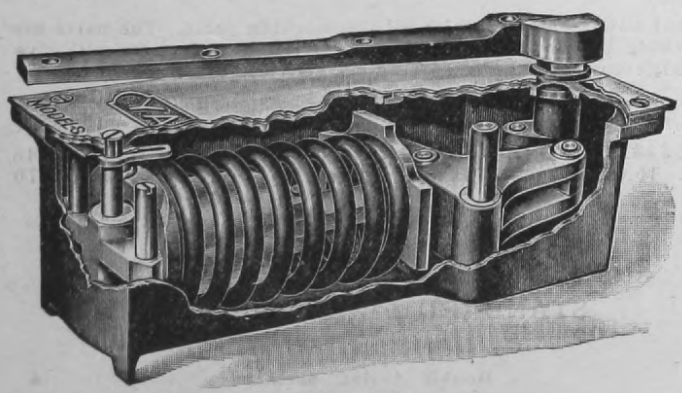
For Double Acting Doors. May also be used for Single Acting Doors by providing a stop at head and side jamb. It perfectly checks and controls the swing of the door, bringing it to a stop at center without oscillation and the action is perfectly noiseless. It is easily applied and the Alignment of the door is at all times perfectly assured by alignment screws located so as to be accessible without removing any parts of the hinge. The Checking Spring Hinge is the Hinge mechanism in the door and the check set in the floor, both principles independent but combined as a unit for convenience and ease of applying. The checking principle is liquid, which by the special method of packing cannot leak out, and the construction insures against seepage or slow evaporation. Simple in construction and the check exercises perfect and steady control of the door.

No. D1—Dead Black Finish.....Per Set, $8.00
No. D4—Antique Copper Finish.....Per Set, 8.00
No. D5—Light Dull Brass Finish.....Per Set, 8.00
No. D6—Sanded Statuary Brass Finish.....Per Set, 8.50

Packed—One Set in a Box, with Screws.

YALE CHECKING FLOOR HINGES

SINGLE ACTING



Nos. 441 to 444.

Yale Checking Single Acting Spring Floor Hinges.

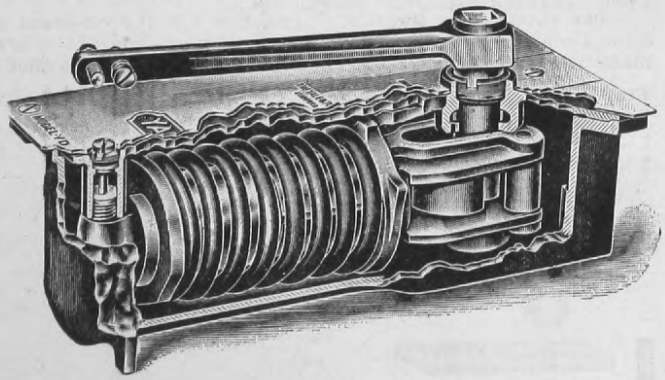
All parts of these hinges are made of the best materials and we offer them as the best on the market. Furnished with Improved Ball Bearing Top Pivot. Floor Plate is finished regularly in Light Dull Brass.

Nos.	Type of Doors	Per Set
441	Butler's Pantry and Light Inside	$11.15
442	Light Outside and Regular Inside	12.25
443	Outside and Vestibule	15.45
444	Extra Heavy Outside	19.05

Boxes for use in cement floors can be furnished at an additional price.

Packed—One Set in a Box, with Screws.

DOUBLE ACTING



Nos. 431 to 434.

Yale Checking Double Acting Spring Floor Hinges.

All parts of these hinges are made of the best materials and we offer them as the best on the market. Furnished with Adjustable Ball Bearing Top Pivot. Floor Plate is finished regularly in Light Dull Brass.

Nos.	Type of Doors	Per Set
431	Butler's Pantry and Light Inside	$10.10
432	Light Outside and Regular Inside	11.55
433	Outside and Vestibule	15.45
434	Extra Heavy Outside	19.40

Boxes for use in cement floors can be furnished at an additional price.

Packed—One Set in a Box, with Screws.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

YALE DOOR CLOSERS AND CHECKS

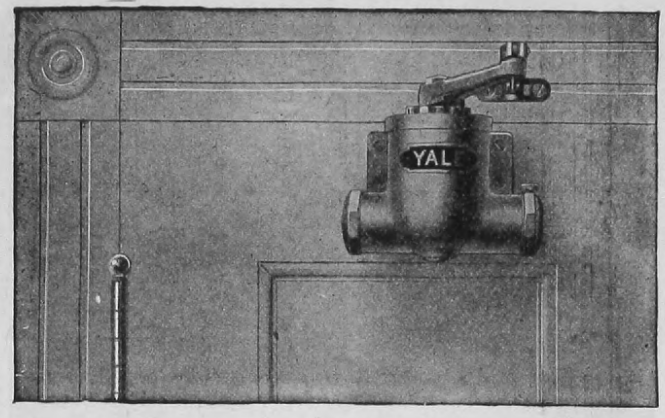


Fig. 1.

Right-hand door from inside. Use right-hand closer.

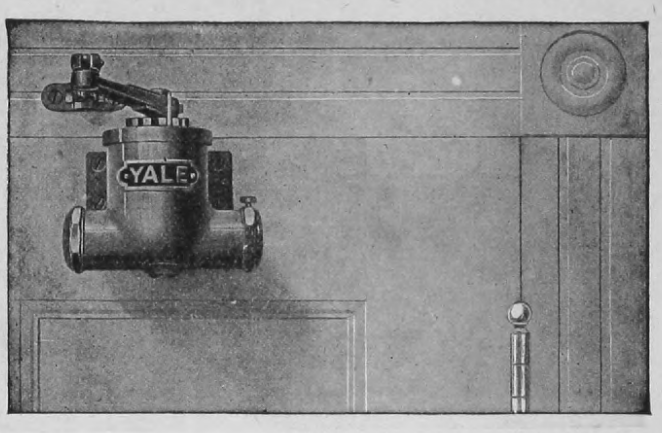


Fig. 2.

Left-hand door from inside. Use left-hand closer.

Method of Attachment

Refer to the illustration showing the position in which the check is to be placed. The text will indicate the hand of door and whether or not a bracket is necessary. **Avoid** using brackets when not really needed.

Checks Without Brackets

Checks **without** Brackets are applied to inner or hinge side of doors (Figs. 1 and 2) and are recommended wherever the conditions permit.

When a Bracket Is Required

When a Bracket is required the **Offset, Soffit** or **Corner Bracket** Figs. 3, 4 or 7 should be used if possible.

A Special Soffit Bracket enables a check to be placed in the limited space between doors. The closing power of a check so applied is not equal, however, to that of a check regularly applied and, therefore, with heavy doors an auxiliary spring should be used. Auxiliary Springs **not** illustrated or listed.

A Flush Bracket, **not** illustrated or listed, may be used when the surface of the jamb is not wide enough for the foot of the Soffit Bracket Fig. 4.

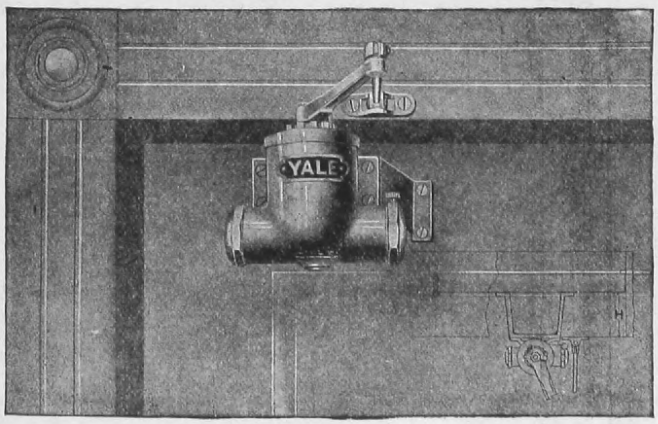


Fig. 3.

Offset Bracket. Right-hand door from inside. Use right-hand closer.

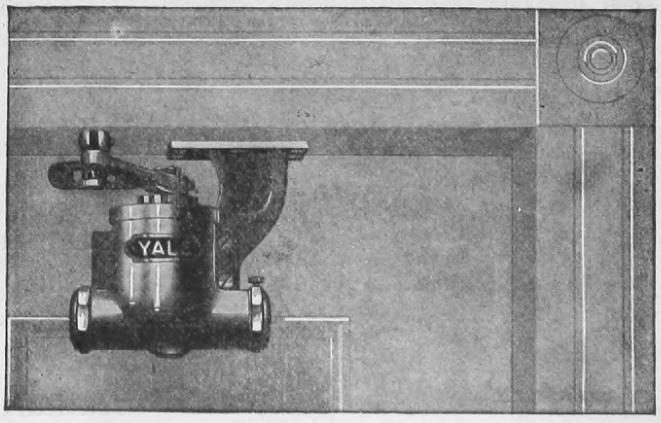


Fig. 4.

Soffit Bracket. Right hand door from outside. Use left-hand closer.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE DOOR CHECKS

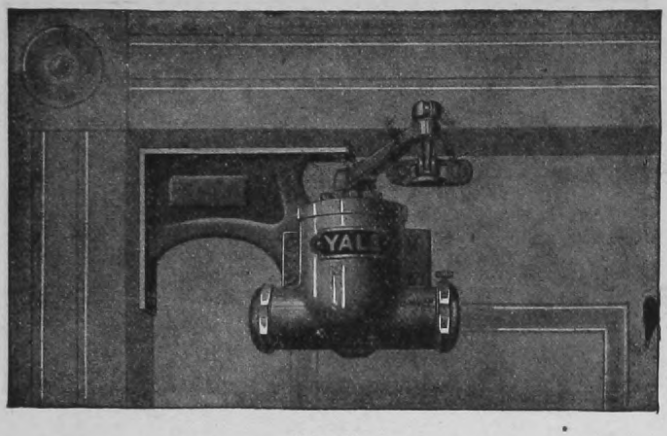


Fig. 7.

Corner Bracket. Left-hand door from outside.
Use right-hand closer.

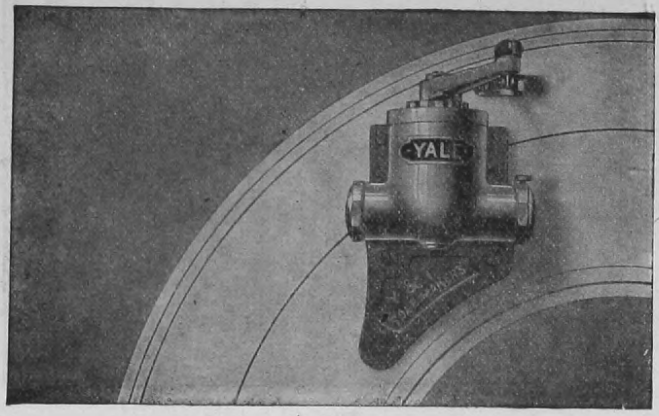


Fig. 8.

Flat Bracket. Right-hand door from inside.
Use right-hand closer.

Brackets—Continued

The Corner Bracket (Fig. 7) does not permit the check to stand as far from hinge edge of door as other brackets, or as far as is desirable. It is only recommended when additional strength is necessary.

The Flat Bracket (Fig. 8) is provided for round top doors when check is applied to the door. When check is applied to the jamb a special flush bracket should be used.

When a bracket for round top doors is required the width of the door and the radius of the top should be given, as well as hand of door and whether it must open all the way back (180 degrees).

Brackets for Yale and Blount Door Closers and Checks

Gold Bronze or Dead Black.

Nos.	**1**	**2**	**3**	**4**	**5**
Inches	3¼	3½	3¾	4	4¼
For Blount Checks ....Nos.,	1	2	3	4	5
For Yale Checks ....Nos.,	11	12	13	14	15
Soffit Brackets (Fig. 4)....Each,	$0.35	.40	.45	.55	.75
Corner Brackets (Fig. 7)....Each,	.50	.65	.75	.95	1.15
Flat Brackets (Fig. 8)....Each,	1.55	1.65	1.75	1.75	1.90

Offset Brackets (Fig. 3). Prices on Application.

Note.—"Blount" and Yale Brackets **will** interchange. Furnished in Gold Bronze or Dead Black Finish at the same price.

"Blount" Extra Coil Springs

For Check, Nos....	**1**	**2**	**3**	**4**	**5**	**6**
Each	$0.45	.60	.70	.85	1.30	1.80

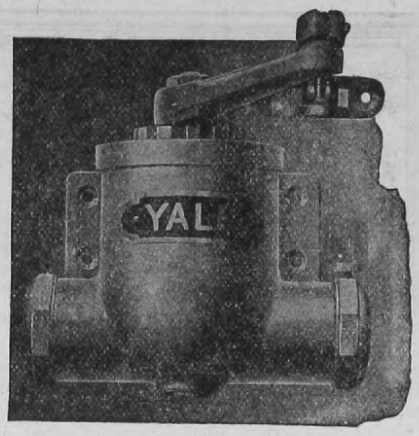
Yale Extra Coil Springs

For Check, Nos....	**11**	**12**	**13**	**14**	**15**
Each	$0.45	.60	.70	.85	1.30

Note.—"Blount" and Yale Coil Springs will **not** interchange.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

"YALE" DOOR CLOSERS AND CHECKS



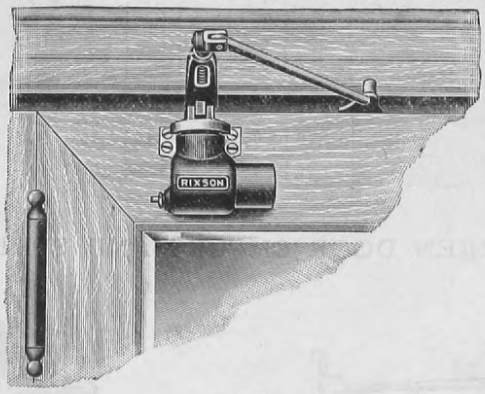
Reversible and applicable for either inside or outside of doors and otherwise subject to the various applications as illustrated and described on the preceding pages. **When ordering,** however, the hand of door should always be given as checks when furnished are set to Right or Left hand, ready for application. The advantages of this new check may briefly be summarized as follows: Mechanical principles based on 20 years' experience—Crank and crank shaft in one piece, of solid drop forged steel—A step bearing at lower end of crank shaft—An overflow reservoir to prevent leakage—A much heavier connecting rod—An improved connection between the piston and rod—An improved regulating screw—Increased convenience in spring adjustment—Improved design of jamb bracket—Either "Release" or "Silent Closing" action as desired—The coils or springs are guaranteed against breakage due to defective manufacture.

Nos.	Description	Gold Bronze	Dead Black
11	For Screen and other very Light Doors	Each, $3.25	Each, $3.25
12	For Light Inside Doors, not exceeding 7 feet high by 2½ feet wide	Each, 4.25	Each, 4.25
13	For Inside Doors of medium size, not exceeding 7 feet high by 3 feet wide	Each, 5.00	Each, 5.00
14	For Heavy Inside and Ordinary Outside Doors, not exceeding 7½ ft. by 3 ft.	Each, 6.00	Each, 6.00
15	For Outside Doors of medium size, not exceeding 8½ feet high by 4 feet wide	Each, 8.00	Each, 8.00

Order Gold Bronze or Dead Black as desired.

Note.—Above Checks will be furnished in special finishes at an additional price.

RIXSON DOUBLE ACTING OVERHEAD CHECK



No. 44.

There is no spring in this device, it is a **CHECK ONLY** and is designed for use on existing doors hung on double acting spring hinges.

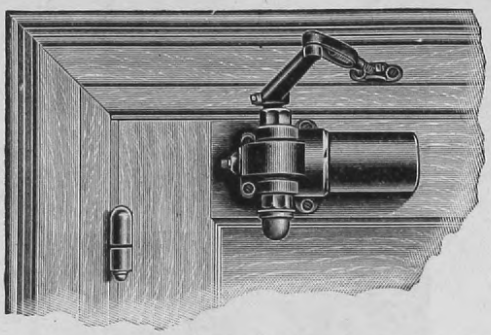
It brings the door to rest at center without any Flip-Flap.

THIS CHECK is in use under all sorts of conditions—in Buildings, Street Cars, Trans-Atlantic Steamers, etc., and is giving satisfactory service and **MAY BE ATTACHED** on the inside or on the outside of the door. **Right** or **Left hand**, without any change in the mechanism, and the door does not have to be altered in any way. All that has to be done is to screw the check to the top of the door and the anchor piece "D" to the head jamb.

No. 44—For Doors not over 4'x7'-6" ..... Each, $8.50

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

RIXSON DOOR CHECK AND SPRING



This Check is applied to **Right** or **Left** hand doors without any change in the mechanism.

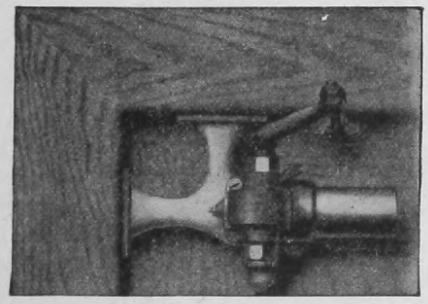
The springs in this device are set to the safe maximum tension at the factory and to reduce the power it is only necessary to set the arm on the spindle. This reduces the action of the spring power without touching the spring.

The durability of this device, which is now generally admitted, is principally due to the fact that the spring cannot be tampered with.

Sizes	**Gold Bronze**	**Dead Black**
A—For Light Inside Doors, not over 3 ft. x 7 ft.	Each, $4.25	Each, $4.25
B—For Medium Corridor Doors or Outside Doors 2 ft. 6 in. by 7 ft.	Each, 5.00	Each, 5.00
C—For Heavy Corridor Doors or Outside Doors, 3 ft. by 8 ft.	Each, 6.00	Each, 6.00
D—For Outside Doors, not over 3 ft. 6 in. by 8 ft.	Each, 8.00	Each, 8.00
E—For Extra Large Doors.	Each, 10.00	Each, 10.00

Note.—For Outside Doors opening **out** use a check one size smaller than specified above.
For Outside Doors opening **in** subject to heavy draughts use one size larger than specified above.

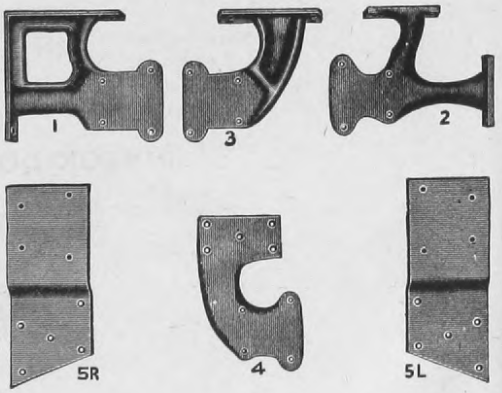
BRACKETS



For outside doors swinging out it is best to put the check on a Bracket inside the door as shown in the above cut.

This list applies to all the styles of Brackets shown.

Malleable Iron.					
Sizes	Painted Finishes	Plated Finishes Unpolished	Plated Finishes Polished	Bower Barff Unpolished	Bower Barff Polished
A-B	$0.60	.90	1.35	1.00	1.30
C.	.70	1.05	1.50	1.15	1.45
D.	.75	1.15	1.70	1.25	1.55



SCREEN DOOR CHECKS AND SPRINGS

YALE

Nos. 501 and 502.

A simple device which closes a door surely and silently, provision being made for adjusting both the spring power and the checking action. Suitable for right or left-hand doors. Gold Bronze Finish.

No. 501—For Ordinary Screen Door.....Each, $1.25
No. 502—For Heavy Screen Doors or Light Inside Doors .....Each, 1.70

Packed—One in a Box, with Screws.

NORTON

No. 4.

Right or Left-hand, Fully adjustable.

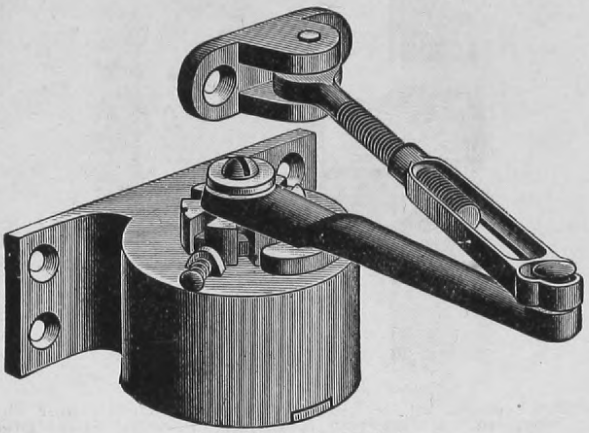
Designed especially for screen doors and light inside doors, applicable to either side of doors, right or left-hand without extra Brackets, Polished Brass checking tube and adjustable spring. The speed in closing is regulated by an air screw in end of cylinder.

No. 4—Norton Screen Door Check and Spring. .....Per Dozen, $.....

Packed—Each in a Separate Carton.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

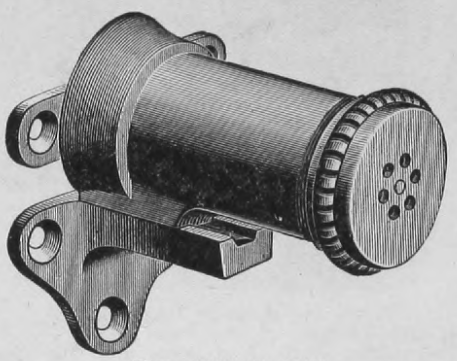
ECLIPSE DOOR CHECKS AND SPRINGS



Nos. 1651 to 1657.

Eclipse Door Springs.

Suitable for either right or left hand doors, made from extra heavy Clock Spring Steel. Directions for applying and adjusting closing tension accompany each spring.



Nos. 1623 to 1627.

Eclipse Door Checks.

Suitable for applying to doors or casing, inside or outside. Give inside preference where possible. Cylinder easily adjusted, in or out, to suit doors differently set in their frames. Instantly varied for light or heavy draft by screwing cap at end of cylinder.

Eclipse Door Springs, Gold Bronzed.

No. 1651—For Inside Doors ..... Each, $1.80
No. 1653—For Wide Inside Doors or Narrow Outside Doors, Each, 2.30
No. 1655—For Wide Outside Doors ..... Each, 3.00
No. 1657—For Very Wide Outside Doors ..... Each, 4.00

Extra "Coil" Springs Only.

No. 1651S ..... Each, $0.50
No. 1653S ..... Each, .75
No. 1655S ..... Each, 1.00
No. 1657S ..... Each, 1.35

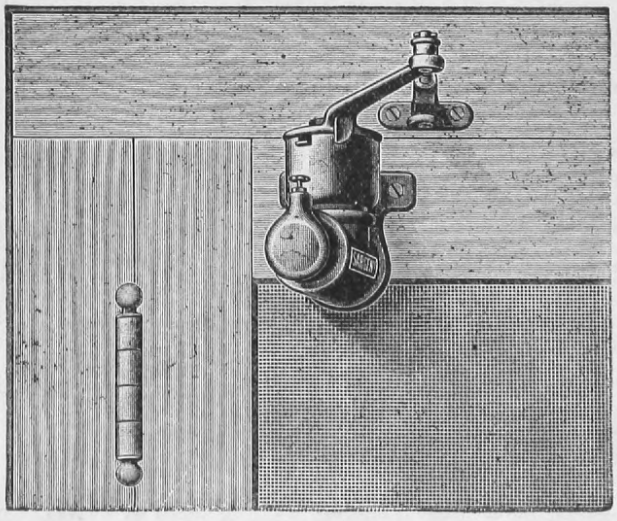
Packed—One in a Box, with Screws.

Eclipse Door Checks. Gold Bronzed.

No. 1623—For Ordinary Doors, Diameter of Cylinder 1½ inches ..... Each, $3.00
No. 1625—For Wide Doors, Diameter of Cylinder 2 inches ..... Each, 4.00
No. 1627—For Very Wide Doors, Diameter of Cylinder 2½ inches ..... Each, 6.00

Packed—With Detachable Feet, One in a Box, with Screws.

SCREEN DOOR CHECKS AND SPRINGS



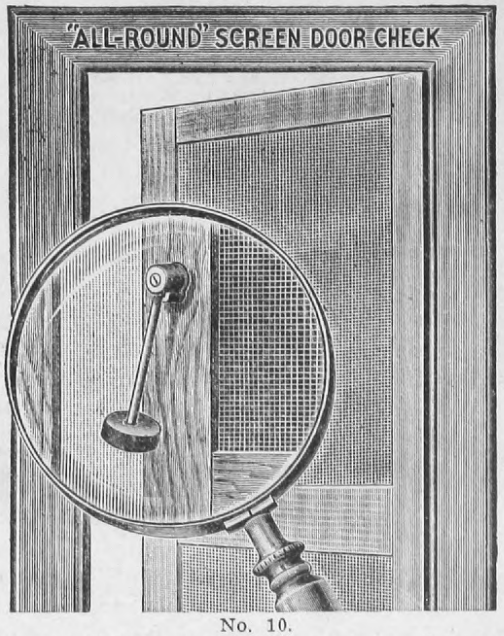
No. 20.

Reversible Liquid Check and Spring, right or left hand, adjustable to different door frames. Regulates the closing of the door perfectly. A sure preventive against slamming.

Gold Bronze Finish.

No. 20—Check and Spring ..... Each, $3.70

Packed—One in a Box, with Screws.



No. 10.

All-Round Rubber Door Checks consist of a suspended rubber disk which receives noiselessly the slam of the door.

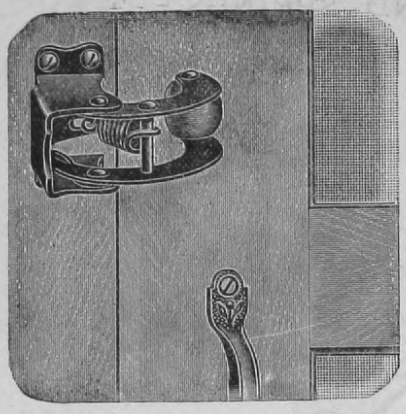
Ivory Black Trimmings.

No. 10—All-round Checks ..... Per Dozen, $4.60

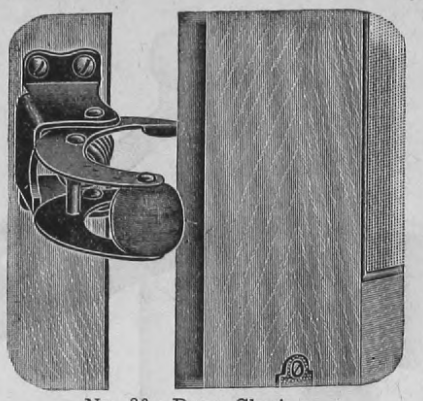
Packed—One in an Envelope, One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SCREEN DOOR CATCHES



No, 20—Holding Door Shut.

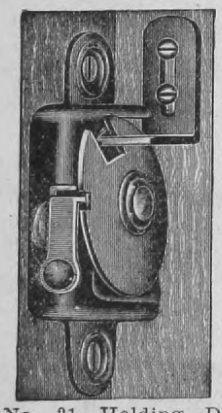


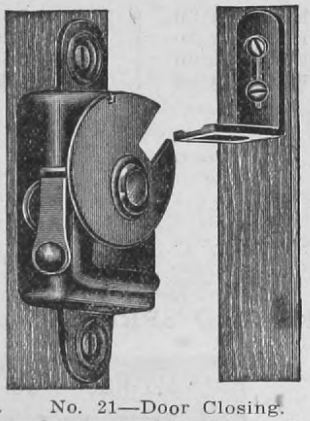
No. 20—Door Closing.

Superior Screen Door Catches, for use on screen, storm or any light doors up to 1½ inches thick. Holds door shut tight, excludes flies, mosquitoes, snow and cold; prevents sagging, warping, rattling and banging. Made of Sheet Steel, with oil tempered steel spring and solid rubber bumper with metal bushing to prevent roller wearing on axle. Furnished with heavy strike plate to prevent door wearing on the wings.

No. 20—Superior Screen Door Catches, Black Enameled.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws, Nails and Strike Plate.





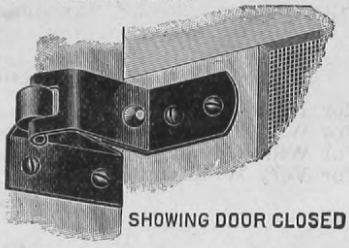
No. 21—Holding Door Shut. No. 21—Door Closing.

Watrous Screen Door Catches form a positive lock. The case comes flush on jamb and strike is adjustable.

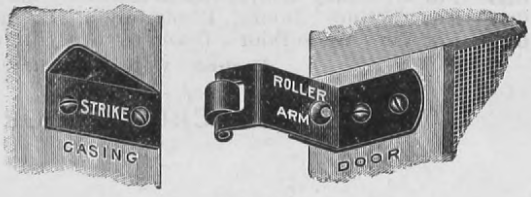
No. 21—Wrought Steel, Black Enameled.....

.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.



SHOWING DOOR OPEN



Fernald.

Fernald Screen Door Catches hold doors shut by friction and prevent warping.

Fernald—Wrought Steel, Japanned..Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.

SCREEN DOOR BRACES

SCREEN DOOR BRACE.
No. 42.

Anti-Sag Screen Door Braces will straighten up and prevent the sagging of any screen door. These Braces are extra long, do the work easily and are applicable to all kinds and sizes of doors. Made entirely of Steel, can be instantly attached to inside of door.

No. 42—Length 42 inches, Black Enameled.....Per Dozen, $.....

Packed—One Dozen in a Box, with Screws.

PERFECTION DOOR SPRINGS

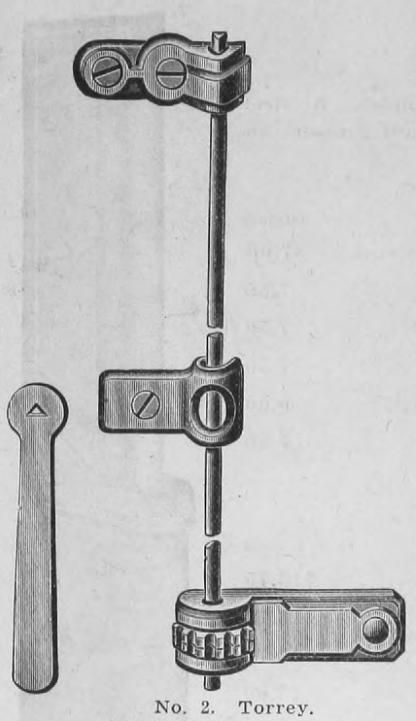
Nos. 51 to 58.
No. 51, for Light Doors; Nos. 52 to 54, for Ordinary Doors;
Nos. 55 to 57, for Heavy Doors; No. 58, for Gates.
Double Loop Ends, Piano Spring Wire, Standard Size and Full Length, Japanned Finish.

Nos.	51	52	53	54	55	56	57	58
Size, Inches.....	¼x16	9/32x16	⅜x16	13/32x16	7/16x16	½x16	9/16x16	1⅛x16
Per Gross	$4.00	4.50	5.00	5.50	6.50	8.00	9.00	22.00
Per Dozen	.....	.....	.....	.....	.....	.....	.....	.....

Packed—One Dozen in a Box, with Screw Eyes for Attaching.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DOOR SPRINGS



No. 2. Torrey.
Half Size Cut of Parts.

Torrey Torsion Door Springs

38 inch Steel Rod, Malleable Iron Fixtures.

No. 2—Torrey Door Springs, Japanned.....Per Dozen $3.25

Packed—One Dozen in a Box, with Screws.

Victor Coil Door Springs

Adjustable Tension, Japanned Finish.

No. 160— 9 in. Spring, for Light Screen Doors...Per Dozen, $2.00
No. 161—10 in. Spring, for Screen Doors .....Per Dozen, 2.50
No. 162—11 in. Spring, for Medium Doors .....Per Dozen, 3.00
No. 163—12 in. Spring, for Large Doors .....Per Dozen, 4.00

Packed—No. 163, Half Dozen; Others, One Dozen in a Box.

Victor

SLIDING WINDOW SCREEN SPRINGS

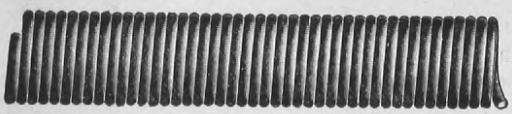
No. 1.

Made from High Grade Tempered Steel.

No. 1—Screen Springs, ¼ inch wide.....Per Gross, $.....

Packed—One Gross in a Box.

TUCK STEEL COIL SPRINGS



Extension Spring.

Compression Spring.

Adapted for use in many places on Automobiles, Farm and Other Machinery.

Outside Diameter, Inch	¼	5/16	⅜	7/16	½	9/16	¾	⅞	1	1⅛
24 In. Long—Per Dozen $...	...	...	...	...	...	...	...	...	...	...

Packed—One Dozen in a Box.

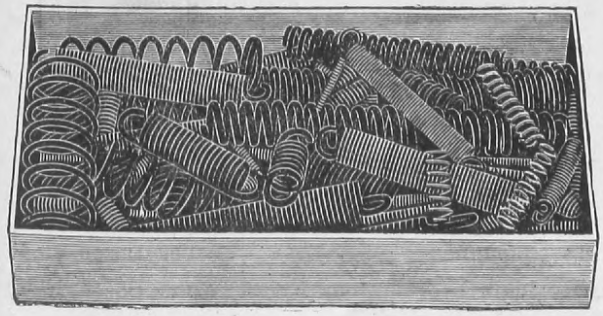
Note.—Always specify on orders whether Extension or Compression Springs are wanted.

TUCK COIL SPRING ASSORTMENTS

Each Assortment contains about 40 feet of high grade oil tempered steel springs mounted on a neat sample board. One-half of these springs are coiled open tension and the other half are coiled close tension, making them available for all general purposes.

No. 8—Assorted, 8 sizes, from ¼ to ⅞ inches Outside Diameter, 24 inches long—Per Assortment $.....

No. 10—Assorted, 10 sizes, from ¼ to 1¼ inches Outside Diameter, 24 inches long—Per Assortment .....



Nos. 2A, 3 and 4.

ASSORTMENTS 2A, 3 AND 4

These Assortments, useful in every garage, consist of a variety of oil tempered cut-out, brake, valve, etc., springs, from 1 to 12 inches long and from ⅛ to 1 inch in diameter.

No. 2A— 20 Assorted Springs in a Box...Per Box, $.....

No. 3 — 50 Assorted Springs in a Box...Per Box, ...

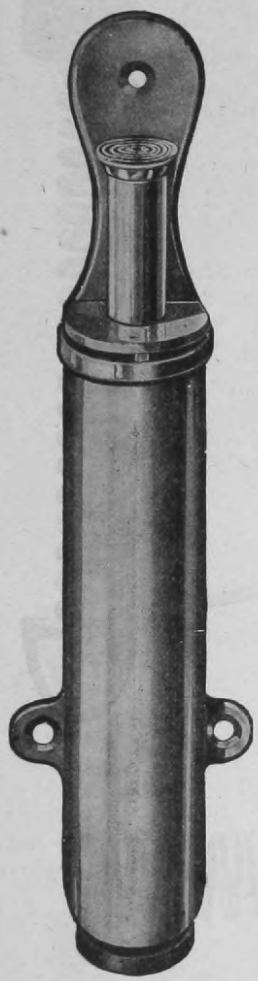
No. 4 —100 Assorted Springs in a Box...Per Box, ...

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

CHAMPION

DOOR HOLDERS

CALDWELL



Nos. 2 to 115.

Champion Door Holders

Made of Wrought Metal, handsome in design and finish. A steel compression spring in base of plunger maintains a constant pressure on the floor.

Wrought Steel.

Nos.	Finishes	Per Dozen
2	—Japanned	$7.00
11	—Plain Bronze Plated	7.50
12	—Antique Copper	7.50
14	—Light Dull Brass	7.50
15	—Sanded Statuary Brass	9.00
18	—Bower-Barff	7.50

Wrought Bronze Metal.

Nos.	Finishes	Per Dozen
111	—Plain Bronze Metal	$13.75
112	—Antique Copper	13.75
114	—Light Dull Brass	13.75
115	—Sanded Statuary Brass	15.00

Packed—Half Dozen in a Box, with Screws.

Caldwell Vertical Door Holders

Special Large Size, "4¼ inch Drop." A bracket affixes the holder immovably to the door, and gives symmetry, simplicity and beauty to its lines. Warranted to hold any door on the smoothest of floors.

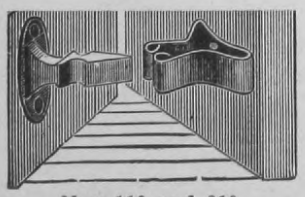
Bronze Metal.

Nos.	Finishes	Per Dozen
401	—Plain Bronze Metal	$52.50
402	—Antique Copper	52.50
404	—Light Dull Brass	52.50
405	—Sanded Statuary Brass	57.75
408	—Bower-Barff	52.50

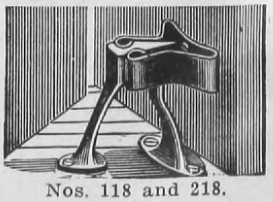
Packed—Quarter Dozen in a Box, with Screws.

Nos. 401 to 408.
Special Large Size.

WILCOX DOOR HOLDERS



Nos. 119 and 219.



Nos. 118 and 218.

A perfect device for holding all kinds of single or double acting doors.

For Wall Attachment.

No. 119—Japanned ..... Per Dozen $3.00
No. 219—Plain Bronze Metal ..... Per Dozen 7.00

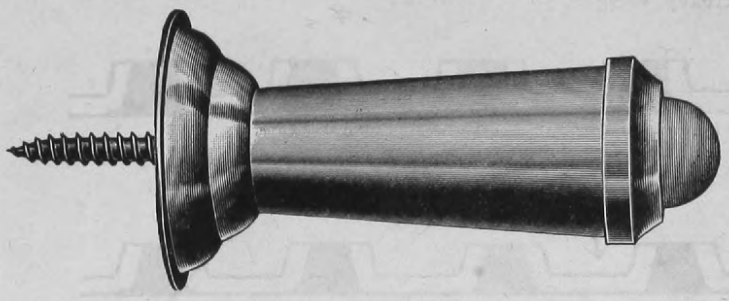
For Floor Attachment.

No. 118—Japanned ..... Per Dozen $3.00
No. 218—Plain Bronze Metal ..... Per Dozen 7.00

Packed—One Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

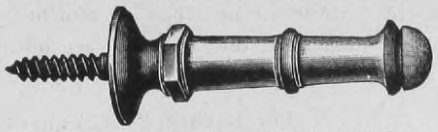
BASE KNOBS



Wrought Metal, Rubber Tipped, 1⅜ inch Base, Projects 2½ inches.

	Per Dozen
No. 3020—Nickel Plated	$2.40
No. 3120—Plain Bronze Plated	2.20
No. 3220—Antique Copper	2.20
No. 3420—Light Dull Brass	2.20
No. 3520—Sanded Statuary Brass	2.40
No. 3820—Bower-Barff	3.20

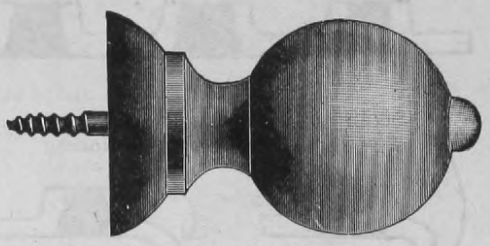
Packed—One Dozen in a Box, with Screws.



Cast Metal, Rubber Tipped, 1¼ inch Base, Projects 2 9/16 inches.

Nos. Finishes	Per Dozen
3082—Nickel Plated	$1.60
3182—Plain Bronze Plated	1.25
3282—Antique Copper	1.60
3482—Light Dull Brass	1.60
3582—Sanded Statuary Brass	1.60
3882—Bower-Barff	2.75

Packed—Half Dozen in a Box.



Wood, Rubber Tipped.

Inches	2½	3
No. 10—Maple ..... Per Gross, $	.....	.....
No. 12—Oak ..... Per Gross,	.....	.....

Packed—Quarter Gross in a Box.

In Barrel Lots.

Inches	2½	3
No. 010—Maple ..... Per Gross, $	.....	.....

Packed—12½ Gross in a Barrel.

Fancy, Improved, Rubber Tipped and Highly Finished.

Inches	3
No. 80—Plain Oak ..... Per Gross, $	.....
No. 82—Antique Oak ..... Per Gross,	.....

Packed—Quarter Gross in a Box.

DOOR STOPS

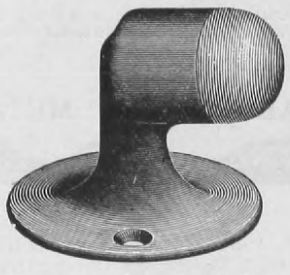
For Floor.

No. 3095 to 3895. Full Size Cut.

Wrought Metal, Rubber Tipped.

Nos. Finishes	Per Dozen
3095—Nickel Plated	$1.90
3195—Plain Bronze Plated	1.90
3295—Antique Copper	1.90
3495—Light Dull Brass	1.90
3595—Sanded Statuary Brass	2.10
3895—Bower-Barff	1.90

Packed—Three Dozen in a Box, with Screws.



Nos. 3095½ to 3895½. Full Size Cut.

Cast Iron Polished. Rubber Tipped.

1¼ inch Base. 1¼ inch High.

Nos. Finishes	Per Dozen
3095½—Nickel Plated	$1.85
3195½—Plain Bronze Plated	1.75
3295½—Antique Copper	1.75
3495½—Light Dull Brass	1.75
3595½—Sanded Statuary Brass	1.85
3895½—Bower-Barff	1.75

Packed—One Dozen in a Box, with Screws.

Nos. 3095¾ to 3895¾. Full Size Cut.

Cast Iron Polished. Rubber Tipped.

Nos. Finishes	Per Dozen
3095¾—Nickel Plated	$2.20
3195¾—Plain Bronze Plated	2.00
3295¾—Antique Copper	2.00
3495¾—Light Dull Brass	2.00
3595¾—Sanded Statuary Brass	2.20
3895¾—Bower-Barff	2.00

Packed—One Dozen in a Box.

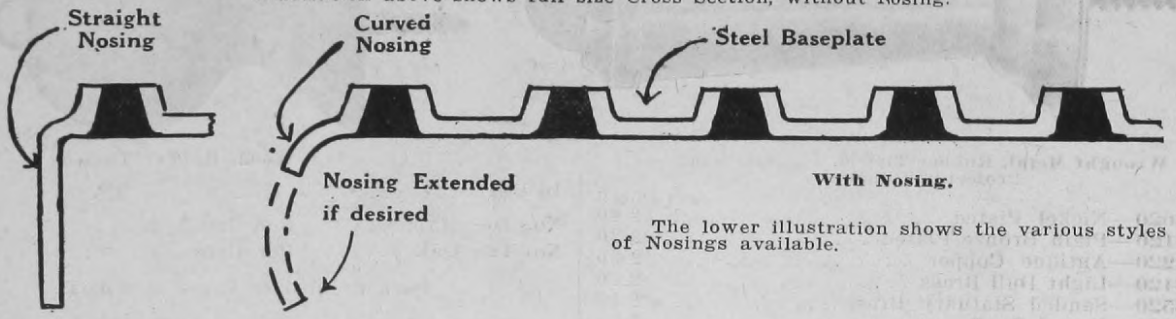
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

UNIVERSAL SAFETY TREAD

Heavy Weight

Without Nosing.

Illustration above shows full size Cross Section, without Nosing.



With Nosing.

The lower illustration shows the various styles of Nosings available.

Durable, Non-Slipping and Economical. For Stairways, Stair Landings, Outside Entrances, Factories, Sidewalks, Elevator Thresholds, Car Steps, Etc.

The Universal Safety Tread is constructed of a heavy steel or brass baseplate, in which openings are punched to receive the filling, which is firmly clinched on the bottom of the baseplate.

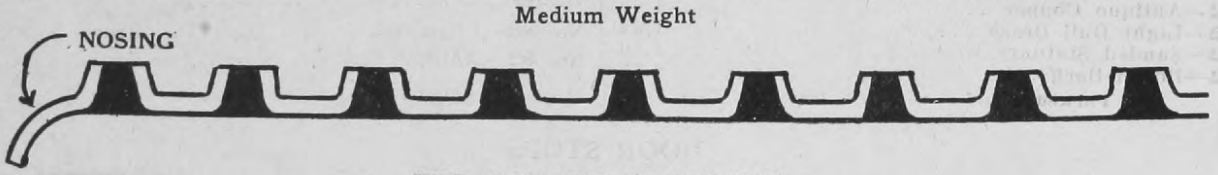
By this construction a continuous, non-slipping wearing surface is presented until the tread is worn out, while the hard steel teeth insure great durability.

The baseplate can be extended to form a nosing of any depth straight drop or curve required.

Heavy Weight .....
- With Steel Base Plate, any width.....Per Square Foot, ...
- With Brass Base Plate.....Per Square Foot, ...

Can be made in one piece in widths of even inches and quarter inches from 1¾ to 7½ inches wide and up to 30 feet long. **Combination** widths form a covering surface for any space desired. Submit Specifications for prices.

Medium Weight



With or Without Nosing as Desired.

The construction of Universal Safety Tread, which is without question the best tread on the market today, is such that the filling of Lead, under all circumstances the most satisfactory filling for safety tread, extends entirely through the bottom of the baseplate and is so proportioned to the steel supports that the wear is uniform, thus rendering the tread absolutely non-slipping in all directions until it is completely worn out. The Universal is the only tread possessing this feature.

Medium Weight .....
- With Steel Base Plate any width.....Per Square Foot, ...
- With Brass Base Plate any width.....Per Square Foot, ...

Made in one piece in widths of even inches and quarter inches from 2 to 12 inches wide and up to 30 feet long. **Combination** widths form a covering surface for any space desired. **Submit** Specifications for prices.

Tread Anchors for Cement or Concrete floors.....Extra, Each, ...

UNIVERSAL ANTI-SLIP METAL TREAD

Full Size Cut of Cross Section.
Reinforced Nosing on Corrugated Type.

Universal Anti-Slip Metal Safety Tread

The Most Effective and Durable Safety Tread on the Market.

Composed of hardest mineral abrasive grains, such as alundum, carborundum, or the like, held together in one solid compact mass by a soft metal binder composed largely of lead, the idea of this binder being to take advantage of the well-known property found permanently in lead of being non-adhesive to ice and snow. This mixture of abrasive grains and lead composition is secured to a steel baseplate in such a perfect manner that it can be broken away only by the use of a sledge-hammer and cold chisel.

No steel comes in contact with the foot.

The abrasive grains are very much harder than steel or iron, and they will resist wear to a much greater degree, and it is upon these grains that both the efficiency and the life of the tread depend. The metal binder recedes below the projecting points of the grains as the tread wears down, and the non-slipping quality is constant throughout the life of the tread, because the material is the same in its entire safety tread thickness.

The bottom of the steel baseplate is coated with lead to prevent rust.

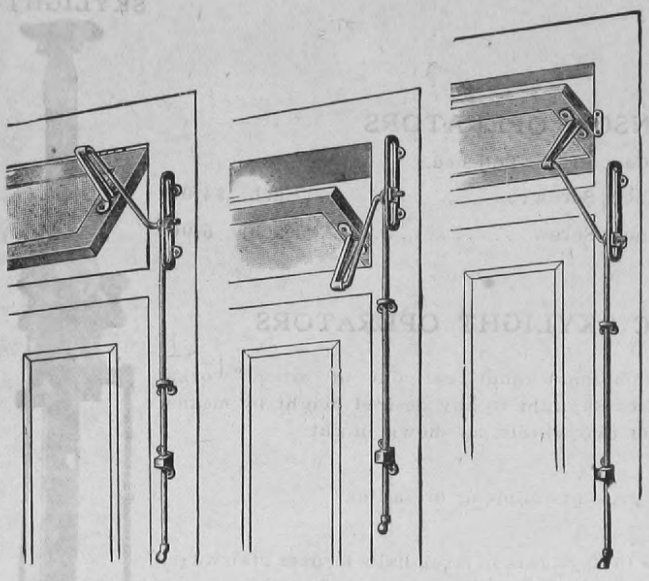
Corrugated Type for General Service on large surfaces.....Per Square Foot, ...

Reinforced Nosing Corrugated Type, for Stair Treads, Etc.....Per Square Foot, ...

Made 1¾, 2½, 3¼ and 4 inches wide. **Combination** widths form a covering surface for any space desired. **Submit** Specifications for prices.

Digitized by Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

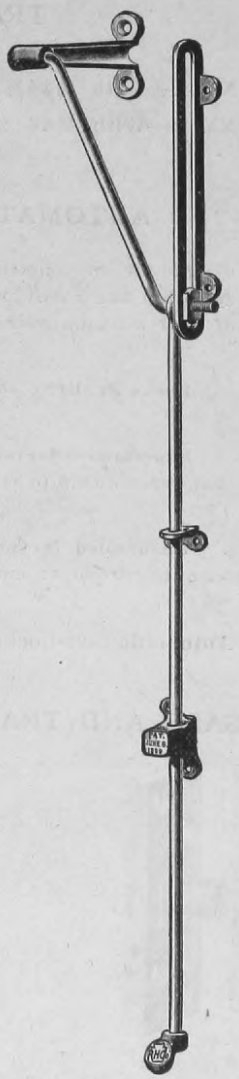
UNIVERSAL TRANSOM LIFTERS



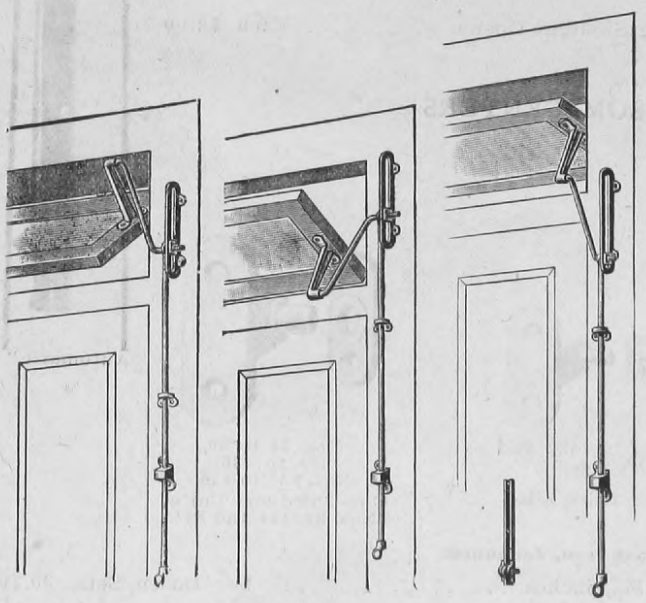
Flush Transom. Top Hung. Opening in.

Flush Transom. Bottom Hung. Opening in.

Flush Transom. Center Hung.



Note.—Universal Transom Lifters are also suitable for Transoms "Opening Out."



Recessed Transom. Top Hung. Opening in.

Recessed Transom. Bottom Hung. Opening in.

Recessed Transom Center Hung.

The Universal Transom Lifter can be used on every style of Hanging Transoms that move up and down, whether hung at top, bottom, or center. Works equally well on Transoms fitting flush with the Door Casing or recessed to any depth up to six inches, without changing any of the parts. Easily adjusted to escape a projecting Bead or Moulding at the side of Door Frame, by turning the Adjusting Screw at end of Short Arm to which the Bracket is attached. Automatic Clamping Device, made of hardened steel, self-locking and will not allow Transom to slip or fall, preventing any danger of breaking the glass. Easily operated with one hand. **Operation**—Grip is released by pulling Thumb Piece forward, which allows Transom to be raised or lowered. **Order** by number only, as the number indicates the size, length, and finish.

Note.—For **Light** Transoms use ¼ inch Rod, for **Medium** 5/16 inch Rod, and for **Heavy** ⅜ inch Rod. **Half** inch rods furnished on special orders. **Heavy** Slides are furnished for Lifters having ⅜ or ½ inch rods.

Lower right hand illustration shows section of heavy slide used on all Transom Lifters having ⅜ and ½ inch rods

Bronzed Steel.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
143	¼	3	$0.38
144	¼	4	.38
154	5/16	4	.70
155	5/16	5	.75
165	⅜	5	1.00
166	⅜	6	1.10
167	⅜	7	1.24
168	⅜	8	1.50

Antique Copper Finish.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
243	¼	3	$0.60
244	¼	4	.60
254	5/16	4	.84
255	5/16	5	.96
265	⅜	5	1.20
266	⅜	6	1.32

Light Dull Brass Finish.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
443	¼	3	$0.60
444	¼	4	.60
454	5/16	4	.84
455	5/16	5	.96
465	⅜	5	1.20
466	⅜	6	1.32

Sanded Statuary Brass Finish.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
543	¼	3	$0.98
544	¼	4	1.06
554	5/16	4	1.20
555	5/16	5	1.32
565	⅜	5	1.56
566	⅜	6	1.80

Bower-Barff Finish.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
843	¼	3	$0.98
844	¼	4	1.06
854	5/16	4	1.20
855	5/16	5	1.32
865	⅜	5	1.56
866	⅜	6	1.80

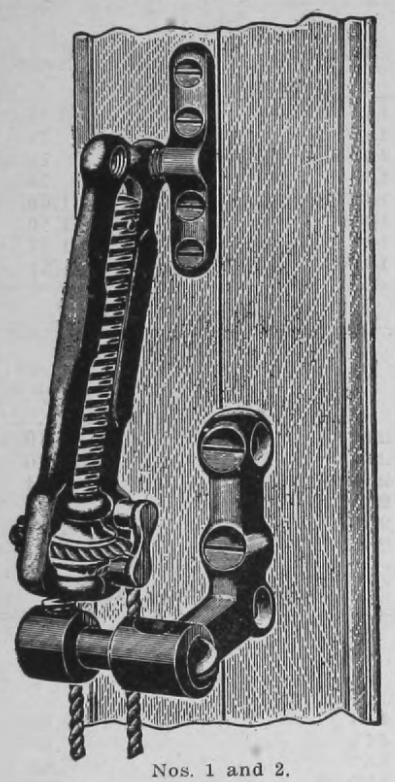
Nickel Plated Finish.

Nos.	Rod		Price Each
	Size Inch	Length Feet	
2043	¼	3	$0.98
2044	¼	4	1.06
2054	5/16	4	1.20
2055	5/16	5	1.32
2065	⅜	5	1.56
2066	⅜	6	1.80

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

TRANSOM AND SKYLIGHT OPERATORS

TRANSOM



Nos. 1 and 2.

TRANSOM OPERATORS

Cast Brass, Polished.

No. 1—With ⅜x4½ inch Screw.....Each, $4.00

No. 2—With ½x6 inch Screw.....Each, 5.00

AUTOMATIC SKYLIGHT OPERATORS

Simple in construction and cannot get out of order, works smoothly and easily, raises Skylight to any desired height by means of cord working over the two wheels, as shown in cut.

Locks Skylight and prevents slipping or falling.

Especially Adaptable to Skylights in large halls or over stairways, that are difficult to reach.

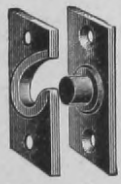
Unequalled for use in factories and foundries and can be used on either wood or metal Skylights.

Automatic Self-Locking Skylight Openers .....Each $3.00

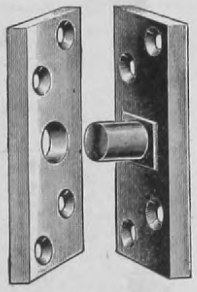
SKYLIGHT

"Automatic."

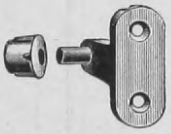
SASH AND TRANSOM CENTERS



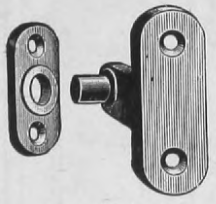
No. 22.
One-Third Size.



Nos. 40 and 41.
One-Third Size.



Nos. 32, 432 and 832.
One-Third Size.



Nos. 33 to 36, 433 to 436.
Nos. 833 to 836.
One-Third Size Cut of Nos. 34, 434 and 834.

Nos. 22, 40 and 41. Cast Iron, Japanned.

No. 22—Japanned, Sash and Transom Centers, Plates 2¼x15/16 inches .....Per Dozen Sets, $0.70

Packed—Three Dozen Sets in a Box.

No. 40—Japanned, Extra Heavy Sash and Transom Centers, Plates 3⅞x1½ inches.....Per Dozen Sets, 4.30

No. 41—Japanned, Extra Heavy Sash and Transom Centers, Plates 4⅜x1¾ inches.....Per Dozen Sets, 5.00

Packed—Half Dozen Sets in a Box.

Note.—Four Pieces constitute one Set of Sash or Transom Centers.

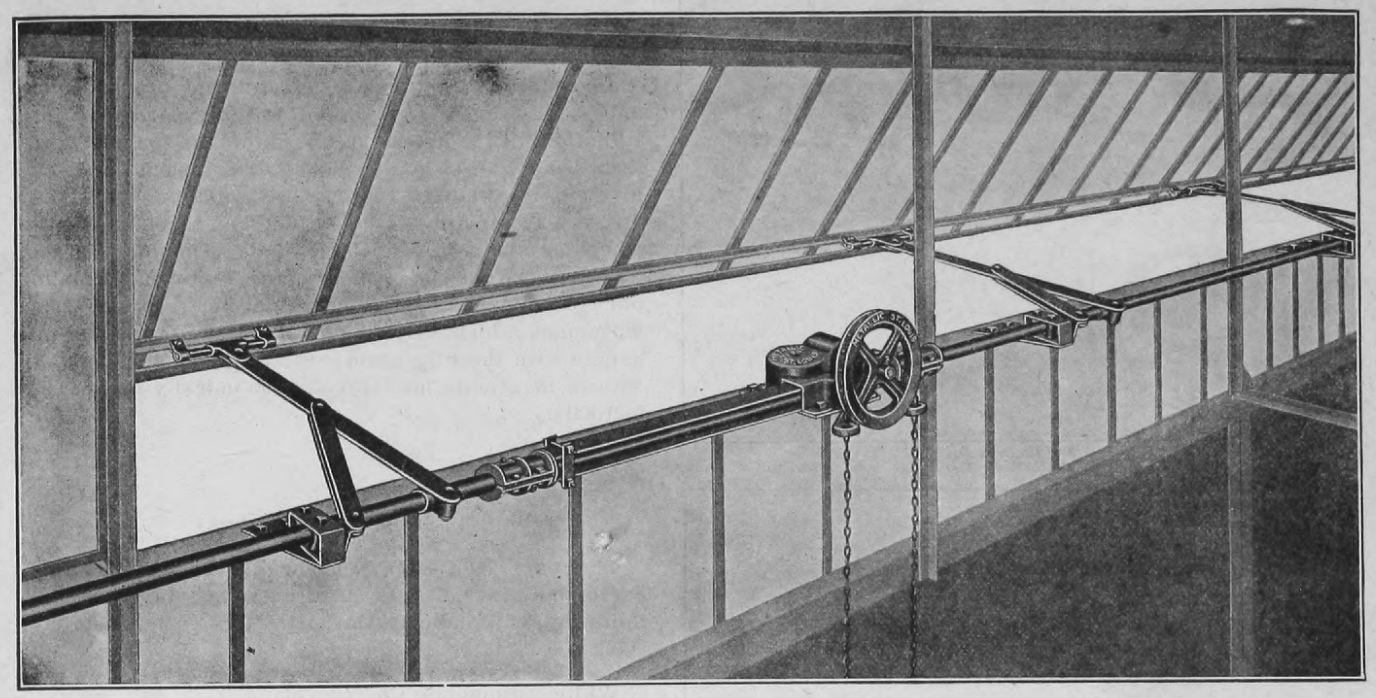
Nos. 32 to 836. Cast Iron.

Finishes		Copper Bronzed.		Light Dull Brass		Bower-Barff	
Backset	Size of Plate.	No.	Per Dozen Sets	No.	Per Dozen Sets	No.	Per Dozen Sets
2/16 Inch	1⅞x ¾ Inch	32	$0.40	432	$1.45	832	$2.10
⅝ Inch	2⅜x ⅞ Inch	33	.70	433	2.45	833	2.85
11/16 Inch	2⅞x1 Inch	34	1.20	434	3.45	834	3.75
13/16 Inch	3⅜x1 3/16 Inches	35	1.95	435	4.35	835	6.00
1 Inch	4⅜x1⅜ Inches	36	2.70	436	5.55	836	8.25

Packed—Nos. 32 to 34, 432 to 434, 832 to 834 One Dozen Sets; Balance Half Dozen Sets in a Box.
All with Screws except Nos. 32 to 36.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SASH OPERATORS



Style No. 9.

Metallic Sash Operators

(A). The modern way in ventilating large or small buildings lies through the use of efficiently constructed sash operators. Those which we illustrate on this and the following page are adapted for use with either metal or wood sash, operating on pivots, hinges or sliding, or disposed in any other manner.

(B). The illustration shows some of the applications for which we are prepared to furnish complete equipment, but any other special form can be supplied if we receive full information as to the size and weight of sash, manner in which they are hung and how it is desired to open them. We call your especial attention to the fact that these operators are unusually efficient —the result of many years' careful study.

Easily Operated

(C). All of these operators are designed on the worm and gear principle, and especial care has been taken in proportioning them, so as to produce quick movement and at the same time retain the greatest ease of operation. Extreme accuracy in the making of gears and worms, and thoroughly scientific designing make these operators thoroughly satisfactory when working under severe conditions and after long use.

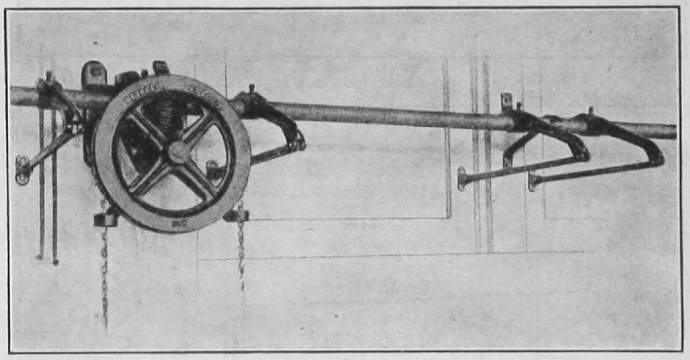
Substantially Built

(D). All parts are of extra heavy construction, to withstand hard use, and give good service. A sash operator equipment should be installed only once—and should then give service as long as the building and the sash remain intact. These operators will do this.

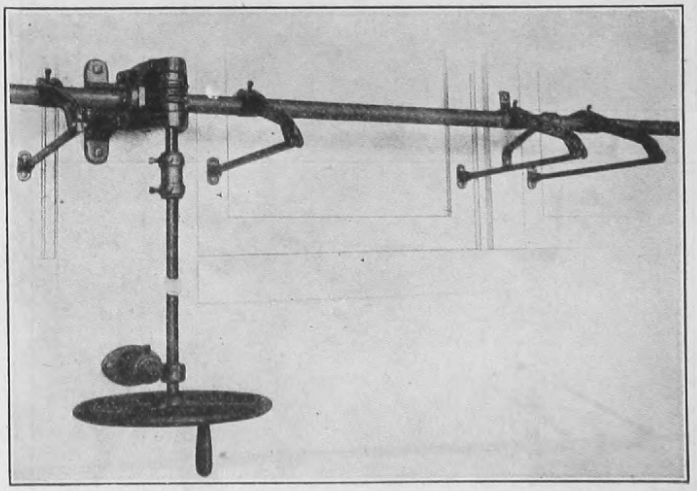
Special Designs

(E). The illustrations show some of the standard forms of equipment which can be very promptly supplied. Special requirements may call for different designs, and these we are prepared to furnish upon request. In communicating with us, please endeavor to inform us as fully as possible exactly what you wish accomplished.

(F). Style No. 9, illustrated at the top of this page, is designed to operate long runs of especially heavy top hung or continuous sash, by means of an endless chain. Style No. 1 is for less severe work, and Style No. 2 is the same as Style No. 1 excepting that a hand wheel replaces the chain.



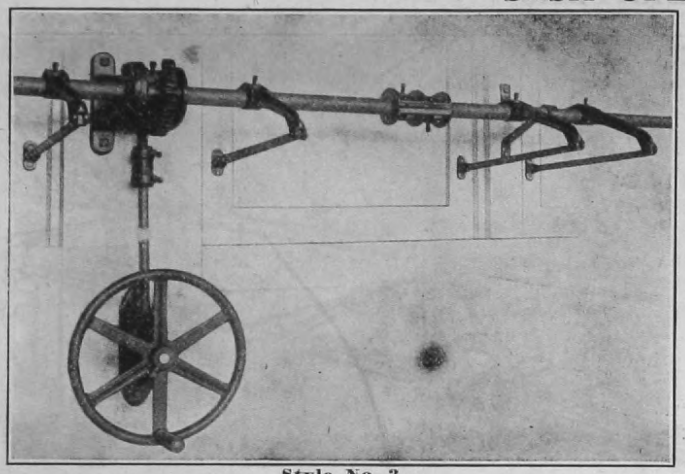
Style No. 1.



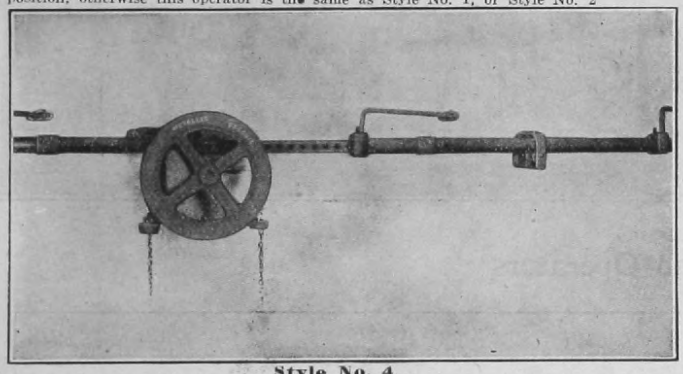
Style No. 2.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

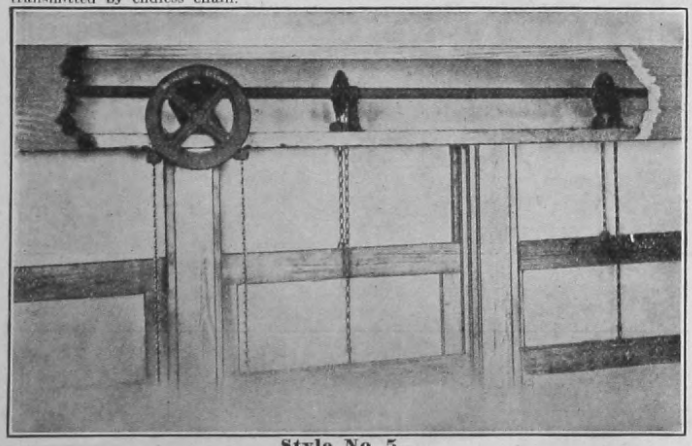
SASH OPERATORS



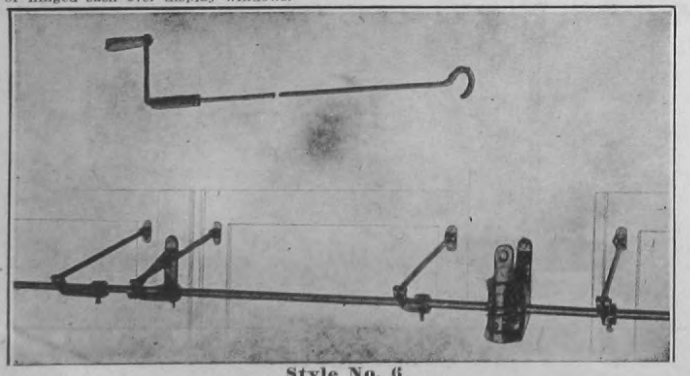
Style No. 3.
Style No. 3 introduces a bevel gear which places the hand wheel in vertical position, otherwise this operator is the same as Style No. 1, or Style No. 2



Style No. 4.
Style No. 4 handles side hinged or top or bottom pivoted sash, power being transmitted by endless chain.



Style No. 5.
Style No. 5 handles vertically sliding sash, Style No. 6 handles small pivoted or hinged sash over display windows.



Style No. 6.

All Conditions Met

In order to intelligently suggest the proper style and size of operator required for any particular installation, it is necessary to know the quantity of sash desired to be handled, how this sash is hung or pivoted, its weight, whether in wood or steel, the distance from sash bottom to floor or to point where wheel or chain is to be operated. The more exact this information is the more accurately can we make our recommendations. There is no sort of sash movement which we are not prepared to adequately handle with these operators—state the conditions and we can invariably meet them, economically and satisfactorily.

Some Installations

These operators have been installed in a large number of buildings, scattered all over the country. The following will indicate the character of the installations.

White Automobile Co., Cleveland, O.
Busch-Sulzer Bros. Diesel Engine Co., St. Louis, Mo.
Fairbanks, Morse & Co., Beloit, Wis.
Hupp Motor Co., Detroit, Mich.
Aluminum Ore Co., E. St. Louis, Ill.
American Steel & Wire Co., Cleveland & Donora, Pa.
Acme Steel Goods Co., Chicago, Ill.
Goodyear Tire & Rubber Co., Akron, O.
Phillips Sheet & Tin Plate Co., Weirton, W. Va.
Great Western Smelting & Refining Co., Chicago, Ill.

Economical for Small as Well as Large Users

The installations listed above are of course in large groups of buildings, but many hundreds of operators have been installed where only a limited number of sash were to be operated, and in comparatively small buildings. We recommend these operators wherever sash are to be opened or closed, and know that their use will represent true economy, as well as providing an up-to-date convenience.

Ask for Special Information

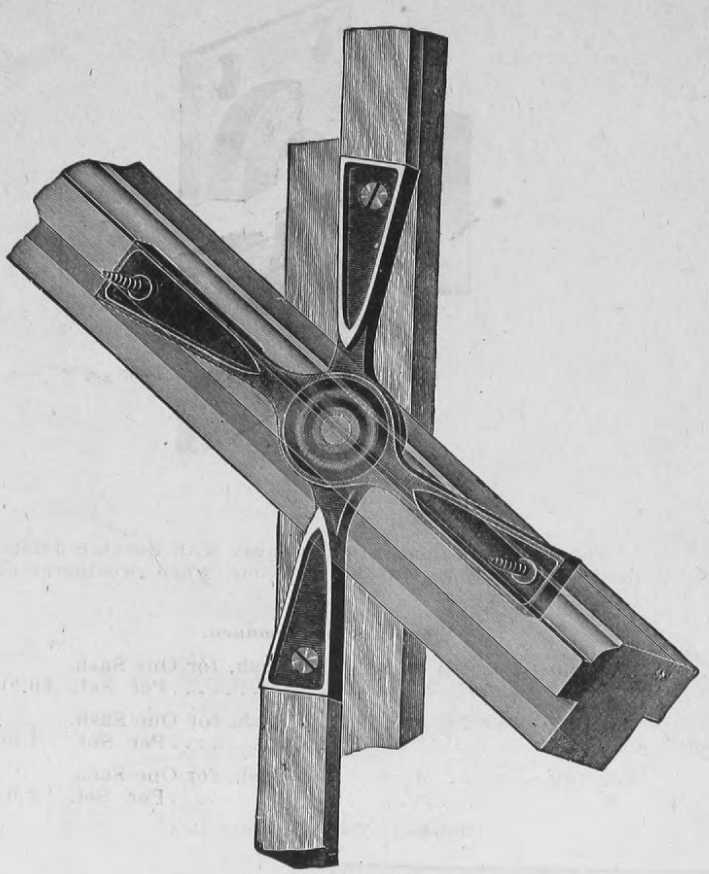
It is impossible to make intelligent quotations on an installation until we are in possession of full information as to the weight and character of sash to be moved, and as much more data as you can furnish. Before deciding whether or not you wish to use sash operators, by all means inform us as to the conditions, and allow us to make a quotation. You will be pleasantly surprised at the very moderate cost of adequate equipment, properly installed. Ask us for special information.

Digitized by. Original from
UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DETROIT SASH CENTERS

REVERSIBLE

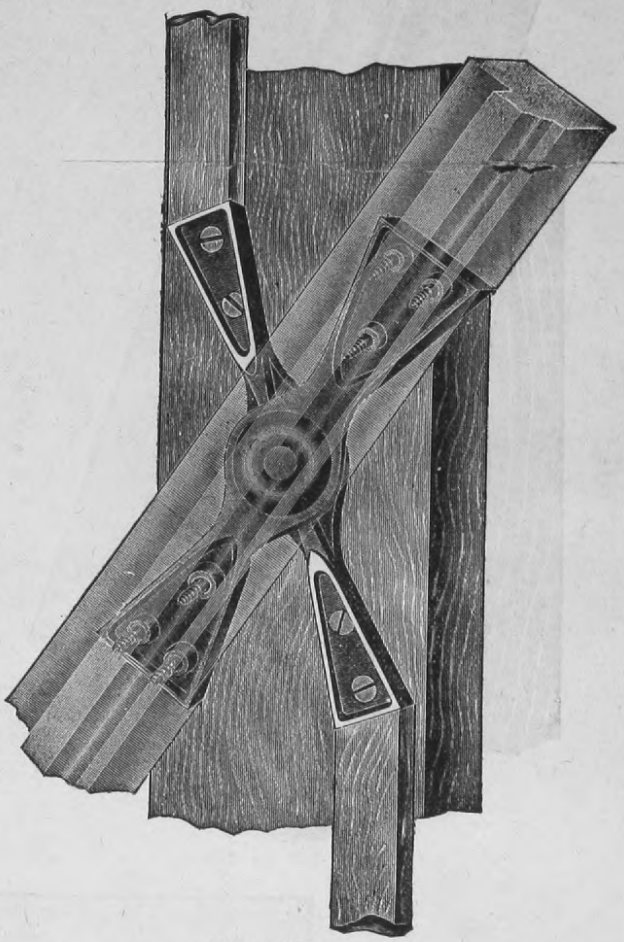
For Factory Windows



Nos. 560 to 562.

Especially adapted for **Single Sash Plank Frame** Factory Windows, as it gives the whole opening for ventilation, also allowing sash to be reversed inside out, thus permitting both sides of glass to be cleaned from inside the building. Made with concave and convex joint, machine finished and riveted together, forming a waterproof and perfect working pivot.

The beveled ears form the bevel of the stops and make an easy and substantial way of fastening the pivot to the sash and frame.



Nos. 460 to 462.

Intended for Factory Windows with **plain face jambs and single sash.** Also adapted for windows in car sheds, power houses, barns, stables, waterworks buildings, engine houses, machine shops, warehouses, foundries, railroad depots, etc. No inside stops, no blind stops, no parting strips, no grooving the frame, no reverse rebating necessary. Gives best of ventilation, will turn window inside out for cleaning or replacing glass. Stops should be ½x⅞ inch.

Reversible Sash Centers, for Factory Windows, Cast Metal Japanned.

Nos. 560 to 562.

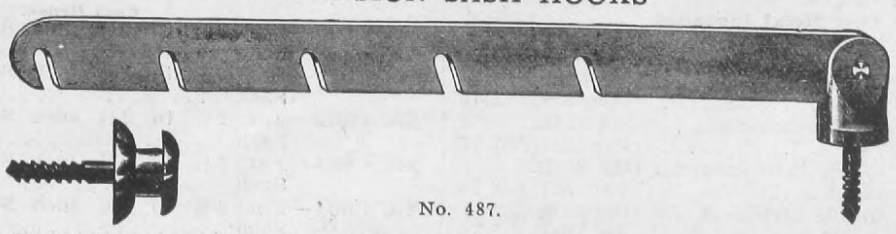
No. 560—For 1⅜ to 1½ inch Sash, for One Sash.....Per Set, $0.40
No. 561—For 1¾ to 2 inch Sash, for One Sash.....Per Set, .50
No. 562—For 2¼ to 2½ inch Sash, for One Sash.....Per Set, .80

Nos. 460 to 462.

No. 460—For 1⅜ inch Sash, for One Sash.....Per Set, $0.50
No. 461—For 1¾ inch Sash, for One Sash.....Per Set, .60
No. 462—For 2¼ inch Sash, for One Sash.....Per Set, .90

Packed—One Set in a Box.

EXTENSION SASH HOOKS

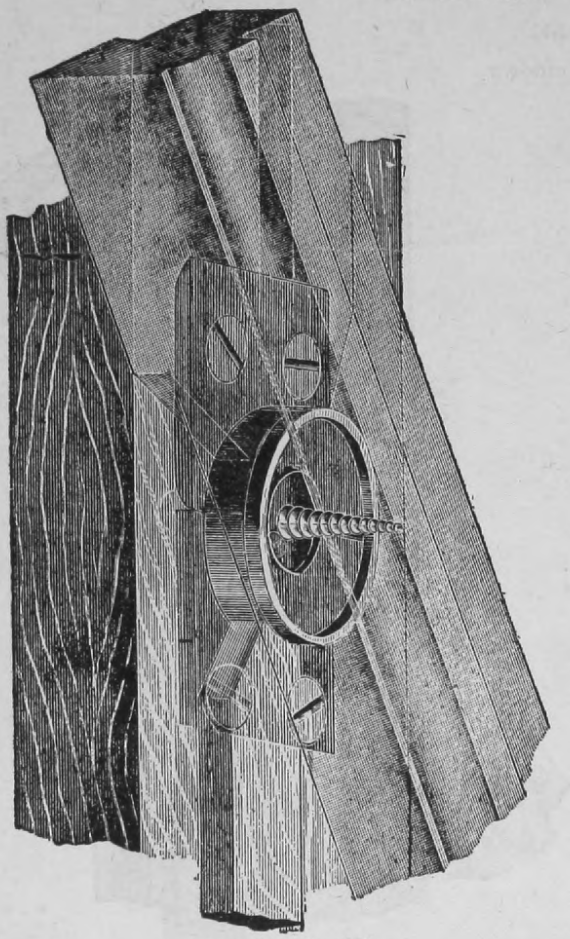


No. 487.

No. 487—Wrought Metal, Japanned, Length 15¼ inches.....Each, $0.30

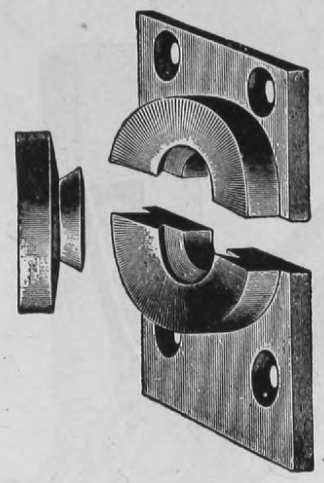
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

DETROIT SASH CENTERS



Nos. 760 to 732.

For Outside Transoms



This Center is Concave and Convex with Dovetail Joints. Used for hanging outside transoms when weatherproof joints are necessary.

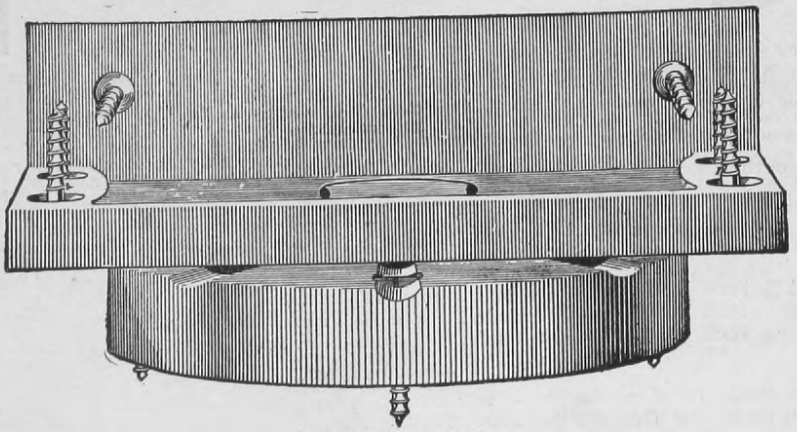
Cast Metal Japanned.

No. 760—For 1¾ to 2 inch Sash, for One Sash. ..... Per Set, $0.90

No. 761—For 2¼ to 2¾ inch Sash, for One Sash. ..... Per Set, 1.00

No. 762—For 3 to 4 inch Sash, for One Sash. ..... Per Set, 2.00

Packed—Two Sets in a Box.



Nos. 960 to C964.

Detroit Automatic Roller Friction Sash Centers

For Heavy Outside Windows.

Adapted for Top and Bottom Hung Windows. Absolutely Weatherproof. Roller Friction holds sash securely at any angle without adjuster.

Cast Metal Japanned.

No. 960—For 1⅜ to 1½ inch Sash, for One Sash. ..... Per Set, $1.20

No. 961—For 1¾ to 1⅞ inch Sash, for One Sash. ..... Per Set, 1.40

No. 962—For 2 to 2⅛ inch Sash, for One Sash. ..... Per Set, 1.85

No. 963—For 2¼ to 2⅜ inch Sash, for One Sash. ..... Per Set, 2.20

No. 964—For 2½ to 2⅝ inch Sash, for One Sash. ..... Per Set, 2.50

Packed—One Set in a Box.

Cast Brass.

No. C960—For 1⅜ to 1½ inch Sash, for One Sash ..... Per Set, $4.40

No. C961—For 1¾ to 1⅞ inch Sash, for One Sash ..... Per Set, 4.60

No. C962—For 2 to 2⅛ inch Sash, for One Sash ..... Per Set, 4.85

No. C963—For 2¼ to 2⅜ inch Sash, for One Sash ..... Per Set, 5.40

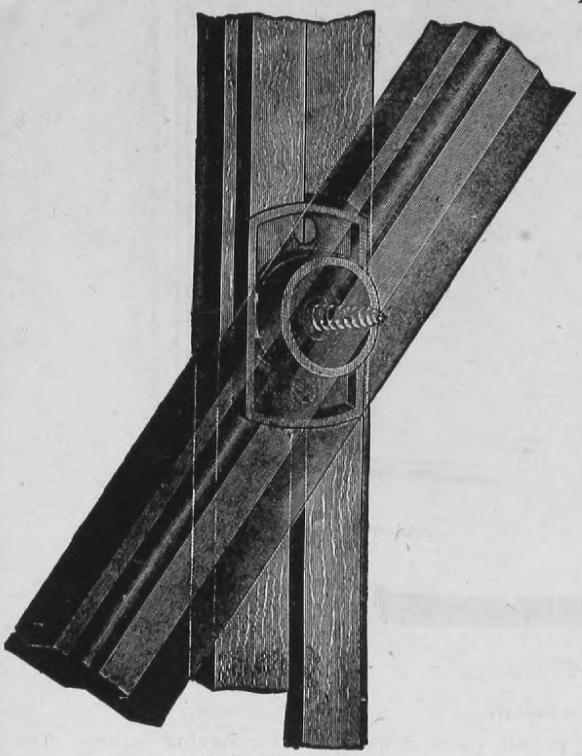
No. C964—For 2½ to 2⅝ inch Sash, for One Sash ..... Per Set, 6.00

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DETROIT SASH CENTERS

REVERSIBLE



Nos. 660 to 665.

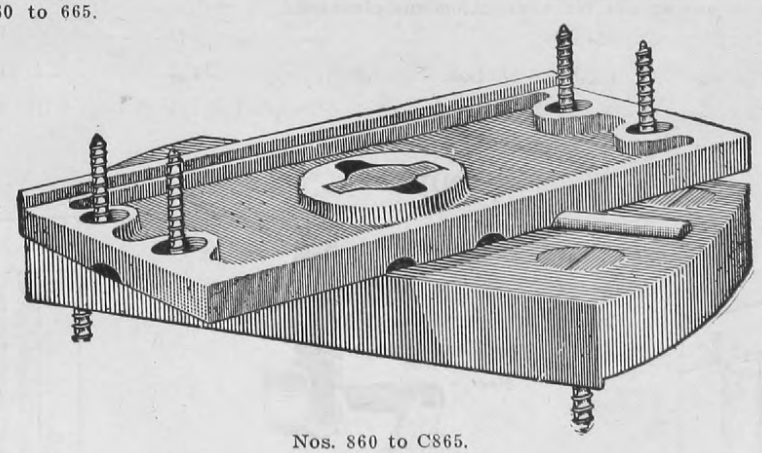
For Inside Transoms or Factory Sash

Adapted for hanging inside or outside transoms, making them as tight as if hinged at top or bottom. It is also adapted for pivoting **round** or **elliptical** windows and is largely used for factory windows where operated in battery form, with operating device. The transom will be perfectly balanced and work freely.

Detroit Sash Centers, Cast Metal, Japanned

No. 660—For 1⅜ inch Sash, for One Sash...Per Set, $0.40
No. 661—For 1½ inch Sash, for One Sash...Per Set, .50
No. 662—For 1¾ inch Sash, for One Sash...Per Set, .60
No. 663—For 2 inch Sash, for One Sash...Per Set, .70
No. 664—For 2⅛ inch Sash, for One Sash...Per Set, .75
No. 665—For 2¼ inch Sash, for One Sash...Per Set, .80

Packed—Two Sets in a Box.



Nos. 860 to C865.

Detroit Reversible Automatic Roller Friction Sash Centers

For Single or Double Hung Sash.

Adapted to Top, Bottom or Side Hung Sash. Absolutely weatherproof Roller Friction holds sash securely at any angle without adjuster. Requires no mortise for spring post when being installed. Sash can be reversed instantly for the purpose of cleaning.

Cast Metal Japanned.

No. 860—For 1⅜ inch Sash, for One Sash.....Per Set, $1.00
No. 861—For 1¾ inch Sash, for One Sash.....Per Set, 1.15
No. 862—For 2 inch Sash, for One Sash.....Per Set, 1.40
No. 863—For 2¼ inch Sash, for One Sash.....Per Set, 1.70
No. 864—For 2½ inch Sash, for One Sash.....Per Set, 2.00
No. 865—For 2¾ inch Sash, for One Sash.....Per Set, 2.30

Packed—One Set in a Box.

Cast Brass.

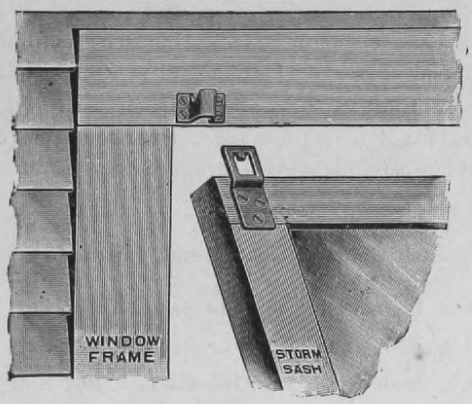
No. C860—For 1⅜ inch Sash, for One Sash...Per Set, $4.40
No. C861—For 1¾ inch Sash, for One Sash...Per Set, 4.60
No. C862—For 2 inch Sash, for One Sash...Per Set, 4.85
No. C863—For 2¼ inch Sash, for One Sash...Per Set, 5.40
No. C864—For 2½ inch Sash, for One Sash...Per Set, 6.00
No. C865—For 2¾ inch Sash, for One Sash...Per Set, 6.50

Packed—One Set in a Box, with Screws.

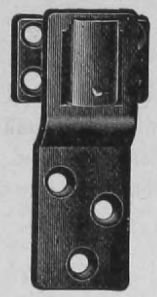
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SASH HANGERS AND FASTENERS

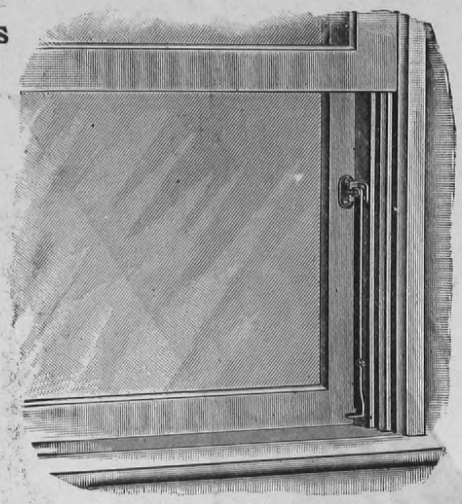
SCHROEDER'S PEERLESS



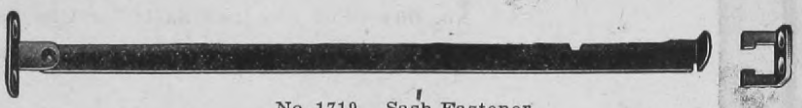
Hangers Applied.



No. 1717. Hanger.



Fasteners Applied.



No. 1719. Sash Fastener.

For Storm Sash and Screen Windows.

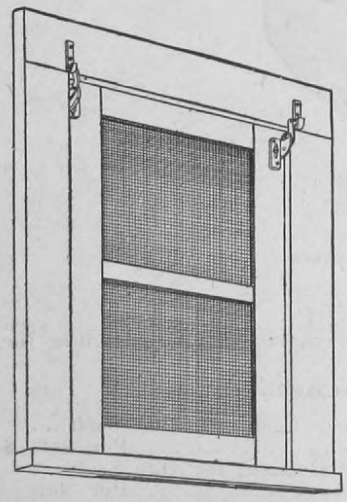
With Schroeder's "Peerless" Hangers, Storm Sash can be **easily** and quickly taken down without removing Screws. The Fasteners allow the Sash to be swung out for ventilation **and cleaning.**

No. 1717—Peerless Sash Hangers, Japanned..... Per Dozen Sets, $1.50

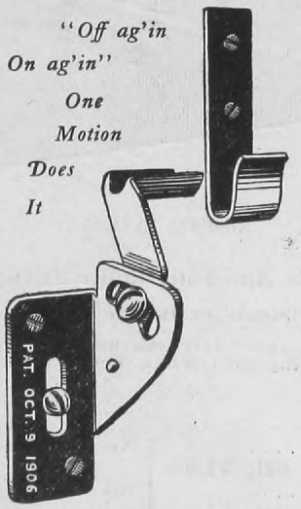
No. 1719—Peerless Sash Fasteners, Length 10 inches, Japanned..... Per Dozen Pairs, 2.00

Packed—Hangers, One Dozen Sets; Fasteners, One Dozen Pairs in a Box, with Screws.

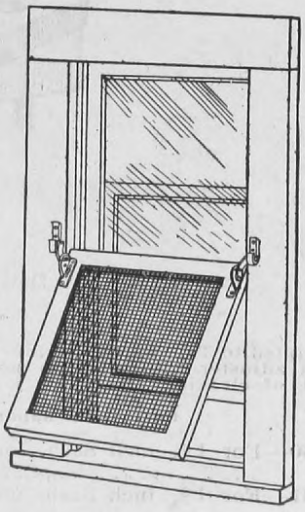
UNIVERSAL



Attached to Full Size Screen.



Universal Adjustable Wrought Steel Hanger.



Attached to Half Size Screen.

Works equally well on flush or offset frames.

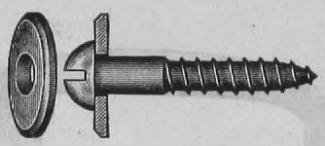
Universal Adjustable Hangers. For Half or Full Size Screens and Storm Sash. Adjustable to any casing, saves on lumber bills and worker's time. The Screen does not have to be same thickness as casing, hangers will go on any place. With ordinary hangers 1⅛ inch thick must be **used.** **With the Adjustable** Hanger ⅞ inch lumber gives a perfect job. Figure out the difference in cost.

No. 26—Galvanized..... Per Dozen Sets. $..... Per Gross Sets, $.....

Packed—One Dozen Sets in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STOP SCREWS AND WASHERS



No. 8, 1¼ inch Screws, with ⅝ inch Washers.

Round Head.

Nos.	Finishes	Per Gross
8	—Blued Steel	$1.03
108	—Nickel Plated	1.16
128	—Antique Copper	1.10
148	—Light Dull Brass	1.10
188	—Bower-Barff	1.20

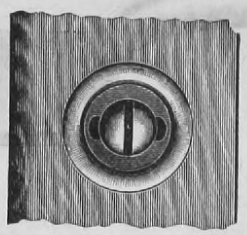
Packed—One Gross in a Box.

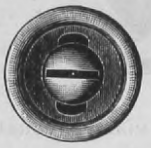
Flat Head.

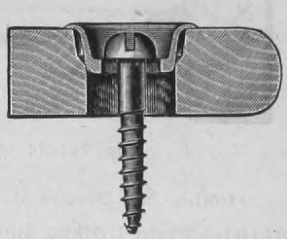
Nos.	Finishes	Per Gross
28	—Blued Steel	$0.93
208	—Nickel Plated	1.06
228	—Antique Copper	1.00
248	—Light Dull Brass	1.00
288	—Bower-Barff	1.10

Packed—One Gross in a Box.

WINDOW STOP ADJUSTERS







Full Size Cuts.

For Windows and Sliding Doors.

Wrought Steel, Polished.

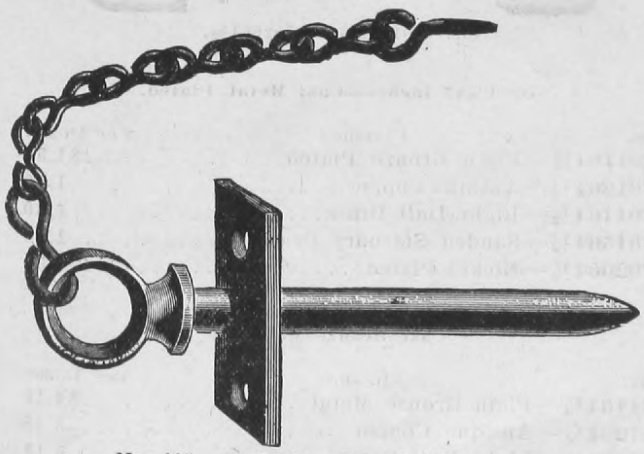
Nos.	Finishes	Per Gross
731	—Amber Bronzed	$1.75
733½	—Plain Bronze Plated	2.08
740	—Nickel Plated	2.33
749	—Antique Copper	2.08
733¼	—Light Dull Brass	2.08

Bronze Metal, Polished.

Nos.	Finishes	Per Gross
734	—Plain Bronze Metal	$3.32
750	—Antique Copper	3.57
751	—Light Dull Brass	3.57
748	—Bower-Barff	2.24

Packed—One Dozen in a Package; One Gross in a Box, with Screws.

SASH PINS

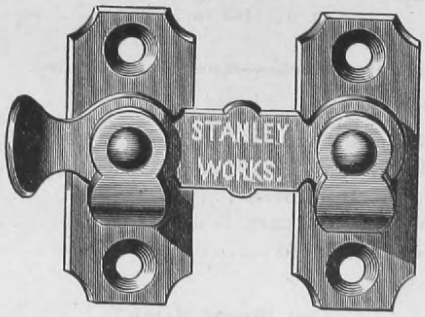


No. 105. Full Size Cut of 2½ inch.

Polished Cast Brass Pin, Wrought Brass Chain.

Length of Pin, inches	2½	3	3½	4
Diameter of Pin, inches	3/16	3/16	3/16	5/16
No. 105—Per Dozen	$2.00	2.25	2.50	3.00

SHUTTER BARS



Nos. 03150 to 03850. Full Size Cut.

Wrought Steel. 2 inch.

Nos.	Finishes	Per Dozen
03150	—Bronze Plated	$1.20
03250	—Antique Copper	1.50
03450	—Light Dull Brass	1.50
03550	—Sanded Statuary Brass	1.75
03850	—Bower-Barff	1.75

Packed—One Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

BAR SASH LIFTS

Nos. 7164 to 7864.

Plain, Cast Bronze Metal, 1⅜x4 inches.

No. 7164—Plain Bronze Metal	Per Dozen,	$5.55
No. 7264—Antique Copper Finish	Per Dozen,	6.55
No. 7464—Light Dull Brass Finish	Per Dozen,	6.55
No. 7564—Sanded Statuary Brass Fin.	Per Dozen,	6.55
No. 7864—Bower-Barff Finish	Per Dozen,	3.50

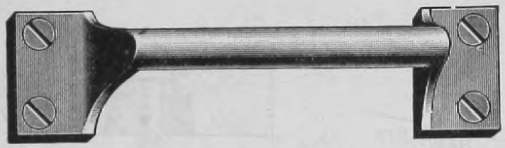
Packed—One Dozen in a Box, with Screws.

Nos. 8164 to 8864.

Plain, Cast Bronze Metal, 1¼x5 inches.

No. 8164—Plain Bronze Metal	Per Dozen,	$5.55
No. 8264—Antique Copper Finish	Per Dozen,	6.55
No. 8464—Light Dull Brass Finish	Per Dozen,	6.55
No. 8564—Sanded Statuary Brass Fin.	Per Dozen,	6.55
No. 8864—Bower-Barff Finish	Per Dozen,	3.50

Packed—One Dozen in a Box, with Screws.



Nos. 381164 to 382064.

Plain, Cast Bronze Metal, 1¼x5 inches.

No. 381164—Plain Bronze Metal	Per Dozen,	$6.25
No. 381264—Antique Copper Finish	Per Dozen,	7.25
No. 381464—Light Dull Brass Fin	Per Dozen,	7.25
No. 381564—Sanded Stat. Brass Fin.	Per Dozen,	7.25
No. 381864—Bower-Barff Finish	Per Dozen,	3.50
No. 382064—Nickel Plated Finish	Per Dozen,	7.25

Packed—One Dozen in a Box, with Screws.

Nos. 0361164 to 0361864.

Plain, Wrought Steel, 1⅛x4½ inches.

No. 0361164—Plain Bronze Plated	Per Doz.,	$1.50
No. 0361264—Antique Copper Finish	Per Doz.,	1.50
No. 0361464—Light Dull Brass Finish	Per Doz.,	1.50
No. 0361564—Sanded Stat. Brass Fin.	Per Doz.,	1.65
No. 0361864—Bower-Barff Finish	Per Doz.,	1.50

Packed—One Dozen in a Box, with Screws.

Nos. 0701164 to 702064.

Size 1⅜x4 inches—Cast Metal, Plated.

Nos.	Finishes	Per Dozen
0701164—Plain Bronze Plated		$1.40
0701264—Antique Copper		1.40
0701464—Light Dull Brass		1.40
0701564—Sanded Statuary Brass		1.40
0702064—Nickel Plated		1.40

Cast Bronze Metal.

Nos.	Finishes	Per Dozen
701164—Plain Bronze Metal		$4.00
701264—Antique Copper		4.50
701464—Light Dull Brass		4.50
701564—Sanded Statuary Brass		4.50
701864—Bower-Barff		2.25
702064—Nickel Plated		4.50

Packed—One Dozen in a Box, with Screws.

Nos. 0701164½ to 702064½.

Size 1⅜x5 inches—Cast Metal, Plated.

Nos.	Finishes	Per Dozen
0701164½—Plain Bronze Plated		$1.50
0701264½—Antique Copper		1.50
0701464½—Light Dull Brass		1.50
0701564½—Sanded Statuary Brass		1.50
0702064½—Nickel Plated		1.50

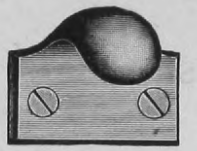
Cast Bronze Metal.

Nos.	Finishes	Per Dozen
701164½—Plain Bronze Metal		$4.15
701264½—Antique Copper		5.15
701464½—Light Dull Brass		5.15
701564½—Sanded Statuary Brass		5.15
701864½—Bower-Barff		2.50
702064½—Nickel Plated		5.15

Packed—One Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOOK SASH LIFTS

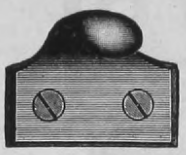


Nos. 381140½ to 381840½.

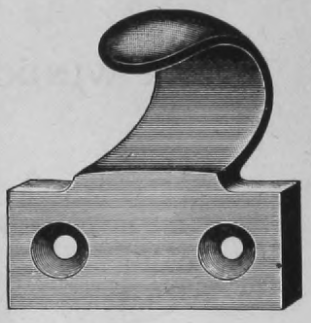
Regular Bevel, Cast Bronze Metal, 1½x1⅝ inches.

Nos.	Finishes	Per Dozen
381140½	—Plain Bronze Metal	$2.80
381240½	—Antique Copper	3.25
381440½	—Light Dull Brass	3.25
381540½	—Sanded Statuary Brass	3.25
381840½	—Bower-Barff	1.95

Packed—Three Dozen in a Box, with Screws.



Nos. 03040 to 3540.
Half Size Cut.



Nos. 09140 to 9840.
Full Size Cut.

Wrought Steel, Bevel Edge, 1⅜x1¾ inches.

Nos.	Finishes	Per Dozen
03040	—Nickel Plated	$0.55
03140	—Plain Bronze Plated	.40
03240	—Antique Copper	.40
03440	—Light Dull Brass	.40
03540	—Sanded Statuary Brass	.50

Packed—Three Dozen in a Box, with Screws.

Wrought Bronze and Brass, Bevel Edge.

Nos.	Finishes	Per Dozen
3140	—Plain Bronze Metal	$1.20
3240	—Antique Copper	1.20
3440	—Light Dull Brass	1.20
3540	—Sanded Statuary Brass	1.50

Packed—Three Dozen in a Box, with Screws.

"Offset" Hook Sash Lifts—Cast Metal, Plated.

Nos.	Finishes	Per Dozen
09140	—Plain Bronze Plated	$0.80
09240	—Antique Copper	.90
09440	—Light Dull Brass	.90
09540	—Sanded Statuary Brass	1.00

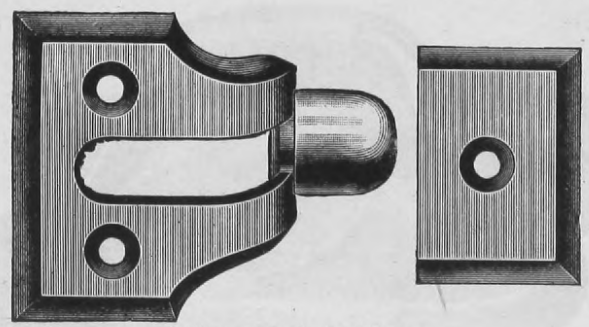
Packed—Three Dozen in a Box, with Screws.

"Offset" Hook Sash Lifts—Cast Bronze Metal.

Nos.	Finishes	Per Dozen
9140	—Plain Bronze Metal	$2.25
9240	—Antique Copper	2.50
9440	—Light Dull Brass	2.50
9540	—Sanded Statuary Brass	2.75
9840	—Bower-Barff	2.00

Packed—Three Dozen in a Box, with Screws.

WINDOW VENTILATING LOCKS



Nos. 1739¾ to 1746.
Full Size Cut.

Cast Metal, Plated.

Nos.	Finishes	Per Dozen
1739¾	—Plain Bronze Plated	$2.53
1740	—Nickel Plated	3.40
1739	—Antique Copper	2.53
1737	—Light Dull Brass	2.53
1763½	—Sanded Statuary Brass	2.70

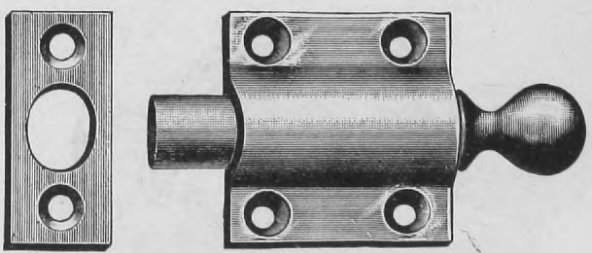
Furnished with Bronze or Brass Knob Finished to match.

Packed—One Dozen in a Box, with Screws.

Cast Bronze, Brass or Iron.

Nos.	Finishes	Per Dozen
1734	—Plain Bronze Metal	$5.00
1742	—Nickel Plated	5.40
1750	—Antique Copper	5.25
1751	—Light Dull Brass	5.25
1783½	—Sanded Statuary Brass	5.40
1746	—Bower-Barff	3.50

Packed—One Dozen in a Box, with Screws.



Nos. 11 to 28.

Cast Bronze, Brass or Iron.

Size 1¼x1¼ inch. Three Strike Plates with each Bolt.

Nos.	Finishes	Per Dozen
11	—Plain Bronze Metal	$4.55
12	—Antique Copper	4.80
14	—Light Dull Brass	4.80
15	—Sanded Statuary Brass	5.05
18	—Bower-Barff	4.30

Packed—Two Dozen in a Box, with Screws.

Cast Bronze, Brass or Iron.

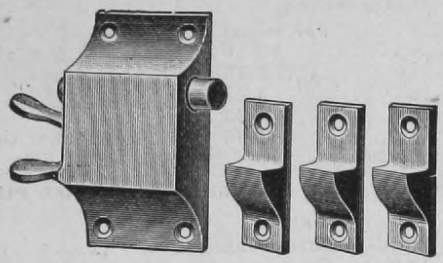
Size, 1½x1½ inch. Three Strike Plates with each Bolt.

Nos.	Finishes	Per Dozen
21	—Plain Bronze Metal	$5.15
22	—Antique Copper	5.55
24	—Light Dull Brass	5.55
25	—Sanded Statuary Brass	5.75
28	—Bower-Barff	4.95

Packed—Two Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CAR WINDOW FASTENERS



No. 177P. Three Strike Plates with each Fastener.

Half Size Cuts.

Cast Bronze Metal.

Reversible.

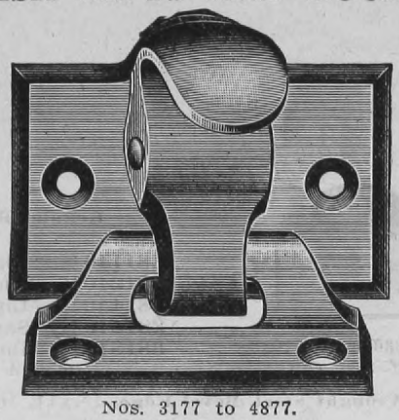
For Right or Left Hand Side of Sash.

Size, 2½x1 3/16 inches.

No. 177P—Plain Bronze Metal.....Per Dozen, $7.80

Packed—One Dozen in a Box, with Screws.

SASH LIFTS AND LOCKS



Nos. 3177 to 4877.
Full Size Cut.

Plain, Heavy Cast Metal, Plated.

Nos.	Finishes	Per Dozen
3177	—Plain Bronze Plated	$1.35
3277	—Antique Copper	1.35
3477	—Light Dull Brass	1.35
3577	—Sanded Statuary Brass	1.56

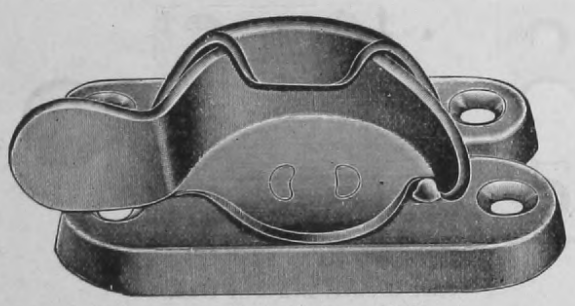
Plain, Cast Bronze Metal.

Nos.	Finishes	Per Dozen
4177	—Plain Bronze Metal	$5.90
4277	—Antique Copper	6.10
4477	—Light Dull Brass	6.10
4577	—Sanded Statuary Brass	6.30
4877	—Bower-Barff	3.25

Packed—One Dozen in a Box, with Screws.

MONITOR SASH LOCKS

Full Size Cuts.



Nos. 1234 to 1240.

Wrought Bronze Metal, Double Riveted.

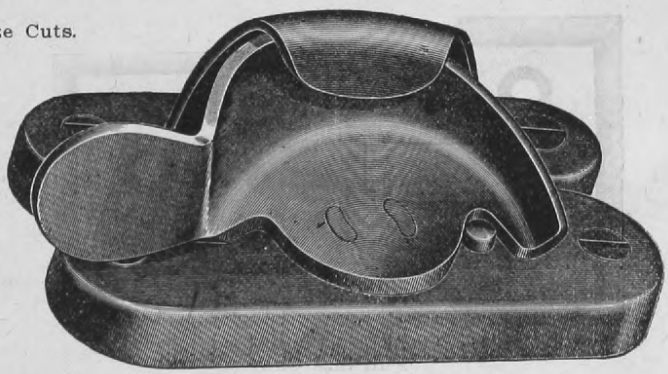
Nos.	Finishes	Per Dozen
1234	—Plain Bronze Metal	$3.50
1250	—Antique Copper	3.50
1251	—Light Dull Brass	3.50
1252½	—Sanded Statuary Brass	3.85
1242	—Nickel Plated	3.85
1246	—Bower-Barff	1.40

Packed—One Dozen in a Box, with Screws.

Wrought Steel, Double Riveted.

Nos.	Finishes	Per Dozen
1231	—Amber Bronzed	$0.60
1239¾	—Plain Bronze Plated	.70
1239	—Antique Copper	.70
1263½	—Sanded Statuary Brass	.75
1237	—Light Dull Brass	.70
1240	—Nickel Plated	.75

Packed—One Dozen in a Box, with Screws.



Nos. 1334 to 1337.

Wrought Bronze Metal, Double Riveted.

Nos.	Finishes	Per Dozen
1334	—Plain Bronze Metal	$6.75
1350	—Antique Copper	6.75
1351	—Light Dull Brass	6.75
1352½	—Sanded Statuary Brass	7.50
1342	—Nickel Plated	7.50
1346	—Bower-Barff	2.00

Packed—One Dozen in a Box, with Screws.

Wrought Steel, Double Riveted.

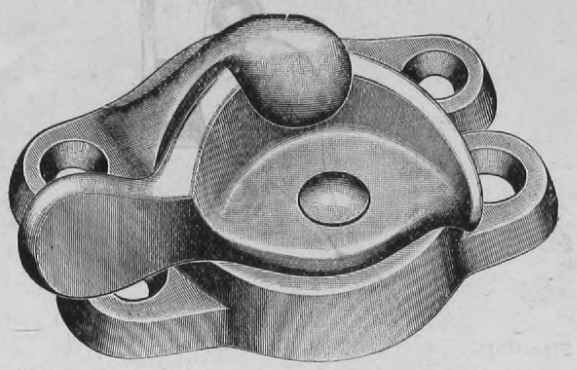
Nos.	Finishes	Per Dozen
1331	—Amber Bronzed	$1.10
1339¾	—Plain Bronze Plated	1.50
1339	—Antique Copper	1.50
1363½	—Sanded Statuary Brass	1.65
1337	—Light Dull Brass	1.50

Packed—One Dozen in a Box, with Screws.

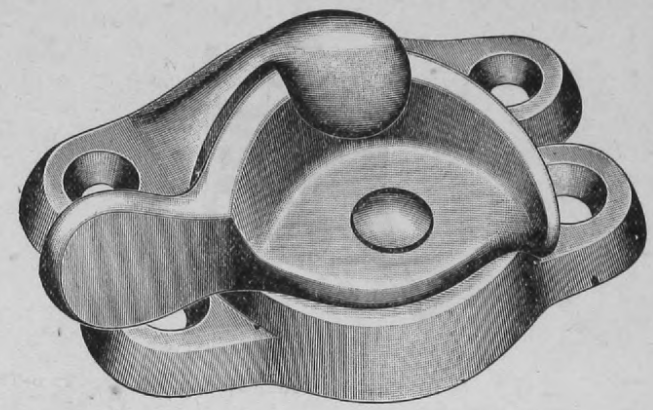
Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

Full Size Cuts.

SASH LOCKS



Nos. 1434 to 1463½.



Nos. 1534 to 1563½.

Fitch Pattern.

Cast Bronze, Brass or Iron.

Nos.	Finishes	Per Dozen
1434	—Plain Bronze Metal	$4.60
1450	—Antique Copper	4.80
1451	—Light Dull Brass	4.80
1483½	—Sanded Statuary Brass	6.00
1442	—Nickel Plated	6.00
1446	—Bower-Barff	4.60

Packed—One Dozen in a Box, with Screws.

Cast Bronze, Brass or Iron.

Nos.	Finishes	Per Dozen
1534	—Plain Bronze Metal	$6.00
1550	—Antique Copper	6.25
1551	—Light Dull Brass	6.25
1583½	—Sanded Statuary Brass	6.50
1542	—Nickel Plated	6.50
1546	—Bower-Barff	4.10

Packed—One Dozen in a Box, with Screws.

Cast Metal, Plated.

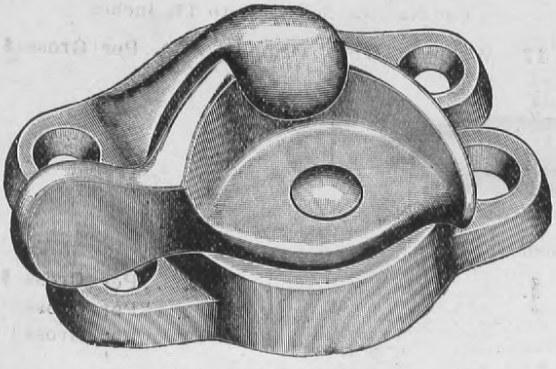
Nos.	Finishes	Per Dozen
1431	—Amber Bronzed	$0.68
1439¾	—Plain Bronze Plated	.75
1439	—Antique Copper	.75
1437	—Light Dull Brass	.75
1463½	—Sanded Statuary Brass	.85

Packed—One Dozen in a Box, with Screws.

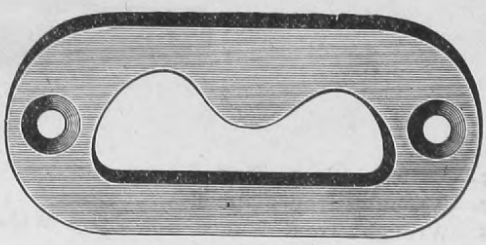
Cast Metal, Plated.

Nos.	Finishes	Per Dozen
1531	—Amber Bronzed	$1.10
1539¾	—Plain Bronze Plated	1.25
1539	—Antique Copper	1.25
1537	—Light Dull Brass	1.25
1563½	—Sanded Statuary Brass	1.40

Packed—One Dozen in a Box, with Screws.



Nos. 1634 to 1663½.



Mortise Strike.
For Nos. 1634 to 1663½.

Fitch Pattern with Mortise Strike.

Cast Bronze, Brass or Iron.

Nos.	Finishes	Per Dozen
1634	—Plain Bronze Metal	$7.30
1650	—Antique Copper	7.50
1651	—Light Dull Brass	7.50
1683½	—Sanded Statuary Brass	7.75
1646	—Bower-Barff	5.60

Packed—One Dozen in a Box, with Screws.

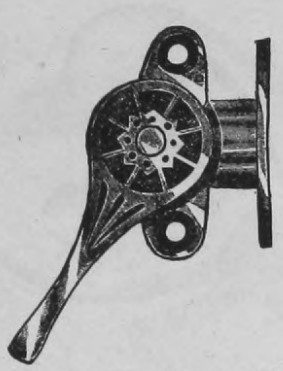
Cast Metal, Plated.

Nos.	Finishes	Per Dozen
1639¾	—Plain Bronze Plated	$1.60
1639	—Antique Copper	1.60
1637	—Light Dull Brass	1.60
1663½	—Sanded Statuary Brass	1.70

Packed—One Dozen in a Box, with Screws.

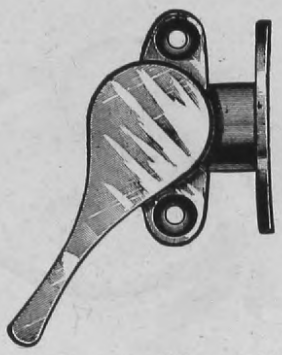
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SIDE SASH LOCKS



No. 10. Ornamental.

Two-Thirds Size Cuts.



Nos. 18, 18B and 18C.

Champion Side Sash Locks, Malleable Iron. Locks the Sash, upper or lower, at any desired point and prevents Rattling.

Nos.	Finish	Per Dozen
10	Amber Bronzed	$1.45
18	Plain Bronze Plated	2.18

Packed—One Dozen in a Box, with Screws.

Nos.	Finish	Per Dozen
18B	Antique Copper	$2.18
18C	Light Dull Brass	2.18

Packed—One Dozen in a Box, with Screws.

Extra Heavy Side Sash Locks

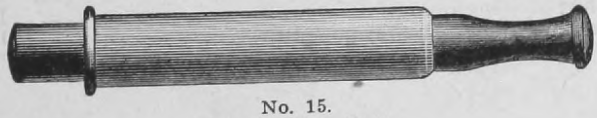
Style of No. 18.

Bronze or Brass Metal. Countersunk in back so that rivet head and washer are flush with surface.

No. 118 —Plain Bronze Metal.....Per Dozen, $8.20
No. 118C—Light Dull Brass.....Per Dozen, 8.20

WINDOW SPRING BOLTS

Full Size Cuts.



No. 15.
For Regular Sash.

No. 47.
For Narrow Sash, 1⅜ to 1⅞ inches.

No. 15—Coppered Iron .....Per Gross $2.35 | **No. 47**—Wrought Iron, Tinned.....Per Gross $5.00

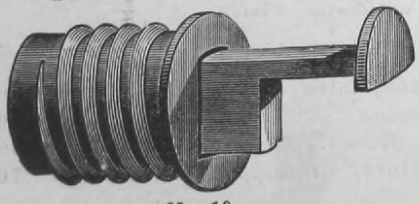
Nos. 57 and 37. Style of No. 38.

For Regular Sash.

No. 57—Malleable Iron, Tinned.....Per Gross $4.25
No. 37—Wrought Iron, Tinned.....Per Gross 4.80
No. 38—Wrought Iron, Tinned, for Extra Wide Sash.....Per Gross 5.40

Packed—All Half Gross in a Box.

SCREW SOCKET BOLTS



No. 19.

Window Spring Bolts.
Self-Fastening, Screw Socket,
To fit ¾ inch hole.
Cast Iron Case, Malleable Iron Bolt, Coppered.

No. 19—Bolts ..Per Gross $5.70
Packed—Half Gross in a Box.

WINDOW SPRING BOLT SOCKETS

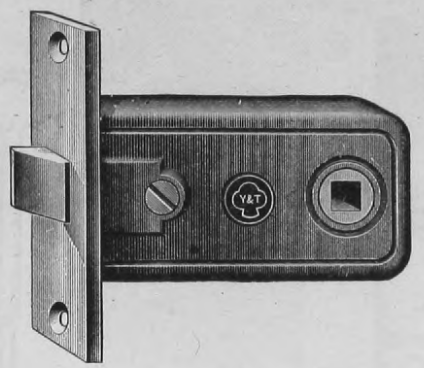
No. 50.

No. 50—Sockets .....Per Gross $0.80
Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MORTISE KNOB LATCHES

Half Size Cuts.



Nos. 413 to 814.

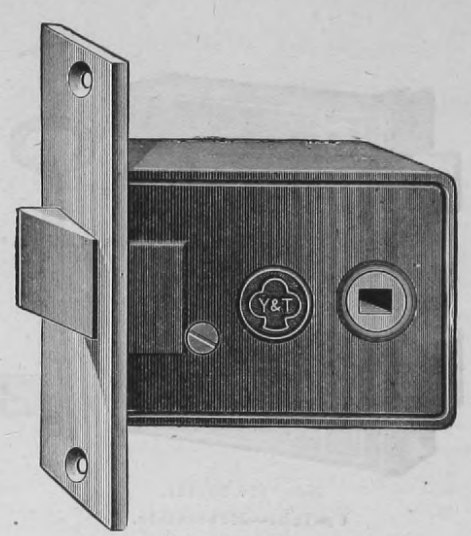
Reversible.

CASE—Japanned Iron, 1¾ x 3⅜ x 1 1/16 inches.
FRONT—3½ x ⅞ inches.
BACKSET—2¾ inches.
HUB for 5/16 inch Spindle.
EASY SPRING Latch Bolt.

Bronze Metal Fronts, Bolts, and Strikes.

Nos.	Finishes	Per Dozen
413	—Brass, Polished and Lacquered	$8.65
114	—Plain Bronze Metal	8.65
214	—Antique Copper	9.95
414	—Light Dull Brass	9.95
514	—Sanded Statuary Brass	9.95
814	—Bower-Barff	8.65

Packed—Half Dozen in a Box, with Screws.



Nos. 115 to 815.

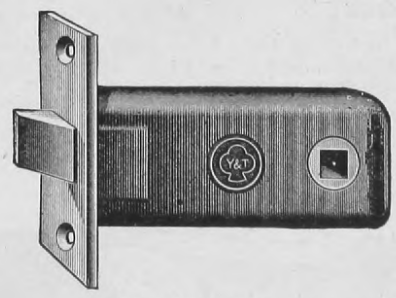
Reversible.

CASE—Japanned Iron, 2½ x 3½ x 1 1/16 inches.
FRONT—4¾ x 1⅛ inches.
BACKSET—2¾ inches.
HUB for 5/16 inch Spindle.
EASY SPRING Latch Bolt.

Bronze Metal Fronts, Bolts, and Strikes.

Nos	Finishes	Per Dozen
115	—Plain Bronze Metal	$23.75
215	—Antique Copper	25.05
415	—Light Dull Brass	25.05
515	—Sanded Statuary Brass	25.05
815	—Bower-Barff	23.75

Packed—Half Dozen in a Box, with Screws.



Nos. 410 and 412.

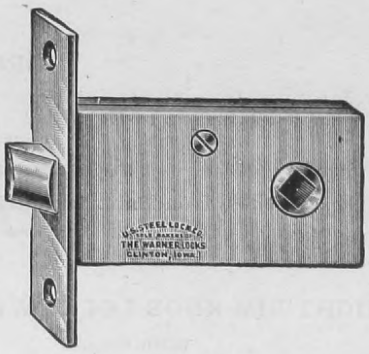
Reversible.

CASE—Japanned Iron, 1¼ x 3⅛ x ½ inches.
FRONT—2¾ x ¾ inch.
BACKSET—2½ inches.
HUB for 5/16 inch Spindle.

Iron or Brass Fronts and Bolts, Steel Strikes.

Nos.	Finishes	Per Dozen
410	—Iron, Amber Bronzed	$2.00
412	—Brass, Polished and Lacquered	4.30

Packed—Half Dozen in a Box, with Screws.



Nos. 3099 and 3099C.

Reversible.

CASE—Cold Rolled Steel, 1½ x 3 x ½ inches.
FRONT—3⅛ x ⅞ inch.
BACKSET—2½ inches.
HUB for 5/16 inch Spindle.

Wrought Steel Fronts and Strikes, Iron Bolts.

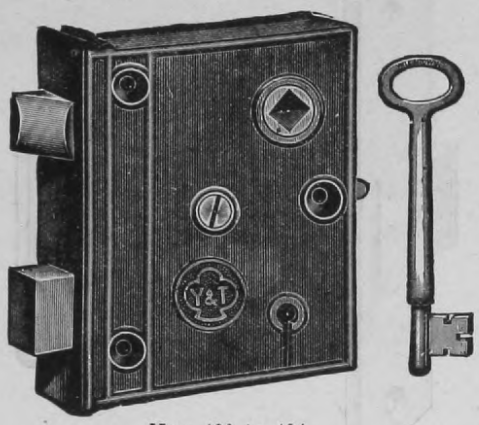
Nos.	Finishes	Per Dozen
3099	—Plain Bronze Plated	$3.00
3099C	—Antique Copper	3.50

Packed— One Dozen in a Box, with Screws.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Half Size Cuts.

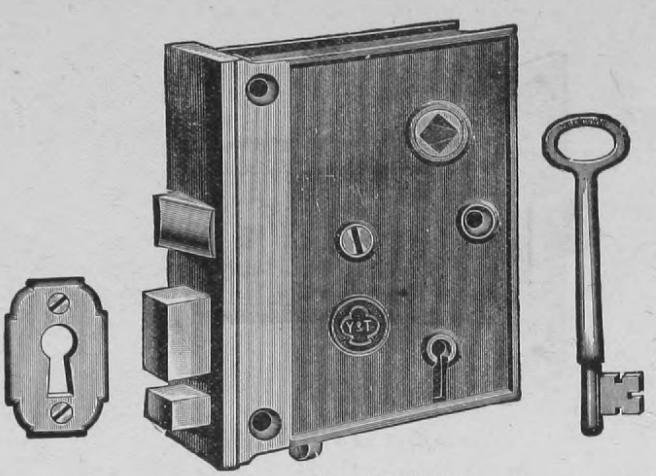
RIM KNOB LOCKS



Nos. 420 to 424.

Upright—Reversible.

CASE—Japanned Iron, 4x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Latch Bolt may be set by Stop.
KEY PLATE—Japanned Iron, 1⅝x1⅛ inches.



Nos. 425 to 428.

Upright—Reversible.

CASE—Japanned Iron, 4¼x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Slide Bolt operated by Thumb Piece from inside.
KEY PLATE—Japanned Iron, 1⅝x1⅛ inches.

"Two Bolts," One Tumbler, Four Changes, with Stop.

No. 420—4x3¼ inches, Iron Bolts and Strike, One Malleable Iron Key.....Per Dozen, $2.90
No. 421—4x3¼ inches, Iron Bolts and Strike, One Nickel Plated Steel Key.....Per Dozen, 3.70
No. 422—4x3¼ inches, Iron Bolts and Strike, **Two** Nickel Plated Steel Keys.....Per Dozen, 4.75
No. 424—4x3¼ inches, **Brass** Bolts, Iron Strike, One Nickel Plated Steel Key.....Per Dozen, 5.60

Packed—Half Dozen in a Box.

"Three Bolts," One Tumbler, Four Changes.

No. 425—4x3¼ inches, Iron Bolts and Strike, One Malleable Iron Key.....Per Dozen, $3.70
No. 426—4x3¼ inches, Iron Bolts and Strike, One Nickel Plated Steel Key.....Per Dozen, 4.55
No. 427—4x3¼ inches, Iron Bolts and Strike, **Two** Nickel Plated Steel Keys.....Per Dozen, 5.80
No. 428—4x3¼ inches, **Brass** Bolts, Iron Strike, One Nickel Plated Steel Key.....Per Dozen, 6.85

Packed—Half Dozen in a Box.

HORIZONTAL RIM KNOB LOCKS

CASE—Heavy Japanned Iron, 3¼x4x¾ inches.
BACKSET—To Knob 3¼ inches, to Keyhole 2 inches.
HUB for 5/16 inch Spindles. Latch Bolt may be set by Stop.
KEY PLATE—Japanned Iron, 1⅝x1 inches. Iron Tumbler.

Two Bolts, One Tumbler, Four Changes, with Stop.

No. 420½—3¼x4 inches, Iron Bolts and Strike, One Tinned Malleable Iron Key.....Per Dozen, $3.00

Packed—Half Dozen in a Box, with Screws.

UPRIGHT RIM KNOB LOCKS WITH KNOBS

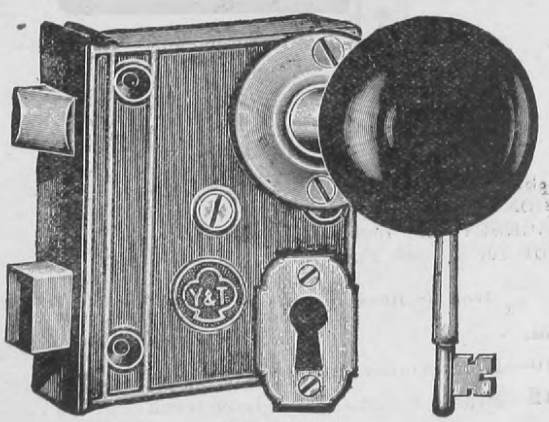
With Stop.

CASE—Japanned Iron, 4x3¼x¾ inches.
BACKSET—2½ inches.
SPACING—2¼ inches. Iron Tumblers.
HUB for 5/16 inch Spindle. Latch Bolt may be set by Stop.
KEY PLATE—Japanned Iron Key Plate, 1⅝x1⅛ inches.

Two Iron Bolts, One Tumbler, Four Changes.

No. 420x203—4x3¼ inches. With **Jet** Knobs. One Tinned Malleable Iron Key.....Per Dozen Sets, $4.95

Packed—Each Set in a Separate Box, with Screws.

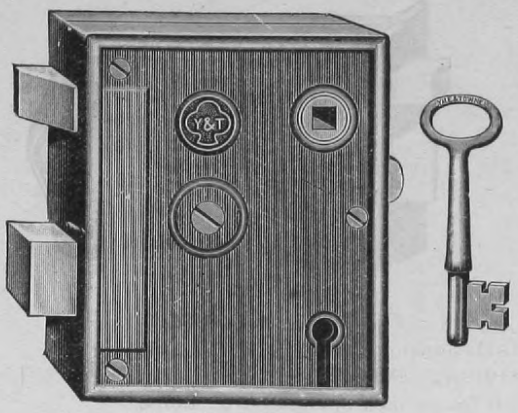


No. 420x203.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

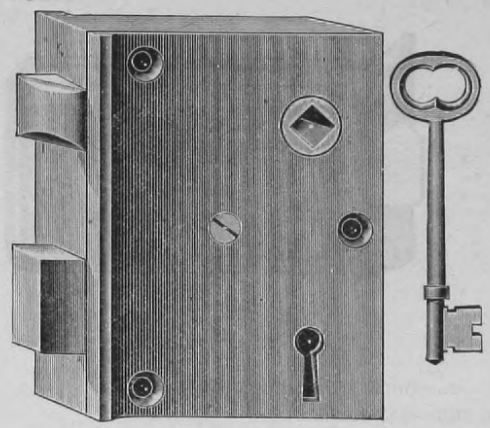
RIM KNOB LOCKS



Nos. 995 and 996.

Upright—Reversible

CASE—Black Enameled Steel, 3¾x3⅛x⅝ inches.
BACKSET—2½ inches.
SPACING—2¼ inches.
HUB for 5/16 inch Spindle, Japanned Iron Key Plates.



No. 4061.

"Bronze Metal," Upright, Reversible.

CASE—All Bronze, 4x3x⅝ inches.
BACKSET—2¼ inches.
HUB for 5/16 inch Spindle
EASY SPRING Latch Bolt. Bronze Metal Strike and Key Plate.
REVERSE—By removing Cap.

One Tumbler, Three Changes, with Stop.

No. 995—3¾x3⅛ inches, Iron Bolts and Strike, One Tinned Malleable Key .....Per Dozen, $3.70

One Tumbler, Six Changes, with Stop.

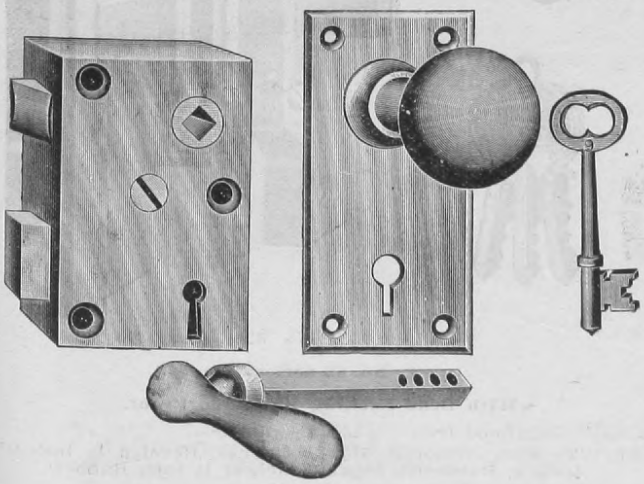
No. 996—3¾x3⅛ inches, Iron Bolt, Iron Strike, One Nickel Plated Key .....Per Dozen, $4.55

Ship and House Locks, "Bronze Metal," One Tumbler, Eighteen Changes.

No. 4061—4x3 inches. All Bronze Highly Polished, One Bronze Metal Key .....Per Dozen, $35.80

Packed—Half Dozen in a Box, with Screws.

SHIP LOCKS



No. 4070.

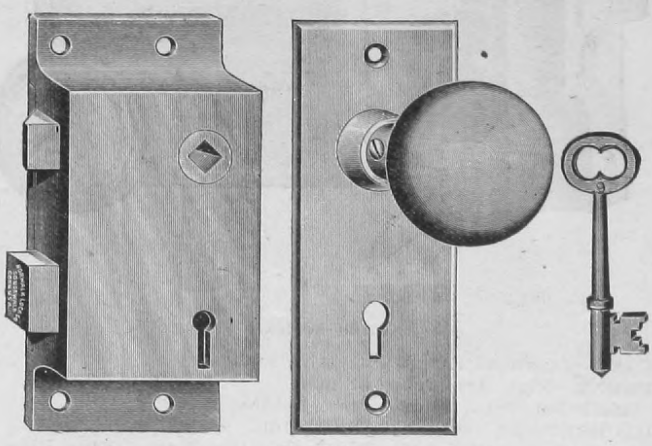
Bronze Metal, Upright, Reversible.

CASE—All Bronze 3x2x9/16 inches.
BACKSET—1 7/16 inches.
HUB for 5/16 inch Spindle. Reverse by removing Cap.
TRIM—1⅞ inch Lever Handle on one side and 1¾ inch Knob on opposite side. One Escutcheon, 3½x1¾ inches.
ONE Bronze Metal Key.
THREE Tumblers, 24 Changes.

For use on Ships, Yachts, Etc.

No. 4070—All Bronze Metal, Highly Polished.... .....Per Dozen, $61.60

Packed—One Set in a Box, with Screws.



No. 4071.

Bronze Metal, Upright, "Not" Reversible.

CASE—All Bronze, 4¼x2x9/16 inches.
BACKSET—1 7/16 inches.
HUB for 5/16 inch Spindle, **Not** Reversible.
TRIM—One Pair 1¾ inch Knobs and One Escutcheon, 4¼x1¾ inches.
ONE Bronze Metal Key.
THREE Tumblers, 24 Changes.

On Thin Doors and Light Work.

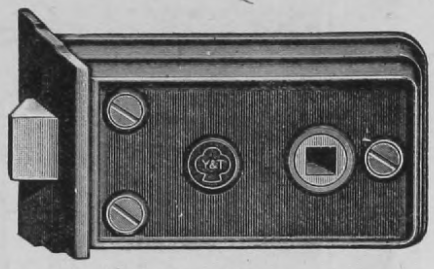
No. 4071—All Bronze Metal, Highly Polished.... .....Per Dozen, $68.40

Packed—One Set in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

RIM KNOB LATCHES



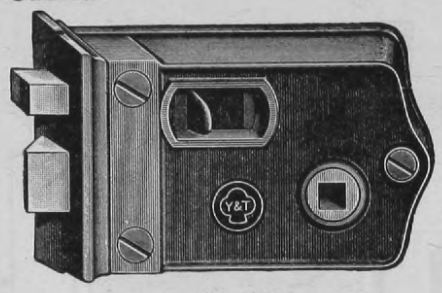
No 432.

Reversible.

CASE—Japanned Iron, 2⅜x3¾x¾ inches.
BACKSET—2⅝ inches.
HUB—For 5/16 inch Spindle. Iron Bolts.
OPERATED—By Knob from both sides.

No. 432—Rim Knob Latches.....Per Dozen, $2.75

Packed—Half Dozen in a Box, with Screws.



No. 433.

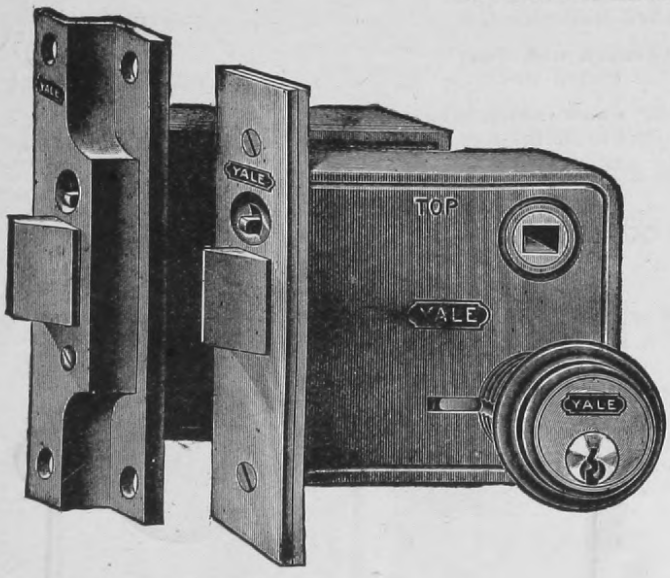
Reversible.

CASE—Japanned Iron, 2½x3⅝x⅝ inches.
BACKSET—2⅝ inches.
HUB for 5/16 inch Spindle. Iron Bolts.
OPERATED—Latch Bolt by Knob from both sides, Slide Bolt, by Thumb Slide from inside.

No. 433—Rim Knob Latches.....Per Dozen, $3.30

Packed—Half Dozen in a Box, with Screws.

MORTISE NIGHT LATCHES



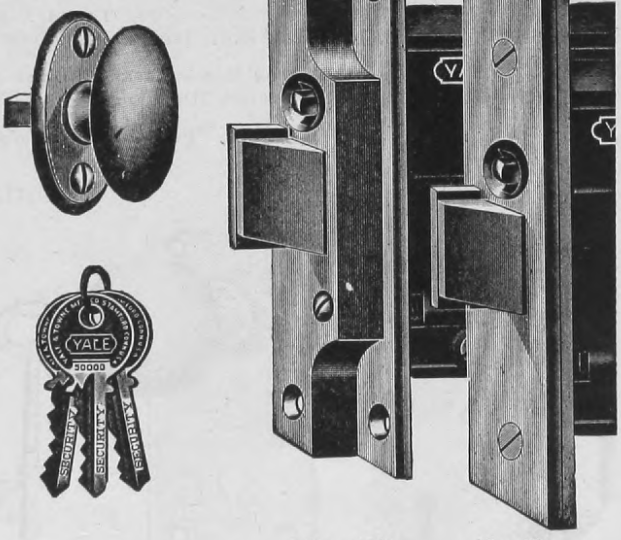
No. 66½. No. 66.

No. 66 Series.

CASE—Japanned Iron, 3¼x3½x1 3/16 inches.
FRONT—Flat, Armored, 5x1 inch.
Rabbeted, 5x1⅛ inch, ½ inch Rabbet.
BACKSET—2¾ inches. 5/16 inch Hub.
KEYS—Three Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes Unlimited. **One** Cylinder.
REVERSIBLE—Flat Front for Door of Either Hand.
Rabbeted—**Not** Reversible. **Specify** Hand.
STRIKE—Center of opening to end of lip—Flat, 1⅛ inch.
Rabbeted, 1 inch.
OPERATED—By Key from outside and by Knob from inside.
EASY SPRING Latch Bolt—Bolt may be set by Stop.
KNOB—1¾x1 5/16 inch, 5/16 inch Spindle, Rose, 2x1⅛ inches.
FOR DOORS 1¼ to 2⅛ inches thick—**Can be** Master-Keyed.
Bronze Metal Front, Bolt, Strike, Cylinder, Knob and Escutcheon.

No. 66 —Flat Front.....Per Dozen, $ 74.10
No. 66½—Rabbeted Front.....Per Dozen, 104.90

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 62½. No. 62.

No. 62 Series.

With Dead Locking Device on Front.

CASE—Japanned Iron, 3½x3⅝x1 3/16 inches.
FRONT—Flat, Armored, 5½x1⅛ inches, Beveled ⅛ inch in 2¼ inches; Rabbeted, 5½x1⅛ inches; ½ inch Rabbet.
BACKSET—2¾ inches. 5/16 inch Hub.
KEYS—Three Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes Unlimited. **One** Cylinder.
NOT REVERSIBLE—Specify Hand.
STRIKE—Center of opening to end of lip—Flat, 1⅛ inch. Rabbeted, 1 inch. Nickel-Bronze.
OPERATED—By Key from outside and by Knob from inside. When Door is Closed the slide automatically deadlocks the bolt and makes it proof against end pressure.
EASY SPRING Latch Bolt—Bolt may be set by Stop.
KNOB—1¾x1 5/16 inch, 5/16 inch Spindle, Rose, 2x1⅛ inches.
FOR DOORS 1¼ to 2⅛ inches thick—**Can be** Master-Keyed.
Bronze Metal Front, Bolt, Strike, Cylinder, Knob and Escutcheon.

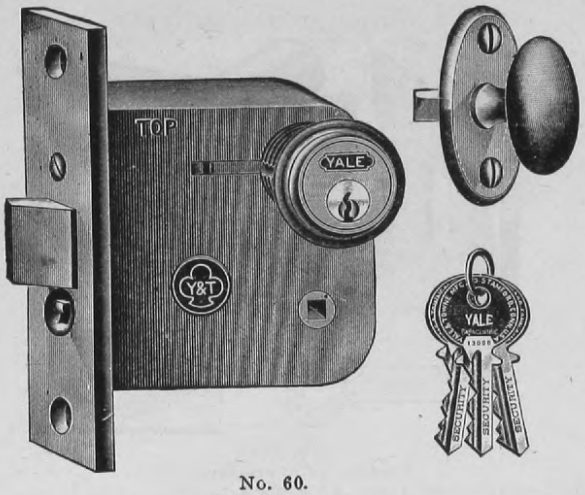
No. 62 —Flat Front.....Per Dozen, $ 83.35
No. 62½—Rabbeted Front.....Per Dozen, 114.15

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

MORTISE NIGHT LATCHES

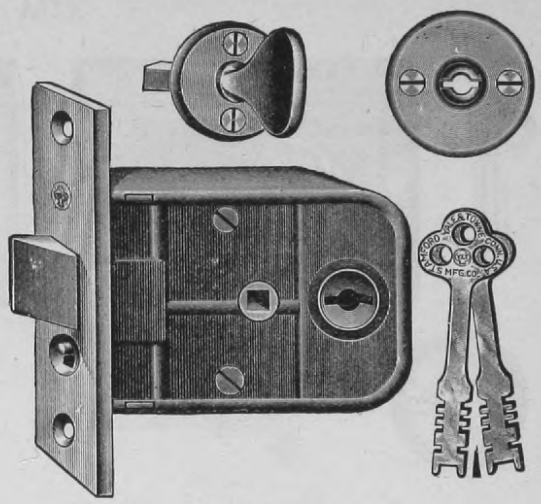
Half Size Cuts.



No. 60.
Reversible.

CASE—Japanned Iron, 2⅞x3⅛x1 1/16 inches.
FRONT—4½x⅞ inches.
BACKSET—2½ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. Four Pin-Tumblers, 1500 Changes. For Doors 1⅛ to 1¾ inches thick.
OPERATED—By Key from outside and by Knob from inside.
EASY SPRING Latch Bolt may be set by Stop.
KNOB—1½x¾ inch; 5/16 inch Spindle; Rose, 2x1⅛ inches. **Can be** Master-Keyed.

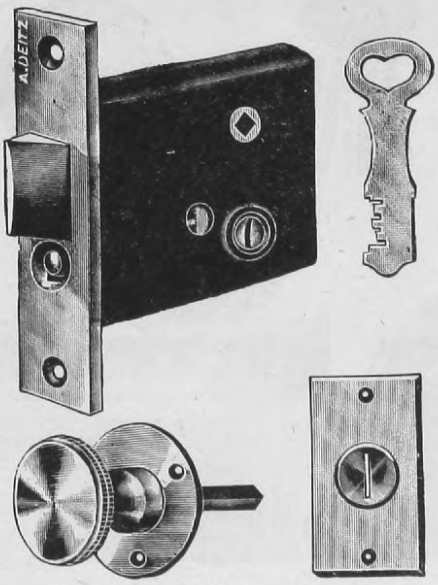
No. 60—Bronze Metal Front, Bolt, Strike, Cylinder, Knob, and Escutcheon.....Per Dozen, $71.75
Packed—One-Twelfth Dozen in a Box, with Screws.



No. 59.
Reversible.

CASE—Brass Plated Steel, 2¼x3⅜x⅝ inches.
FRONT—Flat Wrought Front, 4x⅞ inches.
BACKSET—2¾ inches.
KEYS—**Two** Nickel Plated Flat Steel Keys, Warded, 12 Changes. For Doors 1¼ to 2¼ inches thick.
OPERATED—By Key from outside, and by Thumb-Turn from inside. Latch Bolt may be set by Stop. Thumb Piece, 1 inch; 3/16 inch Spindle; Rose, 1¼ inches. Round Key Plate, 1½ inches.

No. 59—Bronze Metal Front, Bolt, Strike, Key Plate, Thumb Piece, and Escutcheon...Per Dozen, $21.90
Packed—One-Twelfth Dozen in a Box, with Screws.

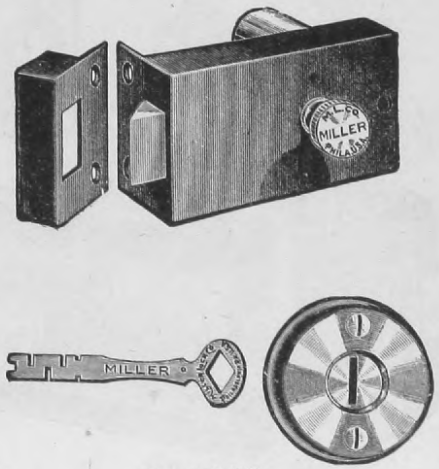


No. 302.
Reversible.

CASE—Japanned Iron, 2½x3x⅝ inches.
FRONT—4x⅞ inches.
BACKSET—2¼ inches.
KEYS—**Three** Flat Steel Keys. For Doors 1⅜ to 3¼ inches thick.
OPERATED—By Key from outside, and by Knob from inside; Latch Bolt may be set by Stop.
KNOB—1¼ inches; Rose, 1½ inches. Key Plate, 2¼x1¼ inches.

No. 302—Bronze Metal Front, Bolt, Strike, Key Plate, Knob and Rose.....Per Dozen, $36.00
Packed—One-Twelfth Dozen in a Box, with Screws.

RIM NIGHT LATCHES



No. 378-I.B.
Reversible.

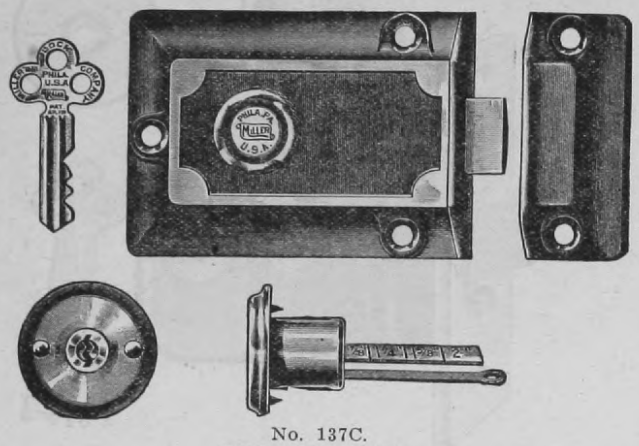
CASE—Black Enameled Steel, 1⅞x3x¾ inches.
BACKSET—2 1/16 inches. CYLINDER—¾ inch Diameter.
KEYS—**Two** Nickel Plated Steel Keys, 36 Changes. For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside; Latch Bolt may be Set by turn of Knob. With **Regular** and **Reverse** Bevel Strike. Round Key Plate, 1½ inches.

No. 378-I.B.—Bronze Metal Knob and Key Plate, Brass Plated Iron Bolt.....Per Dozen, $10.53
Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

RIM NIGHT LATCHES



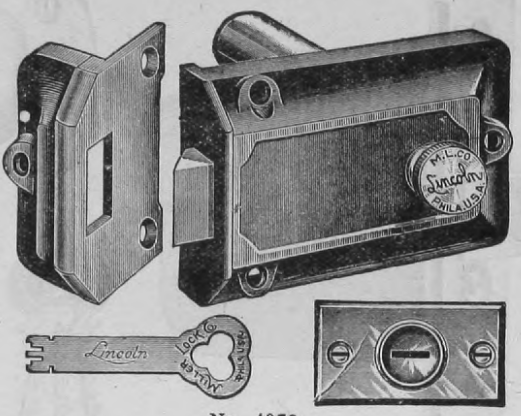
No. 137C.

Miller—Reversible.

CASE—Iron, Extra Heavy with Polished Coppered edges and sides; 2½x3½x¾ inches.
BACKSET—1⅞ inches.
KEYS—Two Nickel Plated Corrugated Steel Keys, 24 Changes.
REVERSIBLE—For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside and by Knob from inside.
LATCH BOLT—May be set by turn of Knob. With 12 **Regular** and 3 **Reverse Bevel** Strikes in each dozen.
KEY PLATE—1½ inches in diameter.

No. 137C—Bronze Metal Knob and Escutcheon, Bronze Plated Iron Bolt.....Per Dozen, $16.62

Packed—One-Twelfth Dozen in a Box, with Screws.



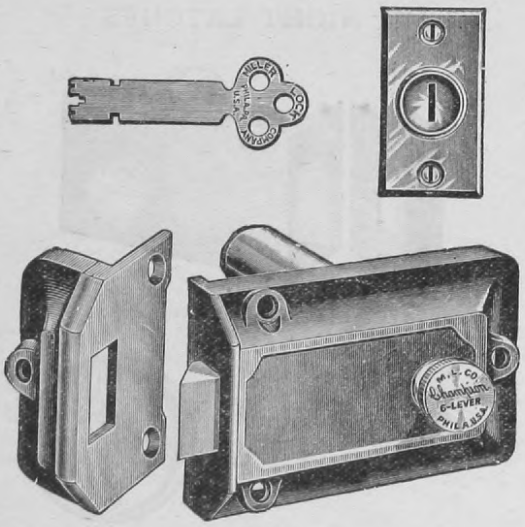
No. 4978.

Lincoln—Reversible.

CASE—Japanned Iron, 2⅜x3⅝x¾ inches.
BACKSET—1¾ inches.
KEYS—Three N. P. Flat Steel Keys, Five Levers, 48 Changes.
REVERSIBLE—For Doors ⅞ to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside.
LATCH BOLT—May be set by short turn of Knob. With 12 **Regular** and 2 **Reverse Bevel** Strikes, in each dozen.
KEY PLATE—2x1⅛ inches.

No. 4978—Bronze Metal Bolt, Knob and Escutcheon .....Per Dozen, $19.95

Packed—One-Twelfth Dozen in a Box.



Nos. 32 and 72.

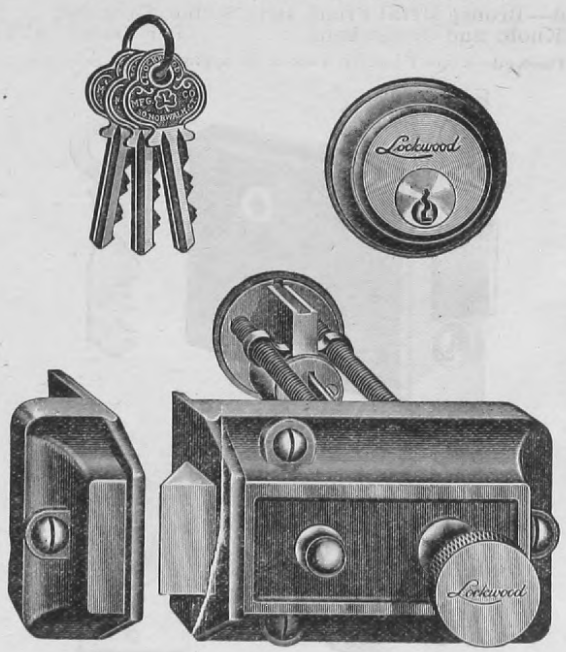
Champion—Reversible.

CASE—2⅜x3⅝x¾ inches.
BACKSET—1$^{15}/_{16}$ inches.
KEYS—Three N. P. Reversible Flat Steel Keys, Seven Levers, 300 Changes.
REVERSIBLE—For Doors 1 to 2 inches thick.
OPERATED—By Key from outside, and by Knob from inside.
LATCH BOLT—May be set by short turn of Knob. With **Regular** and **Reverse** Bevel Strike.
KEY PLATE—2x1⅛ inches.

Bronze Metal Bolts, Knobs and Escutcheons.

No. 32—Japanned Iron Case.....Per Dozen, $26.60
No. 72—Bronze Metal Case.....Per Doezn, 39.91

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 5910.

Lockwood—Reversible.

CASE—Japanned Iron, 2¾x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—Three Nickel-Silver Keys. Five Pin Tumblers, Changes unlimited.
REVERSIBLE—For Doors 1¼ to 3 inches thick.
OPERATED—By Key from outside and by turn of Knob from inside.
LATCH BOLT—May be set by Stop.

Bronze Metal Bolt, Knob and Cylinder.

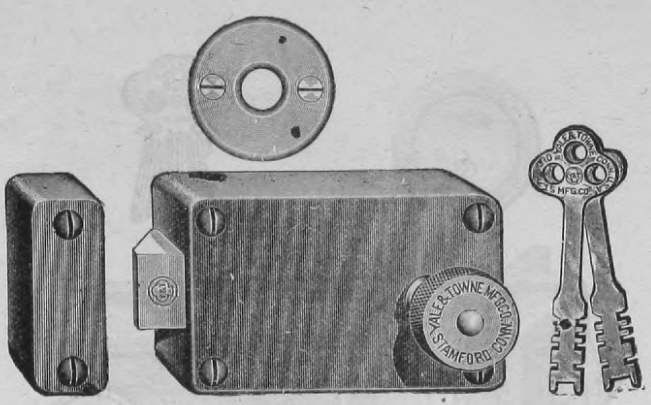
No. 5910—Japanned Case, with **both** Regular and Reverse Bevel Strikes.....Per Dozen, $25.00

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



No. 26.

Reversible.

CASE—Japanned Iron, 2x3¼x¾ inches.

BACKSET—2½ inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 6 Changes.

REVERSIBLE—For Doors ⅞ to 1¾ inches thick.

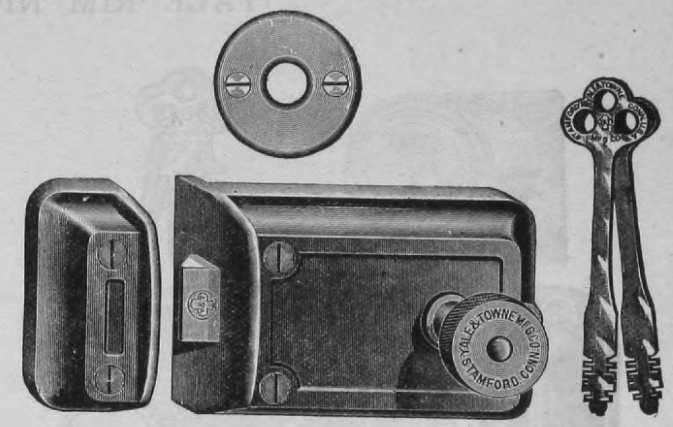
OPERATED—By Key from outside, and by Knob from inside.

LATCH BOLT—May be held back by an extra turn of Knob.

ROUND Key Plate—1½ inches.

No. 26—Nickel Plated Steel Knob and Key Plate, Bronze Plated Iron Bolt.....Per Dozen, $6.45

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 29X.

Reversible.

CASE—Japanned Iron, 2¼x3¼x⅞ inches.

BACKSET—2 inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 12 Changes.

REVERSIBLE—For Doors ⅞ to 2 inches thick.

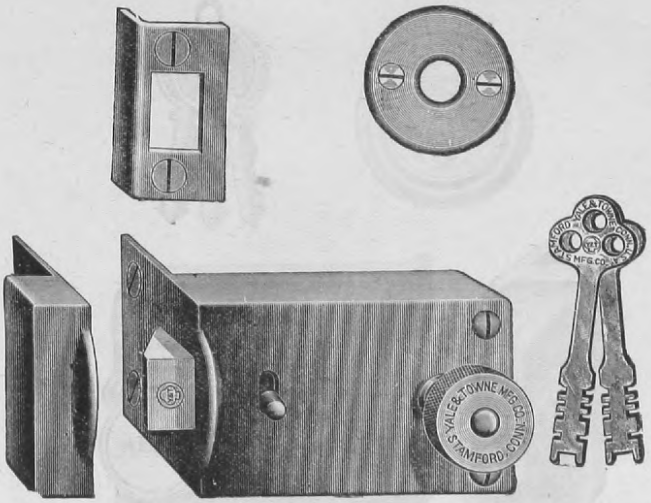
OPERATED—By Key from outside and by Knob from inside.

LATCH BOLT—May be held back by an extra turn of knob.

ROUND Key Plate—1½ inches.

No. 29X—Bronze Plated Steel Turn-Knob, Key Plate and Bolt, Brass Tube.....Per Dozen, $9.35

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 28.

Reversible.

CASE—Japanned Steel, 2x3¼x⅝ inches.

BACKSET—2½ inches.

KEYS—Two Nickel Plated Flat Steel Keys, Warded, 12 Changes.

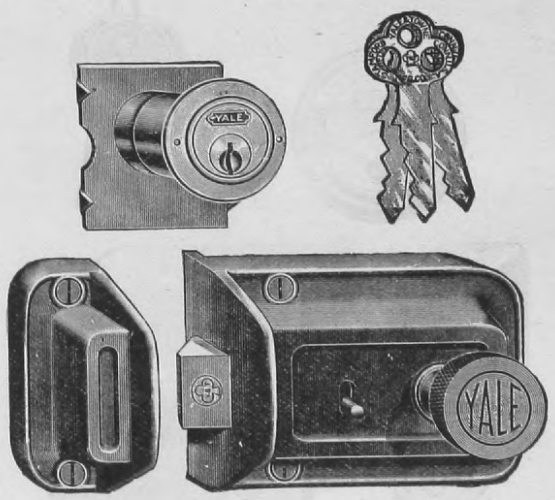
REVERSIBLE—For Doors ⅞ to 1¾ inches thick.

OPERATED—By Key from outside and by Knob from inside. Latch Bolt may be held back by Stop.

LATCH BOLT—Bronze Metal; Knob, Bronze Plated.

No. 28—Japanned Steel Case with **both** Regular and Reverse Bevel Strikes.....Per Dozen, $11.00

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 33.

Reversible.

CASE—Japanned Iron, 2¼x3x⅞ inches.

BACKSET—2 inches.

KEYS—**Three** Nickel Plated Flat Steel Keys. Tubular Cylinder, **Four** Pin-Tumblers, 1500 Changes. For Doors ⅞ to 1½ inches thick.

OPERATED—By Key from outside and by Knob from inside. Latch Bolt may be held back by Stop.

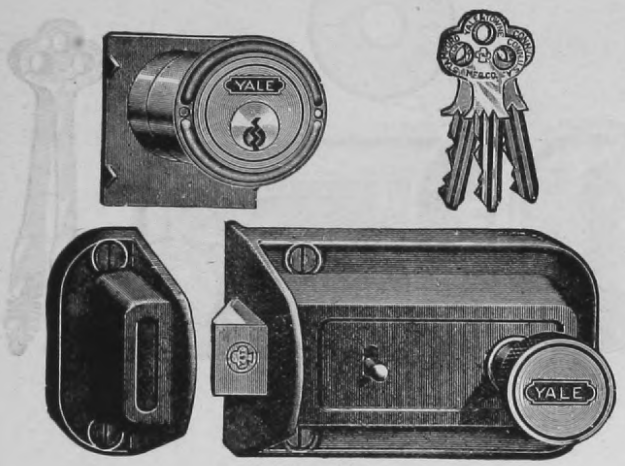
No. 33—Bronze Metal Cylinder Turn Knob and Stop, Bronze Plated Iron Bolt...Per Dozen, $19.00

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



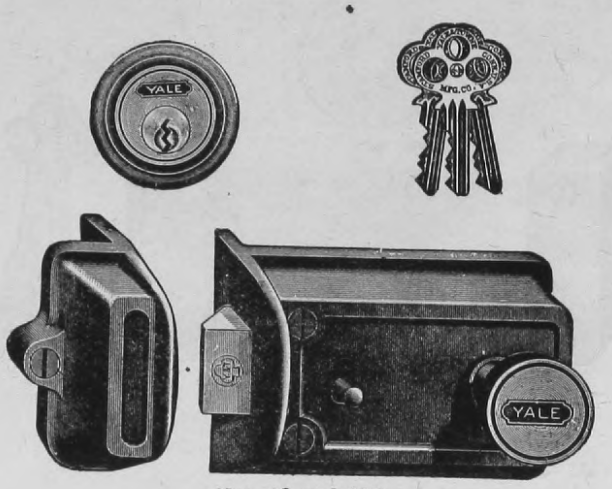
No. 34.

Reversible.

CASE—Japanned Iron, 2¼x3½x⅞ inches.
BACKSET—2⅜ inches.
KEYS—**Three** corrugated Nickel-Bronze Keys, Tubular Cylinder, **Four** Pin-Tumblers, 1500 Changes. For Doors up to 1½ inches thick.
OPERATED by Key from outside and by Thumb Knob from inside. Latch Bolt may be held back by Stop.

No. 34—Bronze Metal Cylinder Tube, Turn Knob and Stop, Bronze Plated Iron Bolt.....Per Dozen, $22.90

Packed—One-Twelfth Dozen in a Box, with Screws.



Nos. 37 and 37R.

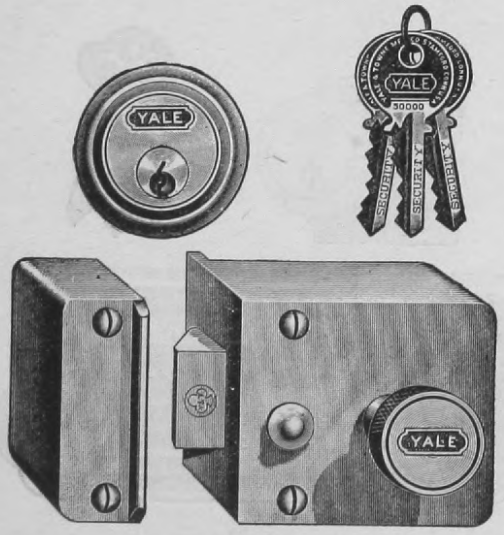
Reversible.

CASE—Japanned Iron, 2x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Corrugated Keys. **Four** Pin-Tumblers, 1500 Changes. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 37 —With Regular Bevel Strike..Per Dozen, $25.05
No. 37R—With Reverse Bevel Strike..Per Dozen, 25.05

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 05042½.

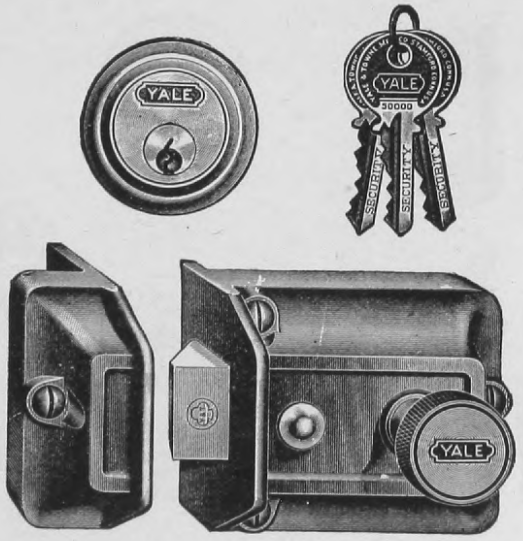
Reversible.

CASE—Buffed Bronze Metal, 2⅜x2⅝x⅞ inches.
BACKSET—1⅝ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick, other thicknesses to order.
OPERATED by Key from outside, and by Knob from inside. Latch Bolt may be held by Stop. **Can be** Master-Keyed.

Bronze Metal Outside and Inside Parts.

No. 05042½—Bronze Metal Case, Strike, Bolt, Knobs and Cylinder.....Per Dozen, $78.00

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 042½R.

Reversible.

CASE—Japanned Iron, 2⅜x2¾x1 inches.
BACKSET—1⅝ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers. Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside and by Knob from inside. Latch Bolt may be held by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knobs and Cylinder.

No. 042½R—Japanned Iron Case with **both** Regular and Reverse Bevel Strikes..Per Dozen, $30.90

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES

No. 42.

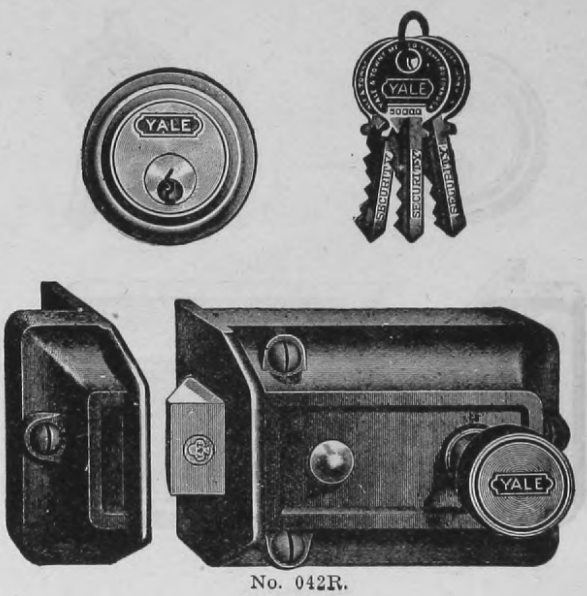
Reversible.

The Best and Most Popular Night Latch in the World.
CASE—Antique **Copper** Plated, 2⅜x3½x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder, Buffed.

No. 42—Antique Copper Finish Iron Case, with Regular Bevel Strike.....Per Dozen, $33.20

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 042R.

Reversible.

CASE—Japanned Iron, 2½x3⅝x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Knob from inside. Latch Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

No. 042R—With both Regular and Reverse Bevel Strikes .....Per Dozen, $30.90

Packed—One-Twelfth Dozen in a Box, with Screws.

No. 41V.

Reversible.

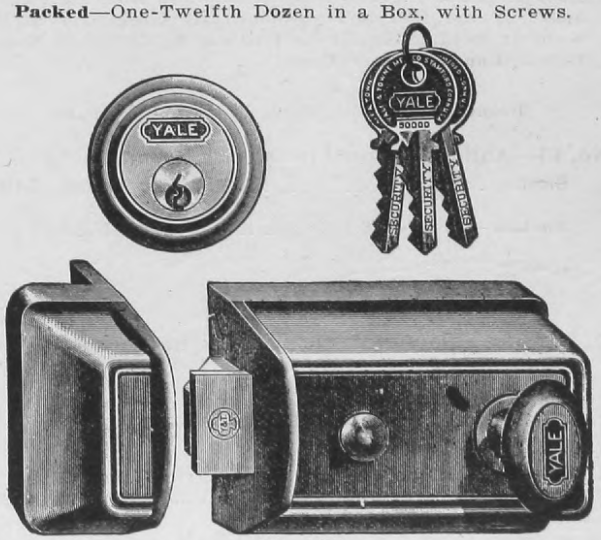
Yale Ornamental Night Latch.

CASE—Iron, Dull Brass Finish, 2⅛x3 7/16x1 inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside and by Turn-Knob from inside. Bolt may be held back by Stop. **Can be** Master-Keyed.

Bronze Metal Bolt, Turn Knob and Cylinder.

No. 41V—With Regular Bevel Strike..Per Dozen, $35.75

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 44V.

Reversible.

Yale "Automatic Deadlocking" Night Latch.

CASE—Iron, Dull Brass Finish, 2⅜x3½x1¼ inches.
BACKSET—2⅜ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.
OPERATED by Key from outside, and by Turn Knob from inside. Bolt may be held back by Stop. When Door is closed the protector on back of Bolt is held retracted and operates to positively deadlock the bolt against end pressure. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

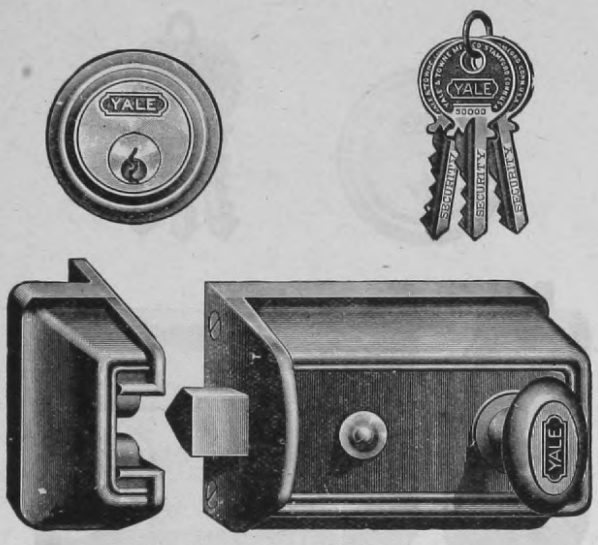
No. 44V —With Regular Bevel Strike. Dozen, $40.40
No. 44VRB—With Reverse Bevel Strike Dozen, 40.40

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE RIM NIGHT LATCHES



No. 45.

Reversible.

Yale "Deadlocking" Night Latch

CASE—Iron, Antique Copper Finish, 2⅜x3½x1¼ inches.

BACKSET—2⅜ inches.

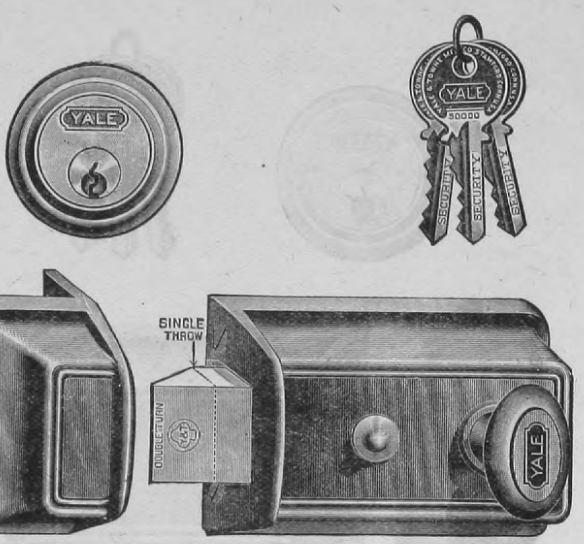
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Knob from inside. Triangular Latch Bolt may be held back by Stop. When Door is closed the two pivoted hooks in Strike are forced apart by the Bolt and automatically close over it, thus securely locking the Door. **Can not be** furnished Reverse Bevel. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

No. 45—Antique Copper Finish, with Regular Bevel Strike.....Per Dozen, $40.40

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 46.

Reversible.

Yale "Double Throw" Deadlocking Night Latch

CASE—Iron, Antique Copper Finish, 2⅜x3½x1 inches.

BACKSET—2⅜ inches.

KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Turn-Knob from inside. Latch Bolt may be held back by Stop. Bolt may be given a Second Throw by Key or Knob which Deadlocks the Bolt, making it proof against end pressure. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 46—With Regular Bevel Strike...Per Dozen, $42.10

Packed—One-Twelfth Dozen in a Box, with Screws.

Yale Automatic Rim Night Lock

Reversible.

CASE—Iron, Antique Copper Finish, 3½x3x1¼ inches.

BACKSET—2⅜ inches.

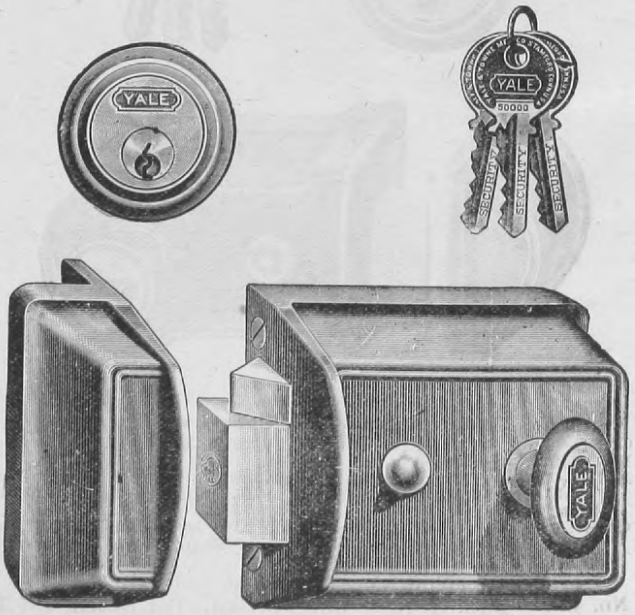
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside, and by Turn Knob from inside. When unlocked by Key or Knob both Dead Bolt and Trigger Bolt are withdrawn and held back in Case; when Stop on Case is pushed down the Trigger Bolt is released and thrown out; when Door is closed the Trigger Bolt automatically releases the Dead Bolt which is also thrown out and Locked. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop and Cylinder.

No. 90—Antique Copper Finish Iron Case, with Regular Bevel Strike.....Per Dozen, $55.55

Packed—One-Twelfth Dozen in a Box, with Screws.

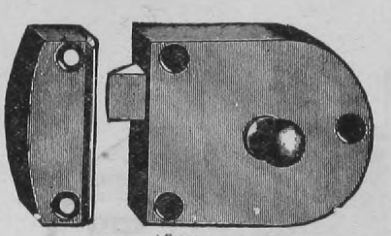


No. 90.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

SECRET OFFICE GATE LATCHES



Nos. 4050 to 4850.

Single Acting. Reversible.

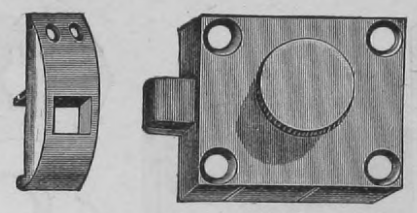
With Both Regular and Reverse Bevel Strike.

CASE—2x2½x¾ inches. Bronze Metal Knob.

OPERATED—By pressure of finger to underside of Latch. The Knob has no effect on the Latch Bolt.

Nos.	Finish	Per Dozen
4050	—Japanned	$12.00
4150	—Plain Bronze Metal	18.00
4250	—Antique Copper	20.00
4450	—Light Dull Brass	20.00
4850	—Bower-Barff	18.00

Packed—Half Dozen in a Box, with Screws.



Nos. 4050½ to 4850½.

Double Acting. Reversible.

For Gates or Doors to Swing both ways.

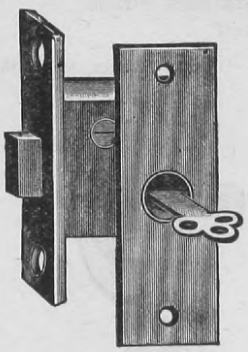
CASE—1⅞x2¼x¾ inches. Bronze Metal Knob.

OPERATED—By pressure of finger to underside of Latch. The Knob has no effect on the Latch Bolt.

Nos.	Finish	Per Dozen
4050½	—Japanned	$12.00
4150½	—Plain Bronze Metal	18.00
4250½	—Antique Copper	20.00
4450½	—Light Dull Brass	20.00
4850½	—Bower-Barff	18.00

Packed—Half Dozen in a Box, with Screws.

MORTISE DEAD LOCKS



Nos. 4141¼ to 4841¼.

Reversible.

CASE—Japanned Iron, 1½x1¾x⁹⁄₁₆ inches.

FRONT—2⅞x1¹⁄₁₆ inch.

BACKSET—1¼ inches.

KEYS—Two Nickel Plated Steel Keys. **Three** Brass Tumblers, 36 Changes.

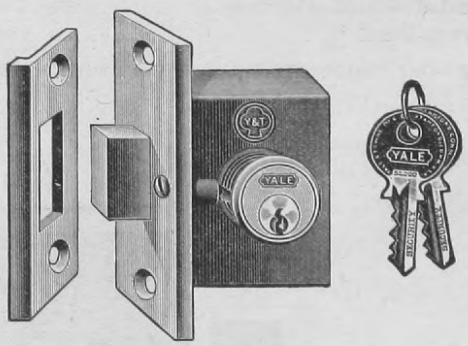
OPERATED—By Key from one side only. One Key Plate, 3¹⁄₁₆x1⅛ inches. **Three** Tumblers, 36 Changes.

BRONZE Metal Front, Bolt, Strike and Escutcheon.

Nos.	Finish	Per Dozen
4141¼	—Plain Bronze Metal	$18.00
4241¼	—Antique Copper	19.00
4441¼	—Light Dull Brass	19.00
4541¼	—Sanded Statuary Brass	19.00
4841¼	—Bower-Barff	19.00

Packed—One Dozen in a Box, with Screws.

YALE CYLINDER DEAD LOCKS



No. 301.

For Limousine and Coupe Car Doors, Etc.

CASE—Iron, Copper Plated, 1⅞x1⅜x⁹⁄₁₆ inches.

BACKSET—¹³⁄₁₆ inch.

BEVELED FRONT—3x⅞ inch. **Not** Reversible, specify hand when ordering. Regular Bevel ¼ to 2¼ inches.

ANGLE STRIKE—3x¾ inches. Diameter of Cylinder ⅞ inch.

OPERATED—By Key from one side only.

KEYS—**Two** Nickel-Bronze Paracentric Keys. Four Pin Tumblers, 1500 Changes, Throw of Bolt ⅜ inch. **Can be** Master-Keyed. **Thickness** of Door must be specified.

No. 301—Cast Bronze Metal Front, Bolt, Cylinder and Strike.....Per Dozen, $50.00

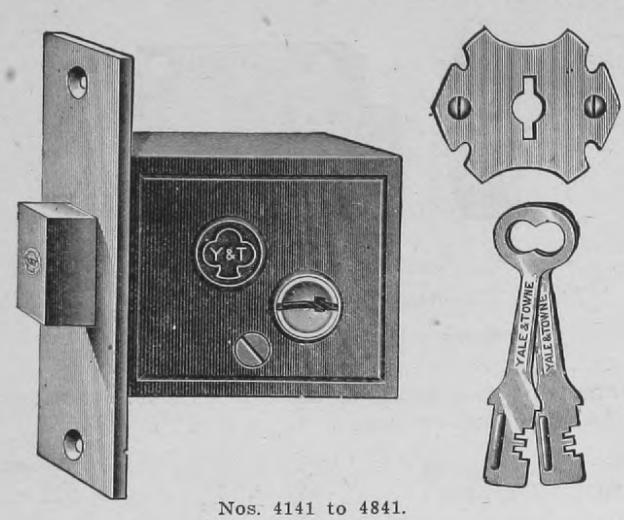
Packed—One-Twelfth Dozen in a Box, with Screws.

Note.—For Yale Motor Car Locks See Pages 1185 to 1187.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

YALE MORTISE DEAD LOCKS



Nos. 4141 to 4841.

Reversible.

CASE—Japanned Iron, 2⅜x3x1 1/16 inches. FRONT, 4½x1⅛ inches. BACKSET, 2⅛ inches. THREE Lever Tumblers. Cold Rolled Steel. TWO Nickel Plated Flat Steel Keys. OPERATED by Key from either side. Two Key Plates, 1⅝x2 inches. THREE Lever Tumblers, 24 changes.

Nos.	Finishes.	Per Dozen.
4141	—Plain Bronze Metal	$35.65
4241	—Antique Copper	36.95
4441	—Light Dull Brass	36.95
4541	—Sanded Statuary Brass	36.95
4841	—Bower-Barff	35.65

Packed—One-Twelfth Dozen in a Box, with Screws.

Nos. 9141½ to 9841½.

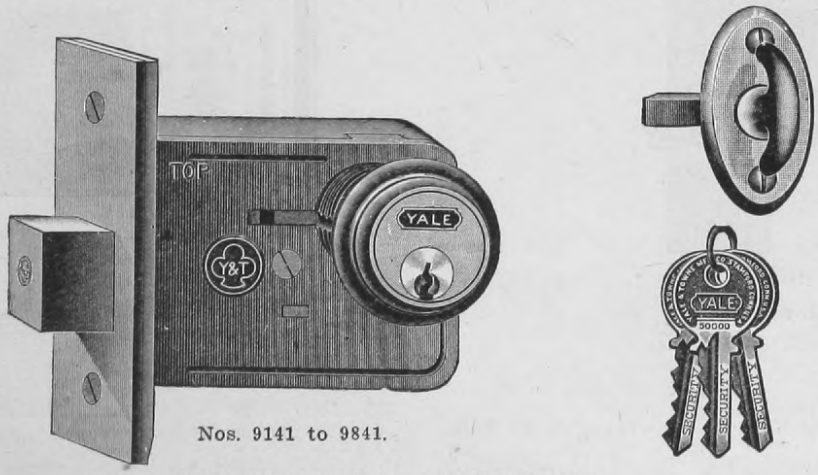
With "Two" Cylinders.

CASE—Japanned Iron, 2½x3⅝x1 3/16 inches. ARMORED FRONT, 4x1 inches. BACKSET, 2¾ inches. THREE Nickel-Bronze Paracentric Keys. FIVE Pin Tumblers, changes unlimited. For doors, 1½ to 1⅞ inches thick, other thicknesses to order. FURNISHED with Two Cylinders and OPERATED by Key from both sides. CAN BE Master-Keyed.

Cast Bronze Metal Front, Bolt, Strike, and Cylinders.

Nos.	Finishes.	Each
9141½	—Plain Bronze Metal	$ 9.85
9241½	—Antique Copper	10.45
9441½	—Light Dull Brass	10.45
9541½	—Sanded Statuary Brass	10.45
9841½	—Bower-Barff	9.85

Packed—One in a Box, with Screws.



Nos. 9141 to 9841.

With "One" Cylinder and Thumb Turn.

CASE—Japanned Iron 2½x3⅝x1 3/16 inches. Thickness of Door must be given. ARMORED FRONT, 4x1 inches. BACKSET, 2¾ inches. THREE Nickel-Bronze Paracentric Keys. Five Pin Tumblers, changes unlimited. For doors 1¼ to 2⅛ inches thick, other thicknesses to order. OPERATED by Key from outside and by Thumb-Turn from inside. ESCUTCHEON, 2x1⅛ inches. No. 15, Thumb-Turn, 1⅜ inches. CAN BE Master-Keyed.

Cast Bronze Metal Front, Bolt, Strike, Thumb Turn, and Cylinder.

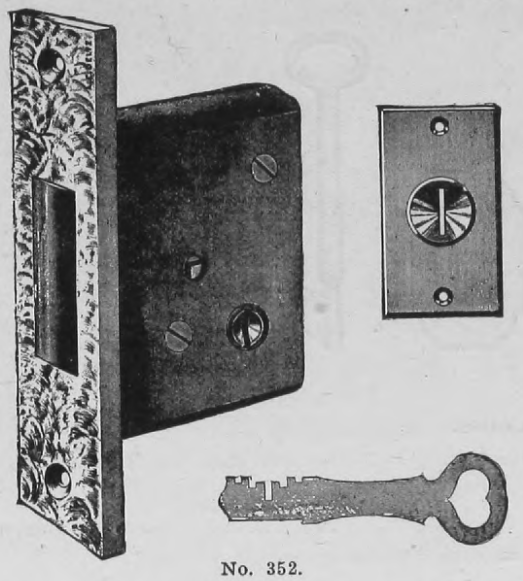
Nos.	Finishes.	Each
9141	—Plain Bronze Metal	$7.50
9241	—Antique Copper	8.15
9441	—Light Dull Brass	8.15
9541	—Sanded Statuary Brass	8.15
9841	—Bower-Barff	7.50

Packed—One in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

MORTISE DEAD LOCKS



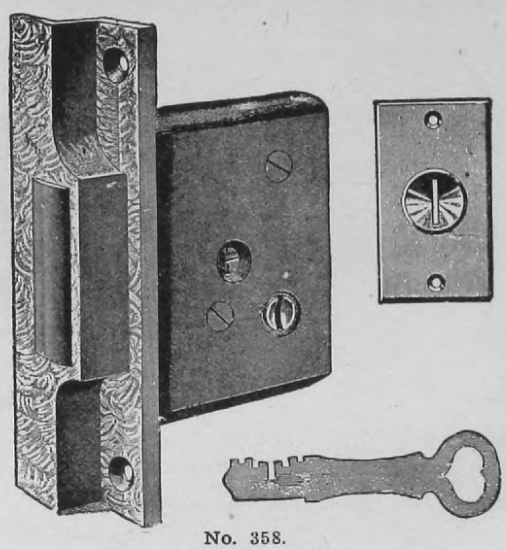
No. 352.

Reversible.

CASE—Japanned Iron, 3⅜x2⅜x1¹³⁄₁₆ inches.
FRONT—5⅜x1⅛ inches.
BACKSET—1⅝ inches.
KEYS—**Three** Flat Steel Keys. **Four** Wrought Steel Tumblers, 200 Changes.
OPERATED by Key from either side. Two Key Plates, 2⅛x1¼ inches.
HEAVY BRONZE METAL Front, Bolt, Strike and Key Plates.

No. 352—Heavy Mortise Dead Locks.....Per Dozen, $36.00

Packed—One-Twelfth Dozen in a Box, with Screws.



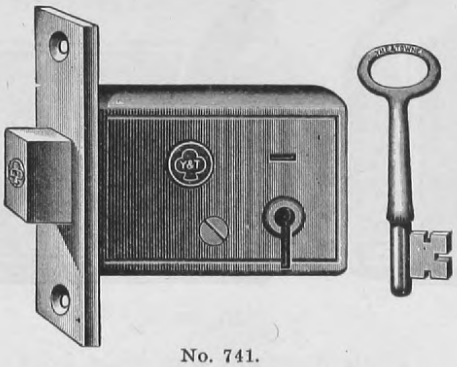
No. 358.

Reversible.

CASE—Japanned Iron, 3⅜x2⅜x1¹³⁄₁₆ inches.
FRONT—5⅜x1⅜ inches. Rabbet, ½ inch.
BACKSET—2⅛ inches, extreme.
KEYS—**Three** Flat Steel Keys. **Four** Wrought Steel Tumblers, 200 Changes.
OPERATED by Key from either side. Two Key Plates, 2⅛x1¼ inches.
HEAVY BRONZE METAL Front, Bolt, Strike and Key Plates.

No. 358—Heavy Mortise Dead Locks.....Per Dozen, $42.00

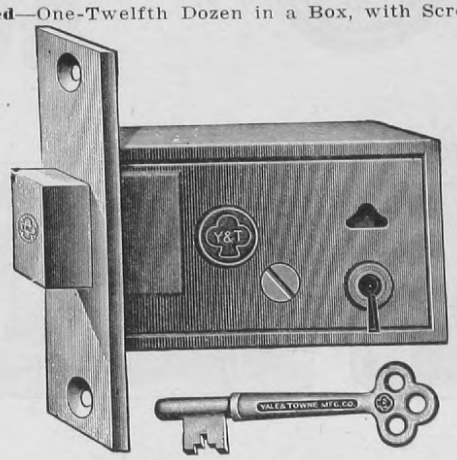
Packed—One-Twelfth Dozen in a Box, with Screws.



No. 741.

Reversible.

CASE—Japanned Iron, 1⅞x2¾x⁹⁄₁₆ inches.
FRONT—3¼x⅝ inches.
BACKSET—2⅛ inches. **Tumblers,** Cold Rolled Steel.
KEY—**One** Nickel Plated Steel Key.
OPERATED by Key from either side. Two Key Plates, 1⅝x1⅛ inches.



Nos. 8141 to 8841.

Reversible.

CASE—Japanned Iron, 2⅛x3½x1¹⁄₁₆ inches.
FRONT—4⅛x1 inches.
BACKSET—2¾ inches.
KEY—**One** Nickel Plated Steel Key. **Three** Tumblers, 54 Changes.
OPERATED by Key from either side. Two Key Plates, 1¾x1⅛ inches.

No. 741—Brass Front, Bolt and Strike, Japanned Key Plates, One Tumbler, 12 Changes.....Per Dozen, **$11.70**

Bronze Metal Front, Bolts, Strikes, and Key Plates.

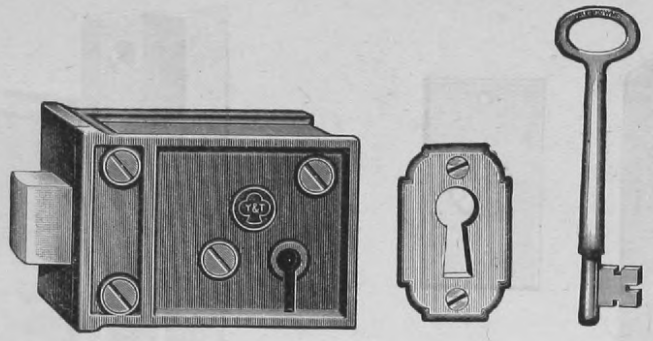
No. 8141—Plain Bronze Metal, Three Tumblers, 54 Changes.....Per Dozen, $18.15
No. 8241—Antique Copper Finish, Three Tumblers, 54 Changes.....Per Dozen, 19.45
No. 8441—Light Dull Brass Finish, Three Tumblers, 54 Changes.....Per Dozen, 19.47
No. 8841—Bower-Barff Finish, Three Tumblers, 54 Changes.....Per Dozen, 18.15

Packed—Half Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

RIM DEAD LOCKS

Half Size Cuts.



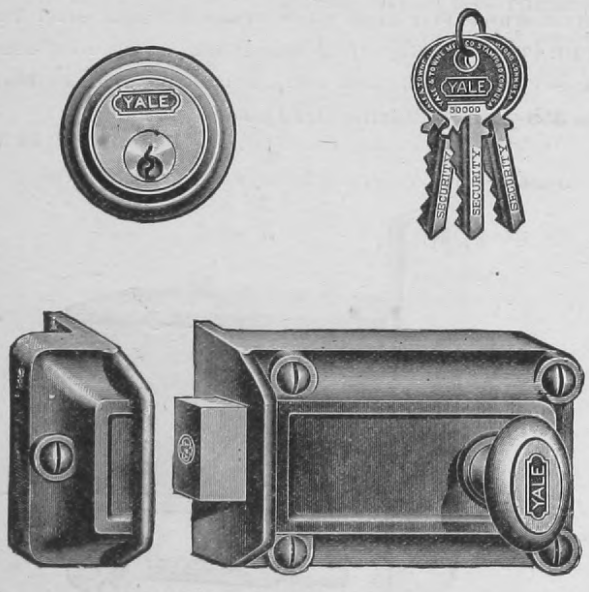
No. 0358.

Horizontal—Reversible.

CASE—Japanned Iron, 2x2¾x⅝ inches. BACKSET—2⅛ inches. **One** Tinned Malleable Iron Key, One Tumbler, 4 Changes, One Key Plate. OPERATED by Key from both sides.

No. 0358—Iron Bolt, One Tumbler, 4 Changes ..... Per Dozen, $2.50

Packed—Half Dozen in a Box, with Screws.



No. 2.

Yale Rim Dead Locks

Horizontal—Reversible.

CASE—Japanned Iron, 2⅜x3⅝x⅞ inches.

BACKSET—2⅜ inches.

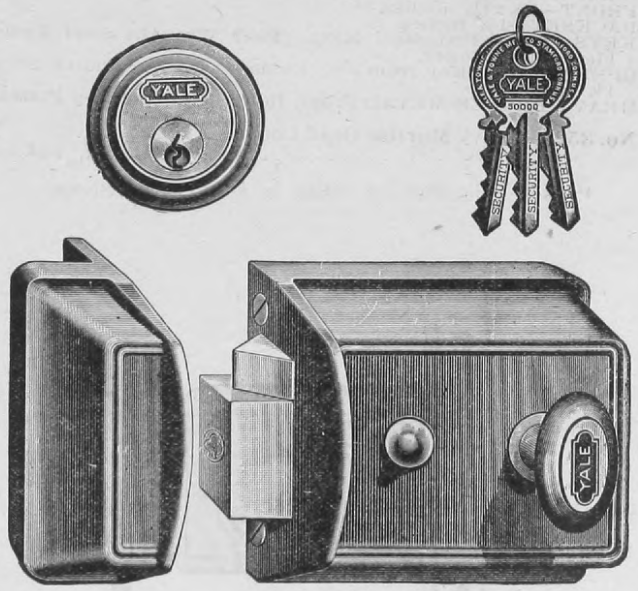
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors 1 to 2½ inches thick, other thicknesses to order.

OPERATED by Key from outside, and by Turn-Knob from inside.

Bronze Metal Bolt, Turn-Knob, and Cylinder.

No. 2—Rim Dead Locks ..... Per Dozen, $40.75

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 90.

Yale Automatic Rim Night Lock

Reversible.

CASE—Iron, Antique Copper Finish, 3½x3x1¼ inches.

BACKSET—2⅜ inches.

KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 2½ inches thick.

OPERATED by Key from outside only, and by Turn-Knob from inside. When unlocked by Key or Knob both Dead Bolt and Trigger Bolt are withdrawn and held back in Case; when Stop on Case is pushed down the Trigger Bolt is released and thrown out; when Door is closed the Trigger Bolt automatically releases the Dead Bolt which is also thrown out and locked. **Can be** Master-Keyed.

Bronze Metal Bolt, Knob, Stop, and Cylinder.

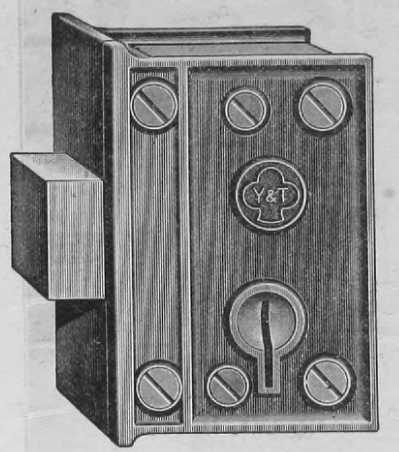
No. 90—Antique Copper Finish Iron Case, with Regular Bevel Strike ..... Per Dozen, $55.55

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

STORE DOOR RIM DEAD LOCKS



No. 388.

Upright—Reversible.

CASE—Japanned Iron, 4x2⅝x⅞ inches.
BACKSET—1⅝ inches. Rim Strike.
KEYS—**Two** Nickel Plated Steel Folding Keys. **One** Tumbler, 12 Changes. For Doors of ordinary thickness.
OPERATED by Key from both sides. Key Plate, 3x1¾ inches.

Iron Bolt, Japanned Iron Strike, and Key Plate.

No. 388—Rim Dead Locks.....Per Dozen, $11.55

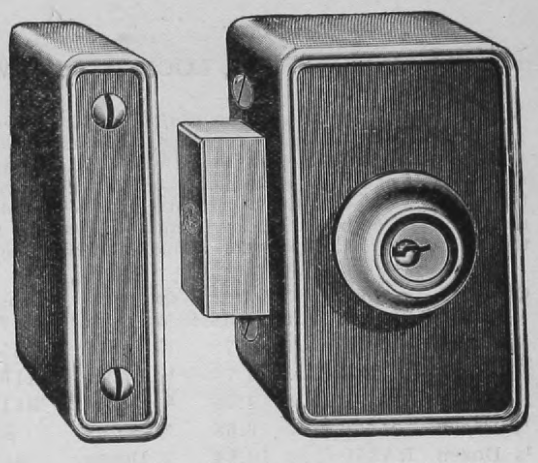
Upright—Reversible.

CASE—Japanned Iron, 5x3⅛x1 inches.
BACKSET—2 inches. Rim Strike.
KEYS—**Two** Nickel Plated Steel Folding Keys. **One** Tumbler, 12 Changes. For all Doors of ordinary thickness.
OPERATED by Key from both sides. Key Plate, 3x1¾ inches.

Iron Bolt, Japanned Iron Strike, and Key Plate.

No. 391—Rim Dead Locks.....Per Dozen, $12.55

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 3.

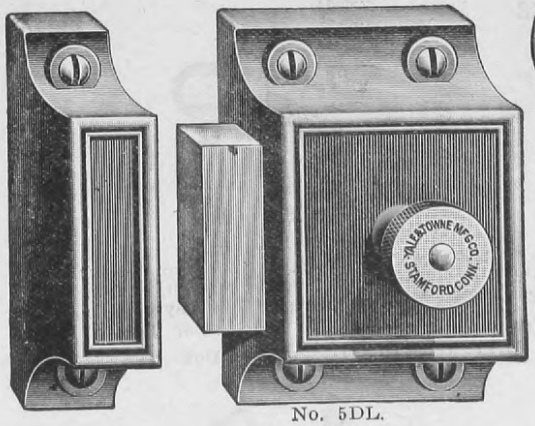
Heavy—Upright—Reversible.

CASE—Iron, **Antique Copper** Finish, 4x2½x1 inches.
BACKSET—1¼ inches.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. For Doors ⅞ to 3 inches thick.
OPERATED by Key from both sides. **Can be** Master-Keyed.

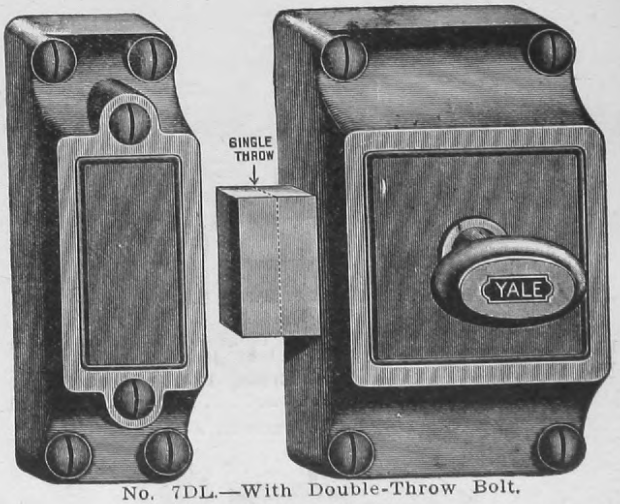
Bronze Metal Cylinder and Bolt.

No. 3—Rim Dead Locks.....Per Dozen, $70.20

Packed—One-Twelfth Dozen in a Box, with Screws.



No. 5DL.



No. 7DL.—With Double-Throw Bolt.

"Heavy" Cylinder Rim Dead Locks—"Reversible."

CASE—Iron, Antique Copper Finish, 4x2½x1 inches.
BACKSET—1¼ inches. Rim Strike.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. **For** Doors 1⅛ to 3 inches thick.
OPERATED—From outside by Key, from inside by Knob. **Can be** Master-Keyed.

Bronze Metal Cylinder, Knob and Bolt.

No. 5DL—Rim Dead Locks .....Per Dozen, $53.60

Packed—One-twelfth Dozen in a Box, with Screws.

CASE—Iron, Antique Copper Finish, 4½x2¾x1⅜ inches.
BACKSET—1⅜ inches. Rim Strike.
KEYS—**Three** Nickel-Bronze Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited. **For** Doors ⅞ to 2½ inches thick.
OPERATED—From outside by Key, from inside by **Knob.** A second turn of Key or Knob accomplishes the double-throw.

Bronze Metal Cylinder and Knob. Steel Bolt.

No. 7DL—Rim Dead Locks.....Per Dozen, $70.20

Packed—One-Twelfth Dozen in a Box, with Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Reduced Size Cuts.

YALE CABINET LOCK ASSORTMENT

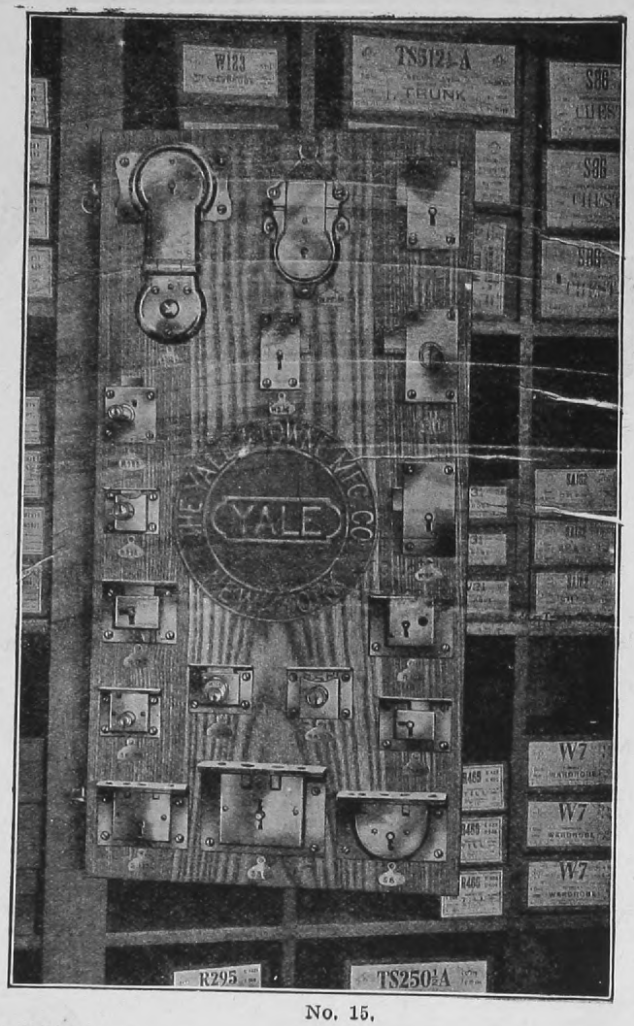
YALE CABINET LOCK ASSORTMENT

The Board is of Mahogany Finish, 24-12 inches, and is very substantial and handsome in appearance; as shown in the illustration, it is intended to be attached to an upright of the shelving. Furnished with heavy brass screw eyes and square hooks to swing on. Locks are attached to board with screws, numbers are stamped on brass number plates. Supplied with the following assortment for stock, including locks on board.

Quantity	Nos.	Per Doz.	Quantity	Nos.	Per Doz.
1/6 Dozen,	W123	$15.46	1/2 Dozen,	R475	$ 3.60
1/4 Dozen,	W44	7.72	1/6 Dozen	5551	29.28
1/2 Dozen,	W7	1.74	1/4 Dozen	SA162	15.04
1/2 Dozen,	W3 1/4	1.56	1/4 Dozen,	S117	9.60
1/4 Dozen,	R359	6.68	1/4 Dozen,	S8	6.56
1/4 Dozen,	RA300	10.04	1/4 Dozen,	S86	14.30
1/2 Dozen,	R465	1.70	1/4 Dozen,	TS250 1/2 A	3.86
1/4 Dozen,	R108	7.72	1/4 Dozen,	TS512 1/2 A	4.64
1/3 Dozen,	R295C	5.80			

No. 15—Yale Cabinet Lock "Sample Board" and Assortment for Stock, consisting of 5 1/6 Dozen Drawer, Wardrobe, Chest, and Locker Locks, as above ..... Each, $40.50

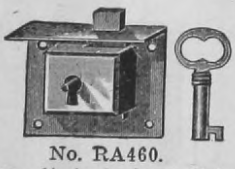
Packed—Each Assortment in a separate case ready for shipment.



No. 15.

YALE DRAWER LOCKS

Half Size Cuts.

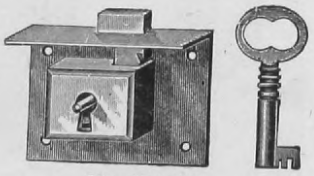


No. RA460.

Back Spring; **Drop,** 1/2 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. RA460—1 1/8 x 1 1/2 inch, **Brass,** 12 Keyed ..... Per Dozen, $1.80

Packed—One Dozen in a Box.

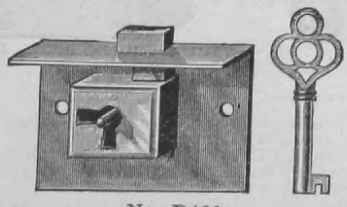


No. RA462.

One Ward, Back Spring; **Drop,** 5/8 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. RA462—1 3/8 x 1 7/8 inch, **Brass,** 12 Keyed .... Per Dozen, $2.40

Packed—One Dozen in a Box.

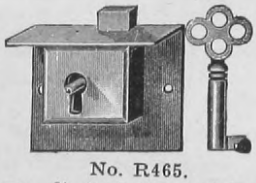


No. R466.

Back Spring; **Drop,** 5/8 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. R466—1 1/2 x 2 1/4 inch, **Iron,** 12 Keyed ..... Per Dozen, $1.62

Packed—One Dozen in a Box.



No. R465.

Back Spring; **Drop,** 3/4 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

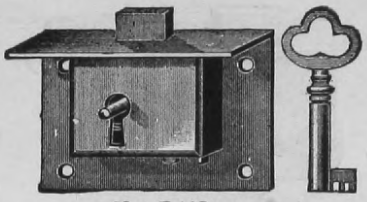
No. R465—1 3/4 x 2 1/4 inch, **Iron,** 12 Keyed ..... Per Dozen, $1.70

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE DRAWER LOCKS

Half Size Cuts.

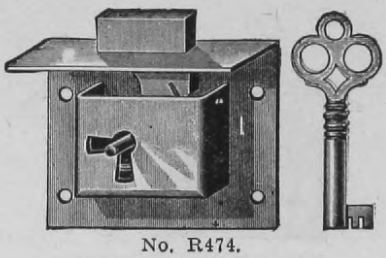


No. R467.

One Ward, Back Spring; Drop, 11/16 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. R467—1¾x2⅜ inch, **Iron**, 12 Keyed, ... Per Dozen, $1.70

Packed—One Dozen in a Box.



No. R474.

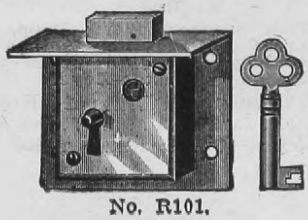
Broad Bolt, One Ward, Back Spring; **Drop**, 1 inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. R474—2x2½ inch, **Iron**, 12 Keyed . . . . . Per Dozen, $2.72

Packed—One Dozen in a Box.

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.

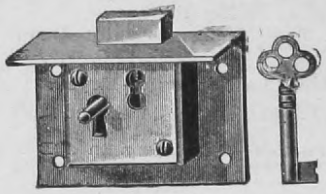


No. R101.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅝ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 60 Changes available.

No. R101—1½x2 inch, **Iron**, 12 Keyed . . . . . Per Dozen, $7.12

Packed—One Dozen in a Box.



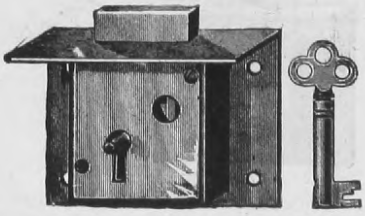
No. R104.

Broad **Brass** Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅝ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 60 Changes available, **Can be** Master-Keyed.

No. R104—1⅝x2⅛ inch, **Iron**, 12 Keyed . . . . . Per Dozen, $7.72

Packed—One Dozen in a Box.

SECURE LEVER



No. R108.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop**, ⅞ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen. 4000 changes available, **Can be** Master-Keyed.

No. R108—1¾x2½ inch, **Iron**, 12 Keyed, ... Per Dozen, $7.72

Packed—One Dozen in a Box.

COMBINATION

No. 0200.

All Brass, Broad Bolt, **Three** Tumblers, 500 combinations. Throw of Bolt, 5/16 inch, 1 5/16 inch Dial. Combination easily changed without removing Lock; **Drop**, 1 11/32 inch from edge of Lock to center of Dial. Applied by boring hole for Cylinder. Made regular for ⅞ inch wood. **Other** thicknesses to order.

Combination Drawer and Locker Lock

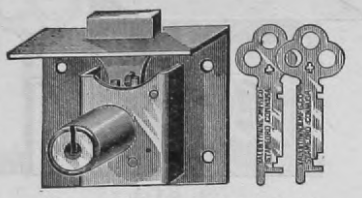
No. 0200—2x2 inch, **All Brass**. Dial Brass with Black Face and White Markings. . Per Dozen, $31.15

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Digitized by UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.



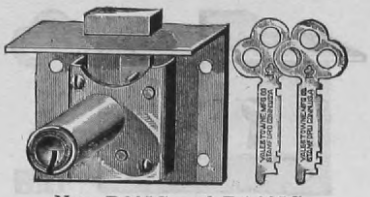
Nos. R294½ and RA294½.

Broad Bolt, Screwed Box, **Two** Secure Levers; **Drop** ½ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 60 Changes available, **Can be** Master-Keyed.

No. R294½—1⅛x1½ inch, **All Steel,** 24 Keyed.. ..... Per Dozen, $6.28

No. RA294½—1⅛x1½ inch, **All Brass,** 24 Keyed ..... Per Dozen, 9.40

Packed—One Dozen in a Box.



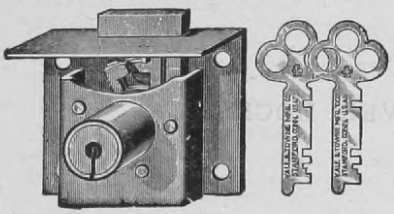
Nos. R295C and RA295C.

Broad Bolt, Two Secure Levers; **Drop,** ¾ inch from Selvedge to center of Concaved Cylinder, for ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

No. R295C—1½x1¾ inch, **Iron,** 24 Keyed..... ..... Per Dozen, $5.80

No. RA295C—1½x1¾ inch, **All Brass,** 24 Keyed ..... Per Dozen, 7.34

Packed—One Dozen in a Box.

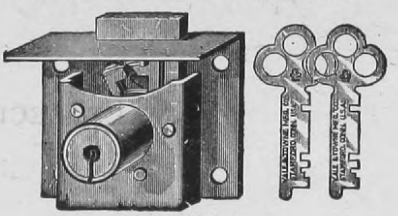


No. R300.

Broad Bolt, Two Secure Levers; **Drop** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

No. R300—1⅝x2 inch, **Iron,** 24 Keyed.. Per Dozen, $8.40

Packed—One Dozen in a Box.

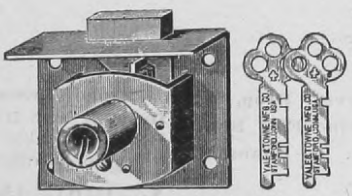


No. RA300.

Broad Bolt, Two Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Changes available, **Can be** Master-Keyed.

No. RA300—1⅝x2 inch, **All Brass,** 24 Keyed... ..... Per Dozen, $10.04

Packed—One Dozen in a Box.

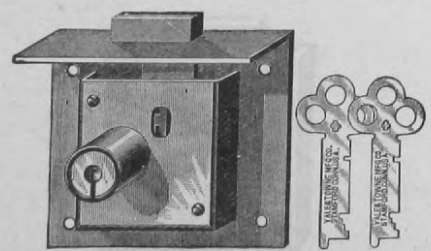


No. RA395.

Broad Bolt, Screwed Box, Three Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 620 Changes available, **Can be** Master-Keyed.

No. RA395—1¾x2 inch, **Brass,** 24 Keyed..... Per Dozen, $10.98

Packed—One Dozen in a Box.



Nos. RA316 and RA316MK.

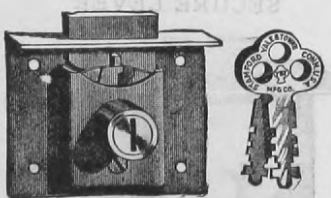
Broad Bolt, Screwed Box, Three Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 7770 Key Changes available, and 1290 Master-Key Changes.

No. RA316—2¼x2½ inch, **All Brass,** 24 Keyed ..... Per Dozen, $23.24

No. RA316MR—Master-Keyed ..... Per Dozen, 26.13

Master Keys "Extra" ..... Each, .75

Packed—One Dozen in a Box.



No. 965A.

Broad Bolt, Screwed Box, Two Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder, For ⅞ inch wood. Nickel Plated Flat Steel Keys.

All Keyed Alike.

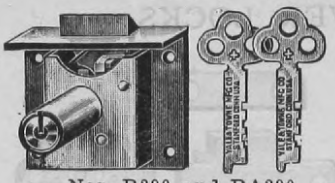
No. 965A—1⅝x2 inch, **All Brass,** 24 Keyed..... ..... Per Dozen $14.97

Packed—One Dozen in a Box.

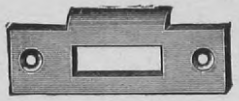
Note—Nos. RA316MK. and WA102MK., page 1176, are Master-Keyed in Sets alike with Keys to pass. **Order** locks in Quantity desired and as many Master-Keys as are wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS



Half Size Cuts.



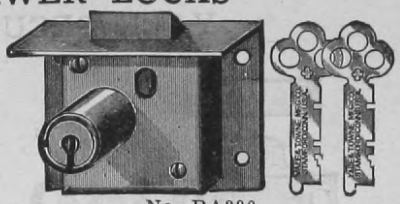
Nos. R290 and RA290.

Broad Cast Brass Spring **Latch** Bolt. **Two** Secure Levers; **Drop,** ¾ inch from Selvedge to center of Cylinder. For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen, 60 Changes Available.

No. R290—1½x1¾ inch, **Iron,** 24 Keyed..... Per Dozen, $9.40

No. RA290—1½x1¾ inch, **All Brass,** 24 Keyed.. Per Dozen, 12.54

Packed—One Dozen in a Box.



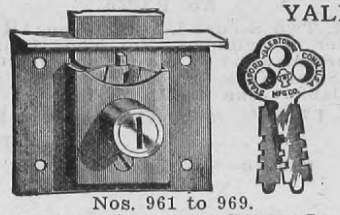
No. RA390.

Broad Bronze Metal Spring **Latch** Bolt. Screwed Box, **Three** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For ⅞ inch wood. Cut for both Drawer and Cupboard. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Changes Available, **Can be** Master-Keyed.

No. RA390—1¾x2¼ inch, **Brass,** 24 Keyed.... Per Dozen, $17.60

Packed—One Dozen in a Box.

YALE STANDARD DRAWER LOCKS



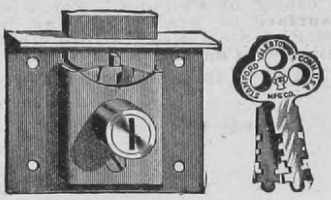
Nos. 961 to 969.

Broad Bolt, Screwed Box, **Two** Secure Levers. **Drop,** ⅞ inch from Selvedge to center of Cylinder, Nickel Plated Flat Steel Keys, all different in a dozen, 12 Changes only Available.

All Brass, 1⅝x2 inch, 24 Keyed.

	Per Dozen
No. 961—For ½ inch Wood	$12.08
No. 962—For ⅝ inch Wood	14.97
No. 963—For ¾ inch Wood	12.08
No. 965—For ⅞ inch Wood	12.08
No. 966—For 1 inch Wood	14.97
No. 967—For 1⅛ inch Wood	14.97
No. 968—For 1¼ inch Wood	14.97
No. 969—For 1⅜ inch Wood	14.97

Packed—One Dozen in a Box.



Nos. 1965 to 1969.

Broad Bolt, Screwed Box, **Four** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 244 Changes Available.

All Brass, 1⅝x2 inch, 24 Keyed.

	Per Dozen
No. 1965—For ⅞ inch Wood	$15.98
No. 1967—For 1⅛ inch Wood	18.87
No. 1969—For 1⅜ inch Wood	18.87

Packed—One Dozen in a Box.

YALE PARACENTRIC DRAWER LOCKS

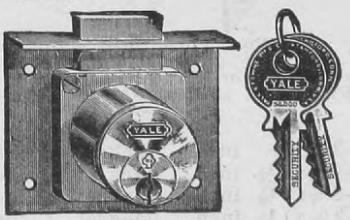
Nos. 5551 and 5561.

Broad Bolt, Screwed Box, ⅞ inch Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

All Brass, for ⅞ inch Wood, 24 Keyed.

	Per Dozen
No. 5551—1½x2 inch, ¾ inch Drop	$29.28
No. 5561—1¾x2 inch, 1 inch Drop	30.08
No. 5561KA—Keyed Alike	32.97
No. 5561MK—Master-Keyed	39.47
Master Keys—Extra Each,	.71

Packed—One-Twelfth Dozen in a Box.

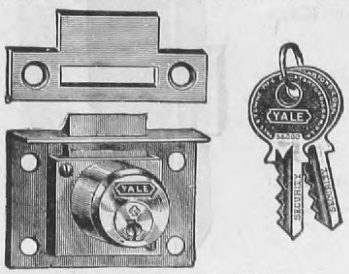


No. 561.

Broad Bolt, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

No. 561—1⅞x2¼ inch, **All Brass,** 24 Keyed.... Per Dozen, $34.50

Packed—One-Twelfth Dozen in a Box.



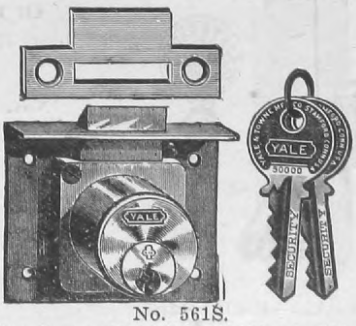
Nos. 5551S and 5561S.

Broad Spring **Latch** Bolt. Screwed Box, ⅞ inch Cylinder. Nickel Bronze Paracentric Keys, changes unlimited. **Can be** Master Keyed.

All Brass, for ⅞ inch Wood, 24 Keyed.

	Per Dozen
No. 5551S—1½x2 inch, ¾ inch Drop	$33.44
No. 5561S—1¾x2 inch, 1 inch Drop	34.30

Packed—One-Twelfth Dozen in a Box.



No. 561S.

Broad Spring **Latch** Bolt, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

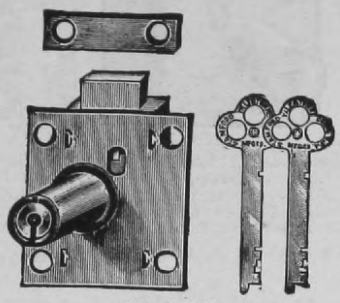
No. 561S—1⅞x2¼ inch, **All Brass,** 24 Keyed.. Per Dozen, $39.72

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE SECURE LEVER DRAWER LOCKS

Half Size Cuts.

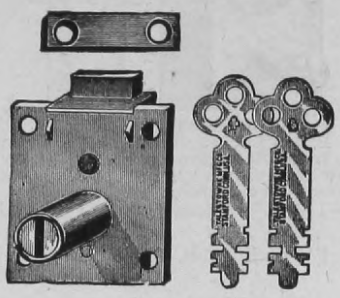


No. R359.

Broad Brass Bolt, **Two** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For wood ⅞ inch thick. Applied to **surface** of wood by boring hole for Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen. 3120 Changes available. **Can be** Master-Keyed.

No. R359—1⅞x1¾ inch, **Iron,** 24 Keyed.....
.....Per Dozen $6.68

Packed—One Dozen in a Box.



No. RA360.

Broad Bolt, Two Secure Levers; **Drop,** 1⅛ inch from Selvedge to center of Cylinder. For wood ⅞ inch thick. Applied to **surface** of wood by boring hole for Cylinder. Nickel Plated Flat Steel Keys, all different in a dozen. 1020 Changes available. **Can be** Master-Keyed.

No. RA360—1⅞x1⅝ inch, **All Brass,** 24 Keyed..
.....Per Dozen, $8.26

Packed—One Dozen in a Box.

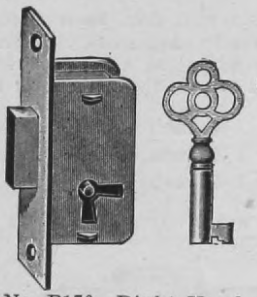
YALE MORTISE CUPBOARD LOCKS

Half Size Cuts.

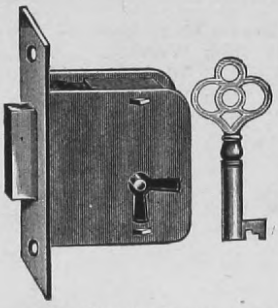
Not Reversible.

State Hand of Door when Ordering.

Cuts show Right Hand Locks.



No. P170—Right Hand.



No. P174—Right Hand.

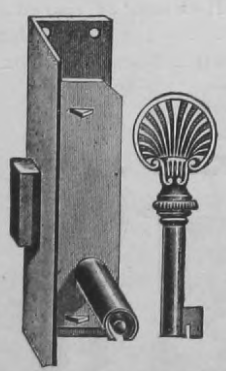
Brass Selvedge, Iron Box, Broad Heavy Bolt, One Tumbler. Backset from Selvedge to center of Key Pin as given below. Fine Flat Bow, Malleable Iron Keys. Double key way for use as a cupboard door or drawer lock as may be desired.

No. P170—2⅝x1 inch. Backset ½ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen $2.62
No. P171—2⅝x1⅛ inch. Backset ⅝ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 2.62
No. P172—2⅝x1¼ inch. Backset ¾ inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 2.62
No. P174—2⅝x1½ inch. Backset 1 inch. Brass Selvedge, Iron Box, 12 Keyed.....Per Dozen 3.16

Packed—One Dozen in a Box.

YALE CUPBOARD LOCKS

Half Size Cuts.

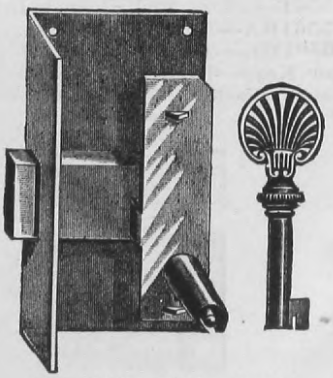


No. PA73—Right Hand.

All Brass, Cut Cupboard Locks; One Tumbler, 12 Keyed, **Fancy** Gold Plated Bow Keys.

Nos. PA73 to **PA81** are all made with the same Key change.

Not Reversible, The Hand of Door must be given; Cuts show Right Hand Locks.



No. PA78—Right Hand.

Polished Brass Finish.

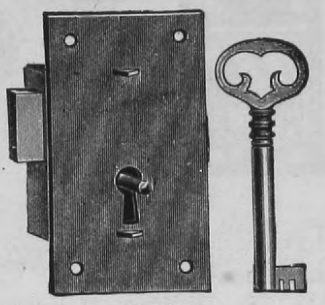
Nos.	PA73	PA75	PA76	PA78	PA80	PA81
Dimensions, inches	3¼x¾	3¼x1⅛	3¼x1⅛	3¼x1⅜	3¼x1⅝	3¼x1⅞
Backset, inches	⅜	⅝	¾	1	1¼	1½
Per Dozen	$14.30	15.52	16.70	19.08	20.24	21.46

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE WARDROBE LOCKS

Half Size Cuts.

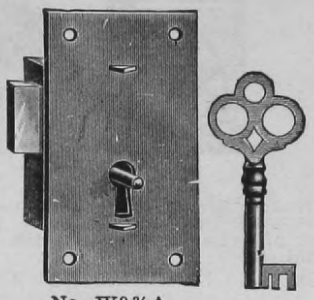


No. W7.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; **Backset,** 13/16 inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys.

No. W7—3x1 5/8 inch, **Iron,** 12 Keyed..Per Dozen, $1.74

Packed—One Dozen in a Box.

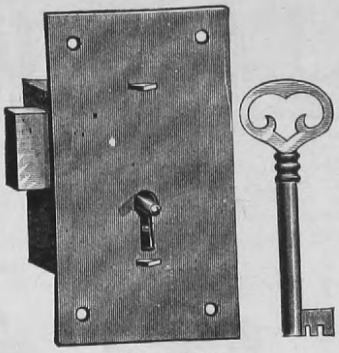


No. W9¾A.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; Backset, 13/16 inch from front of Lock to center of Key Pin. **Ornamental** Bronze Keys, 12 Keyed.

No. W9¾A—3x1 5/8 inch, **Iron,** Brass Plated, Unpolished.....Per Dozen, $3.14

Packed—One Dozen in a Box.

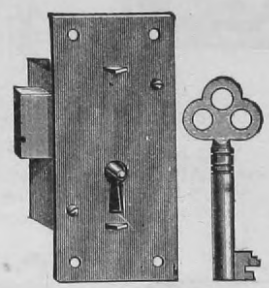


No. W12¼.

Heavy Bolt that shoots right and left, One Ward, One Tumbler; **Backset,** ¾ inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys.

No. W12¼—3 3/8x1 7/8 inch, **Iron,** 12 Keyed.....Per Dozen, $2.68

Packed—One Dozen in a Box.

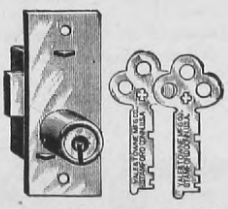


No. W44.

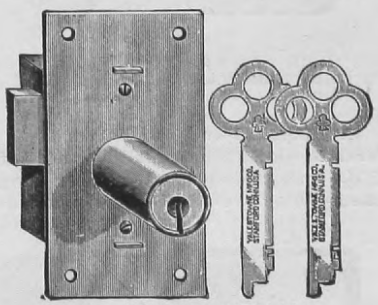
Heavy Bolt that shoots right and left; Square Screwed Box; **Two** Secure Levers; **Backset,** 13/16 inch from front of Lock to center of Key Pin. Flat Bow Malleable Iron Keys, all different in a dozen. 4000 Changes available. **Can be** Master-Keyed.

No. W44—3x1 5/8 inch, **Iron,** 12 Keyed..Per Dozen, $7.72

Packed—One Dozen in a Box.



Nos. W98 and WA98.



Nos. W103 and WA103.

Heavy Bolt that shoots right and left, **Two** Secure Levers; **Backset,** as given below, For Wood as given below, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen. **Can be** Master-Keyed.

Nos.	Material.	Size In.	Backset, In.	For Wood, In.	Changes.	Keyed.	Per Dozen
W98	—Iron	1 7/8x3/4	3/8	7/8	252	24	$10.42
WA98	—Brass	1 7/8x3/4	3/8	7/8	252	24	12.56
W102	—Iron	2 3/4x1 1/4	5/8	7/8, 1, 1 1/8	7770	24	14.30
WA102	—All Brass	2 3/4x1 1/4	5/8	7/8, 1, 1 1/8	7770	24	15.08
WA102MK	—Master-Keyed						17.97
Master Keys	—Extra						Each, .71
W103	—Iron	3x1 5/8	13/16	7/8, 1, 1 1/8	7770	24	16.72
WA103	—All Brass	3x1 5/8	13/16	7/8, 1, 1 1/8	7770	24	17.38

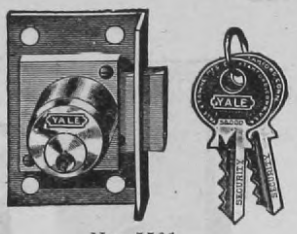
Packed—Nos. W98 to WA102, One Dozen in a Box; Others, One Half Dozen in a Box.

Note.—Nos. WA102MK and RA316MK, page 1173, are Master-Keyed alike with Keys to pass. Order Locks in quantity desired and as many Master-Keys as are wanted.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE CUPBOARD LOCKS

Half Size Cuts.



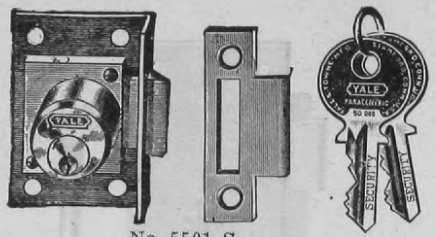
No. 5501.

Heavy Selvedge, Broad Heavy Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5501—2x1½ inch, **All Brass,** 24 Keyed.....
.....Per Dozen, $29.28

Packed—One-Twelfth Dozen in a Box.

Not Reversible State Hand of Door when Ordering.

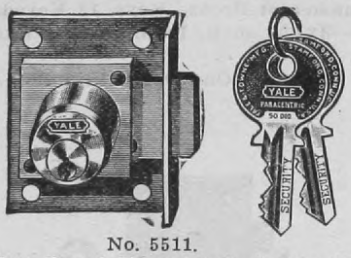


No. 5501-S.

Heavy Selvedge, Broad Spring **Latch** Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5501S—2x1½ inch, **All Brass,** 24 Keyed....
.....Per Dozen, $33.44

Packed—One-Twelfth Dozen in a Box.



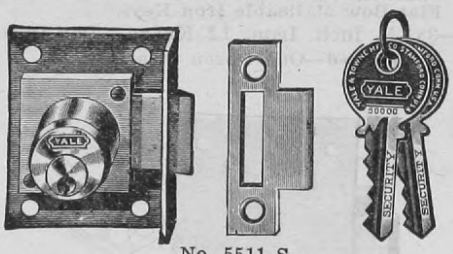
No. 5511.

Heavy Selvedge, Broad Heavy Bolt, Screwed Box, ⅞ inch Cylinder, For ⅞ inch wood; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5511—2x1¾ inch, **All Brass,** 24 Keyed.....
.....Per Dozen, $30.08

Packed—One-Twelfth Dozen in a Box.

Not Reversible. State Hand of Door when Ordering.

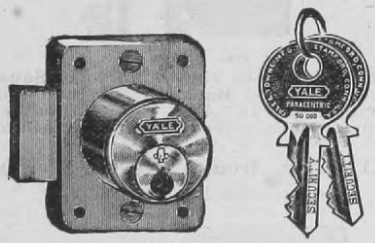


No. 5511-S.

Heavy Selvedge, Broad Spring **Latch** Bolt, Screwed Box, ⅞ inch Cylinder. For ⅞ inch wood; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

No. 5511S—2x1¾ inch, **All Brass,** 24 Keyed....
.....Per Dozen, $34.30

Packed—One-Twelfth Dozen in a Box.



No. 511.

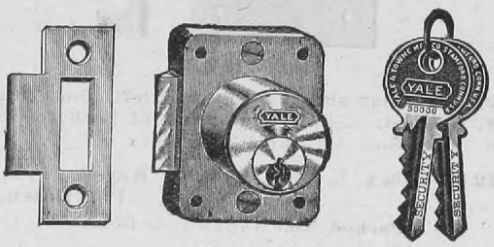
Broad Heavy Bolt, Screwed Box, 1⅛ inch Cylinder, For wood as given below; **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

All Brass, For ⅞ inch Wood.

Reversible—Bolt Shoots Right and Left.

No. 511—2x1½ inch, 24 Keyed....Per Dozen, $41.82

Packed—One-Twelfth Dozen in a Box.



No. 511-S.

Broad Spring **Latch** Bolt, with Strike. Screwed Box, 1⅛ inch Cylinder, For ⅞ inch wood; **Backset,** ¾ inch from front of Lock to Center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

All Brass, For ⅞ inch Wood.

Not Reversible. State Hand of Door when Ordering.

No. 511S—2x1½ inch, 24 Keyed....Per Dozen, $47.04

Packed—One-Twelfth Dozen in a Box.

Nos. 501 and 505.

Reversible—Bolt Shoots Right and Left.

Broad Heavy Bolt, Screwed Box, 1⅛ inch Cylinder, For wood as given below; **Backset,** 1 inch from front of Lock to center of Cylinder. Nickel-Bronze Paracentric Keys, changes unlimited.

2x2 inch, All Brass, Reversible, 24 Keyed.

No. 501—For ⅞ inch Wood.....Per Dozen, $43.86
No. 505—For 1¼ inch Wood.....Per Dozen, 43.86

Packed—One-Twelfth Dozen in a Box.

Note.—To apply No. 2422 Lock: Remove Knob, apply lock, and replace Knob.

No. 2422.
Three Lever Tumblers.

Switch Board Box Lock with Knob attachment. Heavy Cast Brass Spring Bolt. Heavy Wrought Screwed Box. Brass Nose **For** ¼ inch Wood or Metal, can be furnished for ⅛, ⅜, ½, ¾, ⅞ and 1 inch to order and at special price. **Backset,** ⅞ inch. **Keys,** Two Nickel Plated Flat Steel, 12 changes, 210 changes possible. Can be Master-Keyed. **Operation**—Latch Bolt is retracted by Knob. Key is used to deadlock or release Knob and Bolt.

For ¼ inch Wood or Iron.

No. 2422—1⅝x1¾ inch, Steel, Black Japanned
.....Per Dozen, $17.10

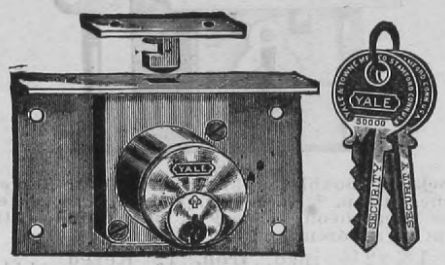
Packed—One Dozen in a Box.

Note.—All Locks on this page **can be** Master-Keyed.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE CHEST AND DESK LOCKS

Half Size Cuts.

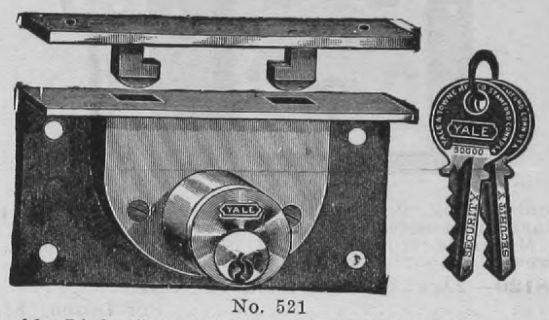


No. 5241.

Single Link, Screwed Box, 1⅛ inch Cylinder. For ⅞ inch wood. **Drop,** 1 inch from Selvedge to center of Cylinder, Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 5241—1⅞x3 inch, **All Brass,** 24 Keyed.... .....Per Dozen, $41.16

Packed—One-Twelfth Dozen in a Box.



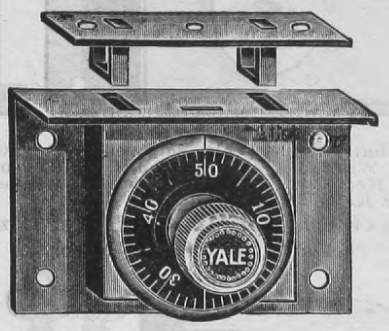
No. 521

Double Link, Screwed Box, 1⅛ inch Cylinder. For 1¼ inch wood. **Drop,** 1¼ inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 521—2x4 inch, **All Brass,** 24 Keyed..... .....Per Dozen, $62.52

Packed—One-Twelfth Dozen in a Box.

CHEST LOCKS



No. 0336.

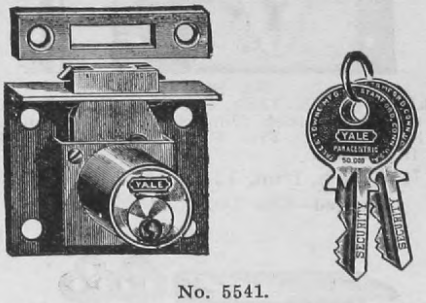
Self Locking, Double Link, Screwed Box, **Four** Tumblers, 11,000 Combinations, 1⅞ inch Dial, black with white numerals: **Drop** 1¼ inch from Selvedge to center of Dial, Combination easily changed without removing Lock. **Specify** thickness of wood when ordering. Directions for operating and changing combination in each box.

Nickel Plated Knob, Black Dial.

No. 0336—2 5/16x3 5/8 inch, **All Brass**..Per Dozen, $50.70

Packed—One-Twelfth Dozen in a Box.

DESK LOCKS



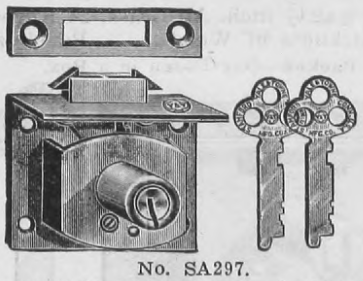
No. 5541.

Double Hook Bolt, Screwed Box, ⅞ inch Cylinder, **Bolt** withdraws from view when in unlocked position. For ⅞ inch wood: **Drop,** 1 inch from Selvedge to center of Cylinder. Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 5541—1¾x2 inch, **All Brass,** 24 Keyed..... .....Per Dozen, $34.30

Packed—One-Twelfth Dozen in a Box.

YALE DESK LOCKS

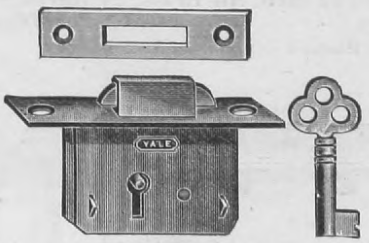


No. SA297.

Double Hook Bolt, **Three** Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. Bolt withdraws from view when in unlocked position. For ⅞ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen. 1290 Changes available. **Can be** Master-Keyed.

No. SA297—1⅝x2 inch, **All Brass,** 24 Keyed.. .....Per Dozen, $16.02

Packed—One Dozen in a Box.



No. S302.

Heavy **Brass** Strike and Selvedge, Iron Box, Double Hook Bolt; **Drop,** ⅞ inch from Selvedge to center of Key Pin; Bolt withdraws from view when unlocked. Fine Flat Bow Malleable Iron Keys.

No. S302—1⅜x2⅝ inch, 12 Keyed...Per Dozen, $7.12

Packed—One Dozen in a Box.

SPECIAL WORK

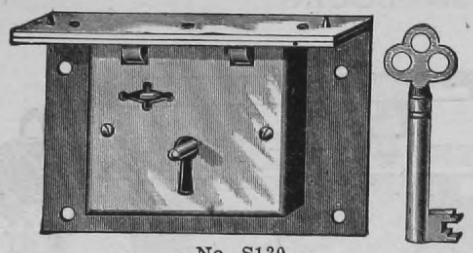
Yale Cabinet Locks in the various styles can be had, Each Lock with any number of Keys, or any number of the same style Lock made with Keys all alike.

Yale Cabinet Locks are also especially adapted to Master-Key work.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE CHEST LOCKS

Half Size Cuts.

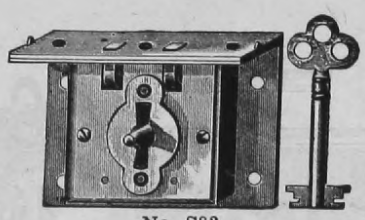


No. S120.

Double Link, Screwed Box, Two Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S120—2¼x3½ inch, **Iron,** 12 Keyed.....
.....Per Dozen, $10.74

Packed—One Dozen in a Box.

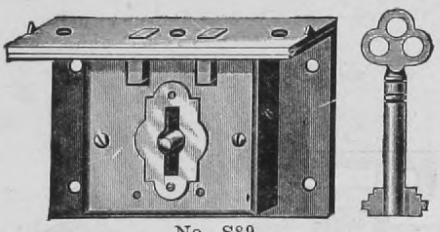


No. S82.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S82—1¾x2½ inch, **Iron,** 12 Keyed.....
..... Per Dozen, $11.36

Packed—One Dozen in a Box.

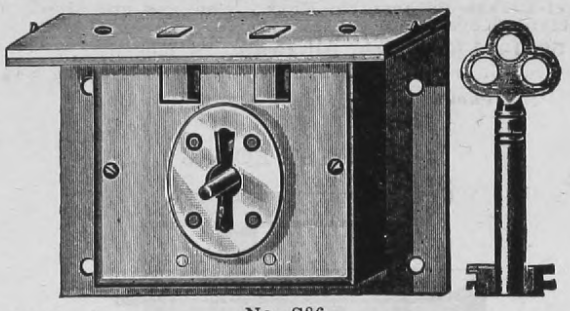


No. S89.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches; **Drop,** 1 inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S89—1⅞x3 inch, **Iron,** 12 Keyed..Per Dozen, $11.96

Packed—One Dozen in a Box.

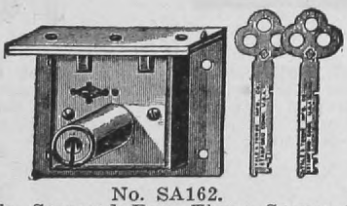


No. S86.

Self Locking, Double Link, Screwed Box, Secret Wards, Four Catches, Warded Keyhole; **Drop,** 1⅜ inch from Selvedge to center of Key Pin. Brass Escutcheon. Fine Flat Bow **Double** Bitted Keys, all different in a dozen.

No. S86—2¾x4 inch, **Iron,** 12 Keyed..Per Dozen, $14.30

Packed—Half Dozen in a Box.

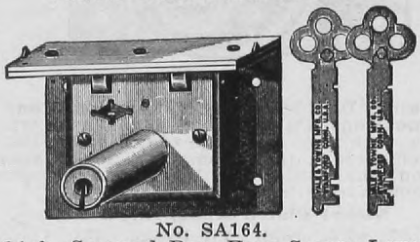


No. SA162.

Double Link, Screwed Box, Three Secure Levers; **Drop,** ⅞ inch from Selvedge to center of Cylinder. For ¾ inch wood. Nickel Plated Flat Steel Keys, all different in a dozen, 252 Changes available.

No. SA162—1½x2 inch, **All Brass,** 24 Keyed....
.....Per Dozen, $15.04

Packed—One Dozen in a Box.

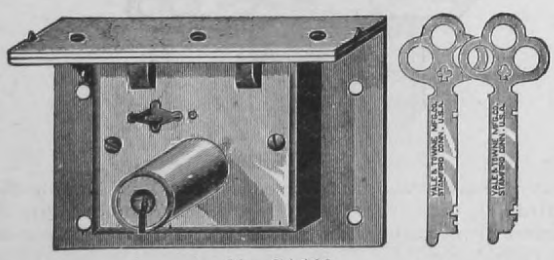


No. SA164.

Double Link, Screwed Box, Four Secure Levers; **Drop,** 1 inch from Selvedge to center of Cylinder. For ¾, ⅞ and 1 inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen. 1020 changes available. **Can be** Master-Keyed.

No. SA164—1¾x2½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, $18.82

Packed—One Dozen in a Box.

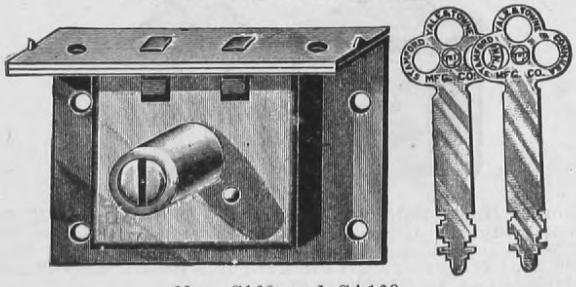


No. SA166.

Double Link, Screwed Box, Four Secure Levers; **Drop,** 1¼ inch from Selvedge to center of Cylinder. For 1 and 1¼ inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. SA166—2¼x3½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, $23.82

Packed—Half Dozen in a Box.



Nos. S168 and SA168.

Self Locking, Double Link, Four Hook Tumblers, Two Wards; Drop, 1⅛ inch from Selvedge to center of Cylinder. For ¾, 1 and 1¼ inch wood, each size separate. Nickel Plated Flat Steel Keys, all different in a dozen.

No. S168—2¼x3½ inch, **Iron,** 24 Keyed....
Specify Thickness of Wood.....Per Dozen, $18.38

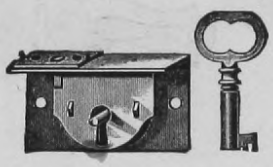
No. SA168—2¼x3½ inch, **All Brass,** 24 Keyed..
Specify Thickness of Wood.....Per Dozen, 22.24

Packed—Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE CHEST LOCKS

Half Size Cuts.



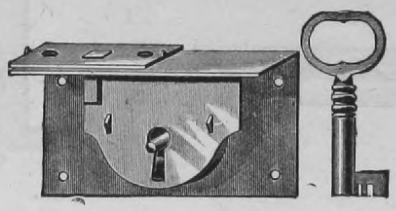
Nos. S22 and SA22.

Single Link, Back Spring; **Drop,** ⅜ inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. S22—⅞x1½ inch, **Iron,** 12 Keyed.....Per Dozen, $1.66

No. SA22—⅞x1½ inch, **Brass,** 12 Keyed.....Per Dozen, 1.80

Packed—One Dozen in a Box.

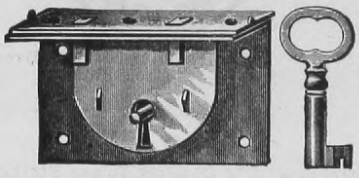


No. S29.

Single Link, Back Spring; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Flat Bow Malleable Iron Keys.

No. S29—1½x3 inch, **Iron,** 12 Keyed...Per Dozen, $2.40

Packed—One Dozen in a Box.

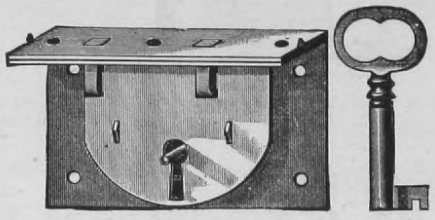


No. S4.

Double Link, Back Spring, One Ward; **Drop,** ⅞ inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys.

No. S4—1½x2½ inch, **Iron,** 12 Keyed..Per Dozen, $5.02

Packed—One Dozen in a Box.



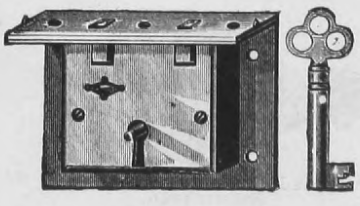
No. S6.

Double Link, Back Spring, One Ward; **Drop,** 1 inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys.

No. S6—2x3 inch, **Iron,** 12 Keyed.....Per Dozen, $5.58

Packed—One Dozen in a Box.

YALE SECURE LEVER CHEST LOCKS

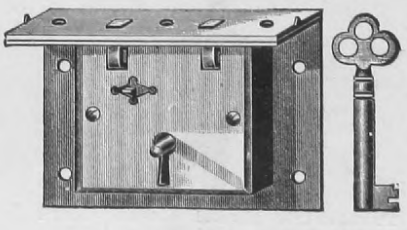


No. S114.

Double Link, Screwed Box, **Two** Secure Levers; **Drop,** 1 inch from Selvedge to center of Key Pin. Fine Flat Bow Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S114—1¾x2½ inch, **Iron,** 12 Keyed.....Per Dozen, $8.40

Packed—One Dozen in a Box.



Nos. S117 and SA117.

Double Link, Screwed Box, **Two** Secure Levers; **Drop,** 1⅛ inch from Selvedge to center of Key Pin. Fine Flat Bow, Malleable Iron Keys, all different in a dozen, 252 changes available. **Can be** Master-Keyed.

No. S117—1⅞x3 inch, **Iron,** 12 Keyed.....Per Dozen, $ 9.60

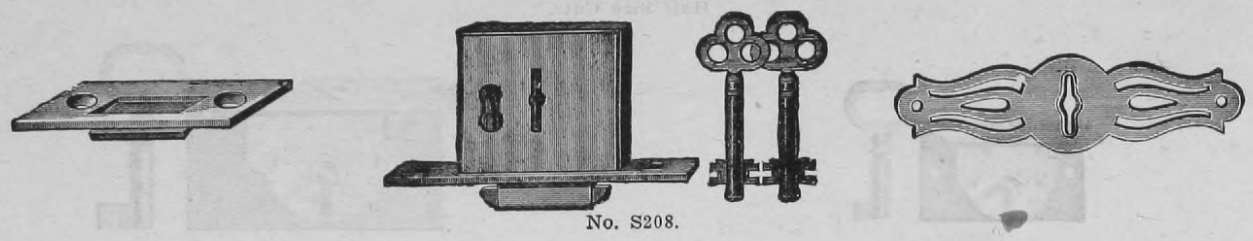
No. SA117—1⅞x3 inch, **Brass,** 12 Keyed.....Per Dozen, 10.74

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE ROLL TOP DESK LOCKS

Half Size Cuts.

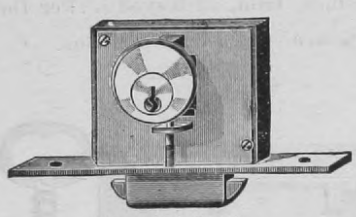


No. S208.

Heavy **Brass** Selvedge, Iron Box, Brass Escutcheon, **Self Locking,** Double Hook Steel Bolt, Guarded against tampering; One Secure Lever; **Drop,** ⅞ inch from Selvedge to Center of Key Hole. Double Bitted Steel Keys, Six Changes. **Self Closing** Brass Strike.

No. S208—1⅝x3 inch, 24 Keyed, Brass Selvedge.....Per Dozen, $12.76

Packed—Half Dozen in a Box, with Screws.



No. S236 Lock.

Paracentric Nickel Bronze Keys with Coined Gold Plated Bows.

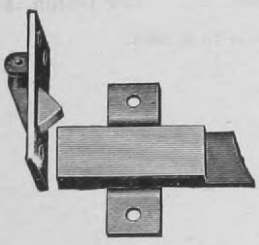
Gold Plated Cast Bronze Escutcheon.

No. S236.

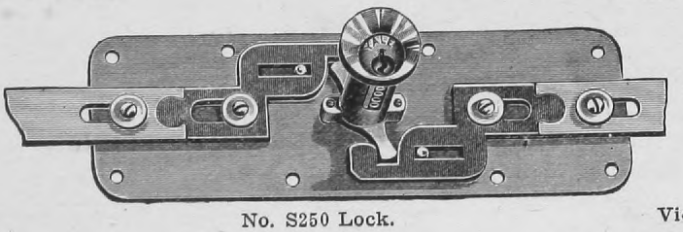
Heavy Brass Selvedge, Screwed Iron Box, Gold Plated Cast Bronze Escutcheon, Self Closing Brass Strike. Self Locking Heavy Brass Spring Bolt with Solid Brass Hooks, guarded against tampering. **Drop,** 1 inch from edge of Selvedge to center of Cylinder. **Thickness**—Made for any thickness of desk rail which must always be specified. Gold Plated Cast Bronze Metal Cylinder, 13/16 inch in diameter. **Two** Paracentric Keys, Pin Tumblers. Changes practically unlimited. **Can be** Master-Keyed. Information on request.

No. S236—1½x3½ inches, Brass Selvedge, 24 Keyed.....Per Dozen, $44.00

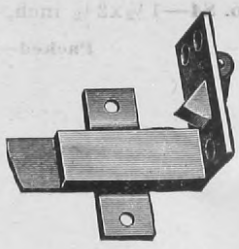
Packed—One-Twelfth Dozen Sets in a Box, with Screws.



View of Bolt and Strike.



No. S250 Lock.



View of Bolt and Strike.

Paracentric Nickel Bronze Keys with Coined Gold Plated Bows.

Gold Plated Ornamental Cast Bronze Escutcheon.

No. S250.

Iron Plate and Rods, Brass Spring Strikes, and Iron Guides. **Length** of Curtain Rail or distance between arms of desk must always be specified. **Drop,** 1⅛ inch from edge of Plate to center of Cylinder. **For Wood**—Furnished for 1⅛, 1¼ or 1½ inch Wood. **Thickness** of Wood must always be specified. Made on special orders for any thickness of Wood. Gold Plated Brass Cylinder, ⅞ inch diameter. **Two** Paracentric Keys, Pin Tumblers. Changes practically unlimited. **Can be** Master-Keyed. Information on request.

No. S250—1⅞x5⅝ inches, 24 Keyed, otherwise as described above.....Per Dozen, $48.34

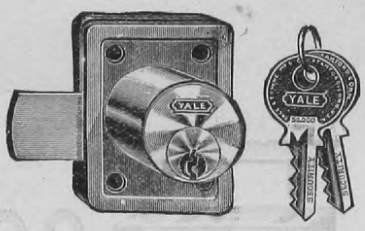
Packed—One-Sixth Dozen Sets in a Box, with Screws.

Note.—Furnished only on special orders.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

YALE LOCKER LOCKS

Half Size Cuts.

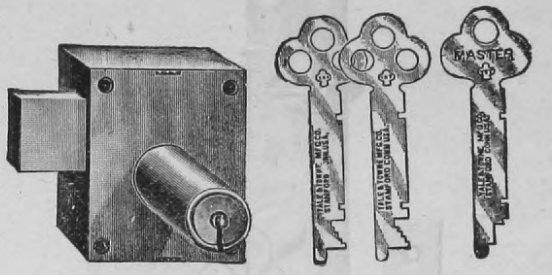


No. 531.

Heavy Bolt, swings right and left, ¾ inch Throw, Bronze Metal Strike, 1⅛ inch Cylinder, **Reversible.** For ⅞ inch wood. **Backset,** ¾ inch from front of Lock to center of Cylinder. Nickel-Bronze **Paracentric** Keys, changes unlimited. **Can be** Master-Keyed.

No. 531—2x1½ inch, **All Bronze** Metal, 24 Keyed ..... Per Dozen, $31.38

Packed—One-Twelfth Dozen in a Box, with Screws.



No. W120MK.

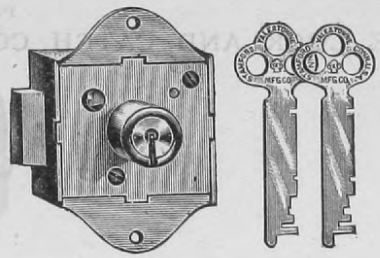
Broad Heavy Brass Bolt, ⅝ inch Throw, shoots right and left. Five Secure Levers. **For** ⅞ inch wood. **Backset,** 13/16 inch from front of Lock to center of Cylinder. Nickel Plated Flat Steel Keys.

Made Regularly Master-Keyed.

No. W120MK—2x1⅝ inch, **Iron,** 24 Keyed ..... Per Dozen, $18.35

Master Keys "Extra" ..... Each, .50

Packed—One-Twelfth Dozen in a Box, with Screws.
Note—The $18.35 list does not include Master-Key. Order Locks in quantity desired and as many Master-Keys as are wanted.



No. R381½L.

Dead Bolt Lock for "Metal" Lockers

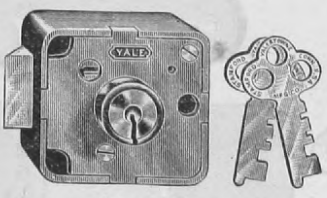
Heavy Cast Bronze Metal Bolt, Three Secure Levers, Heavy Wrought Screwed Box. Brass Cylinder. **Backset,** ⅞ inch from edge of lock to center of nose. **For** ¼ inch thickness, for any other thickness on special orders only. For Doors of either hand. Nickel Plated Flat Steel Keys, all different in a dozen. 46650 Key Changes available. **Can be** Master-Keyed.

No. R381½L—2½x1¾ inch, Steel, Japanned, 24 Keyed ..... Per Dozen, $11.08

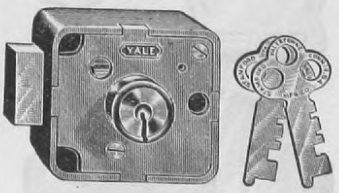
Packed—One Dozen in a Box.

YALE "LOCKER" AND SUB-TREASURY LOCKS

Half Size Cuts.



No. 2222.



No. 2206.

Cylinders are cut either Drawer or Cupboard Style.

Wrought Steel Screwed Case, Heavy Cast Bronze Metal **Spring Latch** Bolt, Three Secure Levers; **Backset,** ⅞ inch from front of Lock to center of Cylinder. **For** ¼ inch thickness, for any other thickness on special orders only. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Key Changes available. **Can be** Master-Keyed.

No. 2222—1½x1¾ inch, Steel, Black Japanned, 24 Keyed ..... Per Dozen, $10.56

Packed—One Dozen in a Box.

Wrought Steel Screwed Case, Heavy Brass **Dead Bolt,** Three Secure Levers; **Backset,** ⅞ inch from front of Lock to center of Cylinder. **For** ¼ inch thickness, for any other thickness on special orders only. Nickel Plated Flat Steel Keys, all different in a dozen, 1290 Key Changes available. **Can be** Master-Keyed.

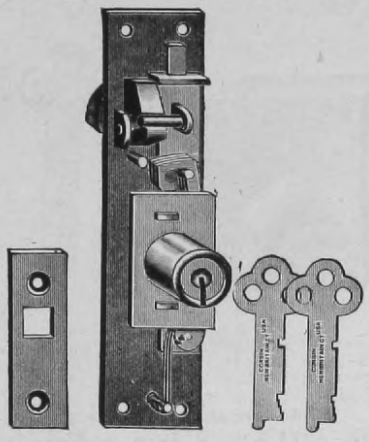
No. 2206—1½x1¾ inch, Steel, Black Japanned, 24 Keyed ..... Per Dozen, $10.56

Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

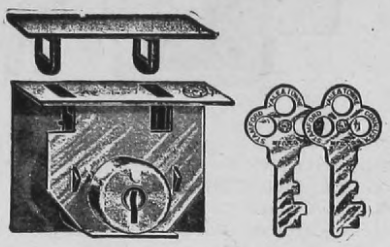
SHOW CASE LOCKS



No. 02295½.
For Sliding Doors.
Heavy Cast Brass Hook Bolt, Heavy Wrought Brass Strike. **Three** Secure Levers. Nickel Plated Flat Steel Keys, all different in a dozen, 252 changes available. For Wood ⅞ inch thick.

No. 02295½—4½x1 inch, **Brass**, 24 Keyed.....Per Dozen, $28.00
Packed—One Dozen in a Box.

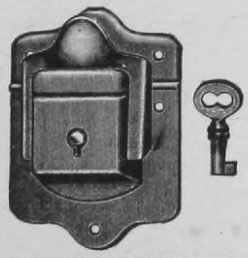
YALE CASH BOX LOCKS



No. S395.
Iron Case, Brass Tube, Iron Double Link, One Secure Lever; **Drop**, 1 inch from Selvedge to center of Cylinder. Nickel Plated Flat Steel Keys. Key Changes alike.

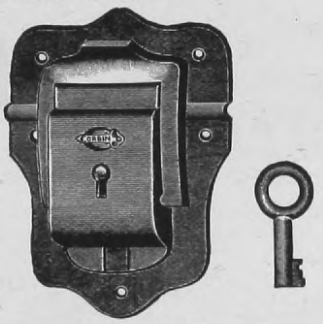
No. S395—1½x2 inch, 24 Keyed.....Per Dozen, $2.34
Packed—One Dozen in a Box.

SUIT CASE LOCK AND CATCH COMBINED



No. 01839.
All Brass, Polished, Buffed and Lacquered. Malleable Iron Key.

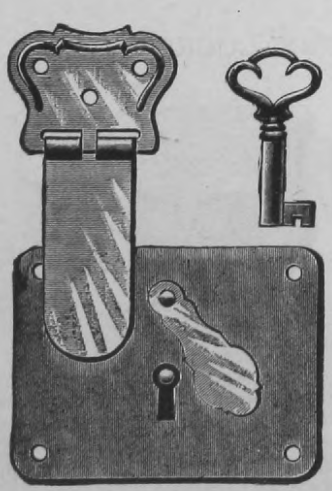
No. 01839—2½x1¾ inch, 12 Keyed...Per Dozen, $6.00
Packed—One Dozen in a Box.



No. 01840.
All Brass, Polished, Buffed and Lacquered. One Secure Lever Wrought Brass Key.

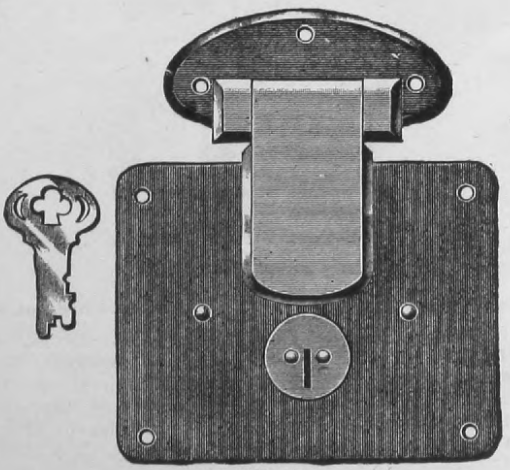
No. 01840—3¼x2¼ inch, 12 Keyed...Per Dozen, $7.00
Packed—One Dozen in a Box.

YALE TRUNK LOCKS



No. TS11J.
Iron Plate and Hasp, Back Spring, Tinned Drop. Malleable Iron Keys.

No. TS11J—3 inch, Japanned, 12 Keyed.....Per Dozen, $1.06
Packed—One Dozen in a Box.



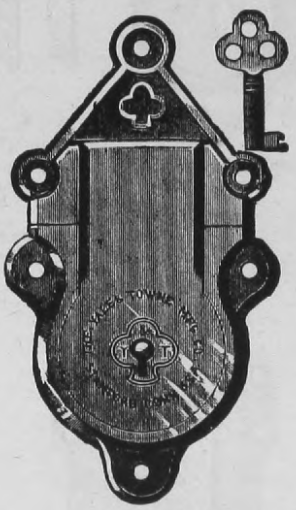
No. TS74J.
Wrought Metal Plate, Extra Heavy Malleable Spring Hasp, Brass Escutcheon. Flat Steel Keys.

No. TS74J—3¼ inch, Japanned, 12 Keyed.....Per Dozen, $1.76
Packed—One Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE TRUNK LOCKS

Half Size Cuts.

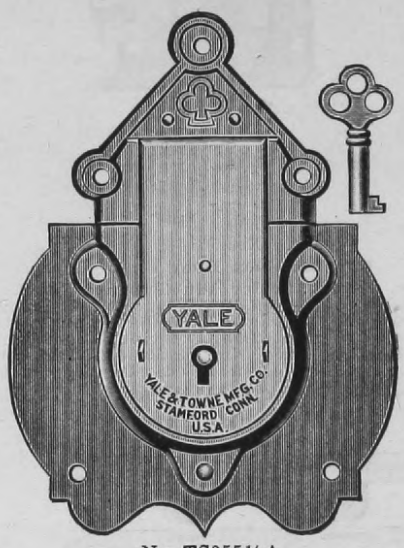


No. TS250½A.

Iron Frame and Center, attached to Surface without cutting Trunk. Flat Bow Malleable Iron Barrel Keys.

No. TS250½A—5 inch, Brass Plated, 12 Keyed . . . . . Per Dozen, $2.86

Packed—One Dozen in a Box.



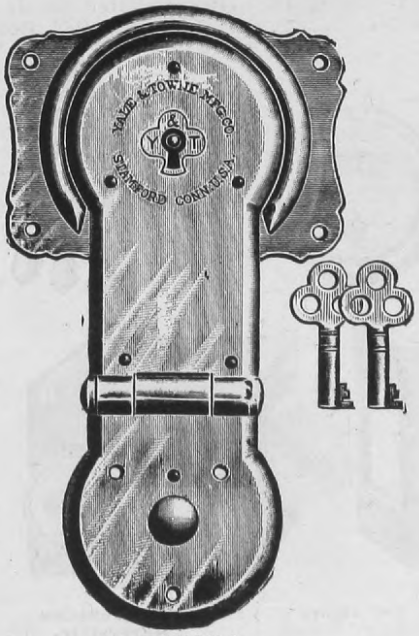
No. TS255½A.

Iron Plate and Center, Malleable Frame, attached to Surface without cutting Trunk. Flat Bow Malleable Iron Barrel Keys.

No. TS255½A—5¼ inch, Brass Plated, 12 Keyed . . . . . Per Dozen, $3.50

Packed—One Dozen in a Box.

YALE TRUNK LOCKS



No. TS502¾A.

Brass Plated Wrought Steel Lock with Guard Cup, **Two** Secure Levers. Fine Flat Bow Malleable Iron Barrel Keys, Four Changes in a dozen.

No. TS502¾A—6½ inch, Brass Plated, 24 Keyed . . . . . Per Dozen, $5.58

Packed—One Dozen in a Box.

No. TA552.

Cast Brass Lock and Plated Cup, Machine Surfaced, Buffed Edges, **Two** Secure Levers. Fine Flat Bow Polished Malleable Iron Barrel Keys, Four Changes in a dozen. Furnished with Bolts, Nuts and Washers for attaching.

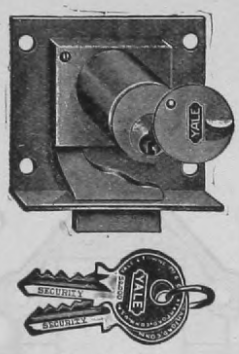
No. TA552—6¼ inch, Cast Brass, 24 Keyed . . . . . Per Dozen, $16.40

Packed—One Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.



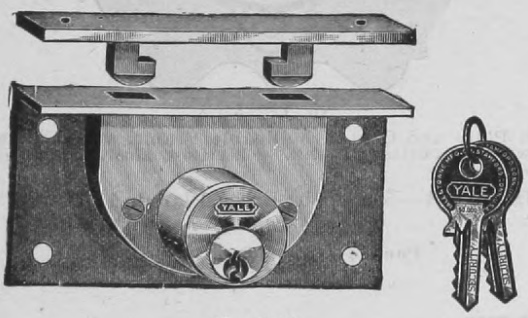
No. 5573¼

For Tool Box Door Under Car.

All Brass, Yale Cylinder Pin Tumbler Lock. Furnished with dust guard to prevent key way from clogging with dirt, etc. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1 3/32 inch from center of Cylinder to Selvedge. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5573¼—2x1 13/16 inch, **All Brass**.....Each, $3.50

Packed—One Lock in a Box.



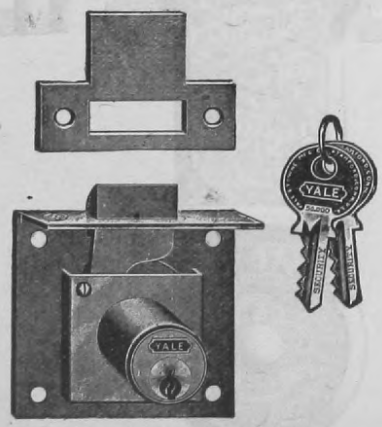
No. 5521.

For Luggage and Tool Boxes.

All Brass, Yale Cylinder Double Hook Lock. Solid Box, Cast Brass Links. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1¼ inch from Selvedge to Center of Cylinder. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5521—2¼x3 inch, **All Brass**....Per Dozen, $45.72

Packed—One Lock in a Box.



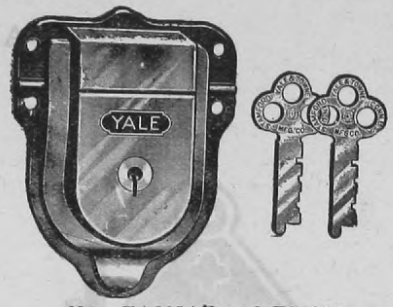
No. 5563½S.

For Heel and Tail Boards.

All Brass, Yale Cylinder Spring Lock. Square Selvedge, Solid Screwed Box. Cast Brass Spring Bolt, Wrought Brass Strike. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Drop,** 1¼ inches from Selvedge to center of Cylinder. **Two** Nickel Bronze Paracentric Keys with each lock, changes unlimited. **Can be** Master-Keyed.

No. 5563½S—2⅛x2¼ inch, **All Brass**.....Per Dozen, $46.26

Packed—One Lock in a Box.



Nos. TA805AZ and TS805J.

For Metal Tool Boxes. Two Keys.

Yale Lever Tumbler Lock. The Hasp or Loop of Lock is so arranged that when raised it forms a handle and when closed it prevents the lid from rattling.

No. TA805AZ—3x2¼ inch, Polished Brass.....Per Dozen, $8.74

No. TS805J—3x2¼ inch, Japanned Steel.....Per Dozen, 5.24

Packed—One in a Box.

Nos. TA905 and TS905A.

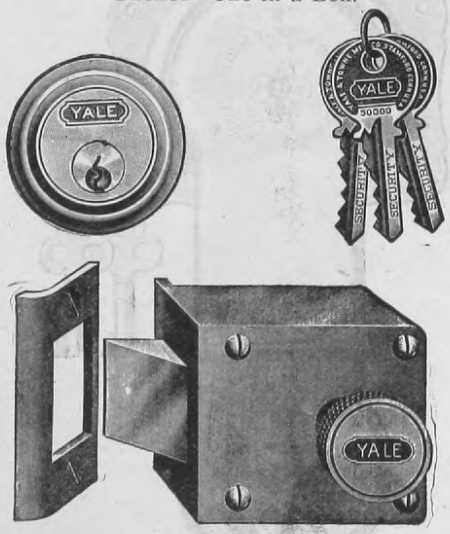
For Metal Battery Boxes. No Keys.

Yale Catch. The Hasp or Loop of Catch is so arranged that when raised it forms a handle and when closed it prevents the lid from rattling.

No. TA905 —3x2¼ inch, Polished Brass.....Per Dozen, $6.11

No. TS905A—3x2¼ inch, Brass Plated Steel....Per Dozen, 3.50

Packed—One in a Box.



No. X042½C.

For Doors of Commercial Vehicles.

Yale Cylinder Spring Latch. **Reversible,** for doors of either hand. **Backset,** 1⅝ inches. **Operated** by Key from outside and by Turn Knob from inside, Self-Locking. **Extra Heavy Case,** Hardened Steel Bolt, 1x⅝ inches, Bronze Cylinder and Turn-Knob. **Illustration** shows Reverse Bevel, which, if wanted, must be specified on order. **Three** Paracentric Keys. **Five** Pin-Tumblers, Changes unlimited.

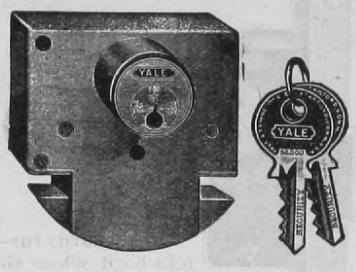
No. X042½C—2x2 5/16 inch, Cast Iron Case, Antique Copper Finish .....Each, $5.00

Packed—One in a Box.

Digitized by Google
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.



No. S261½.

For Hoods.

Wrought Steel Yale Cylinder Spring Lock with Two Cast Bronze Hook Bolts. Designed to securely fasten the Hoods or Bonnets of motor cars and is applied to the center of the lower rim, the bolt engaging with a striker fastened to the frame. **Diameter** of Cylinder, ⅞ inch. **Specify** thickness of material when ordering. **Backset** 1 inch from edge of lock to center of Cylinder. **Two** Nickel-Bronze Paracentric Keys, changes unlimited. **Can be** Master-Keyed.

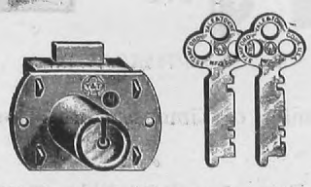
No. S261½—1½x2¼x½ inch, Steel.....Each, $2.50
Packed—One Lock in a Box.

No. 5101.

For Compartments.

All Brass Yale Cylinder Lock, with Broad Heavy Dead Bolt. Screwed Box. **Backset,** ⅝ inch from edge of lock to center of Cylinder. **Diameter** of Cylinder, ⅞ inch. **For Wood**—Regularly furnished for ¾ inch wood; also for ⅞ inch wood, to order, without extra charge; will also be furnished for ⅝, 15/16, 1, 1⅛, 1¼, 1⅜, 1½ and 1⅝ inch wood, to special order, and at an additional price. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5101—1⅝x1¼ inch, **All Brass**...Per Dozen, $32.20
Packed—One in a Box.

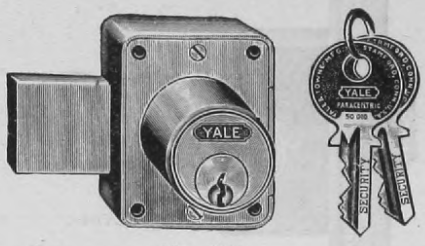


No. R357.

For Compartments.

Iron with Heavy Bolt. **Two** Lever Tumblers. **Drop** or Backset, ½ inch from selvedge to center of Cylinder. **For Wood**—Regularly furnished for ½ inch wood or metal; will also be furnished for 5/32, ¼, 5/16, ⅜, ⅝ and ¾ inch wood, to special order and at an additional price. **Specify** thickness of material when ordering. Applied to surface by boring hole for cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 12 changes. Key can be withdrawn only when lock is locked.

No. R357—1x1½ inch, 24 Keyed.....Per Dozen, $5.80
Packed—One Dozen in a Box.

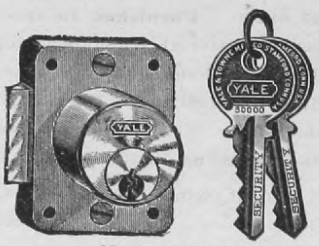


No. 5611.

For Hood Locking Into Radiator.

All Brass Yale Pin Tumbler Cylinder Lock with Broad Heavy Bolt having 1 inch throw. Screwed Box. **Backset,** 13/16 inch from edge of Lock to center of Cylinder. **Cylinder**—⅞ inch diameter; Buffed Nose, may be furnished Nickel Plated to Special order. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5611—2x1⅝ inch, **All Brass**.....Each, $.....
Packed—One in a Box.

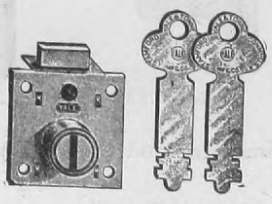


No. 5101S.

For Compartments.

All Brass Yale Cylinder Lock with Broad Heavy **Spring** Bolt. Screwed Box. **Backset,** ⅝ inch from edge of Lock to center of Cylinder. **Diameter** of Cylinder, ⅞ inch. **For Wood**—Regularly furnished for ¾ inch wood; also for ⅞ inch wood, to order, without extra charge; will also be furnished for ⅝, 15/16, 1, 1⅛, 1¼, 1⅜, 1½ and 1⅝ inch wood, to special order, and at an additional price. **Specify** thickness of material when ordering. **Two** Nickel-Bronze Paracentric Keys with each Lock, changes unlimited. **Can be** Master-Keyed.

No. 5101S—1⅝x1¼ inch, **All Brass**..Per Dozen, $36.38
Packed—One in a Box.



No. R660.

For Compartments.

Iron with Heavy Bolt and **Two** Lever Tumblers. **Drop** or Backset, ¾ inch from selvedge to center of Cylinder. **For Wood**—Regularly furnished for ½ inch wood; will also be furnished for 3/16, ¼, 5/16, ⅜, ⅝ and ¾ inch to special order and at an additional price. **Specify** thickness of material when ordering. Applied to surface by boring hole for cylinder. Nickel Plated Flat Steel Keys, all different in a dozen, 12 changes.

Brass Nose and Iron Bolt.

No. R660—1 3/16x1 3/16 inch, 24 Keyed....Per Dozen, $6.72
Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

YALE MOTOR CAR LOCKS

Half Size Cuts.

Note.

Dust Guards furnished when so ordered, at an additional price.

No. 306.

For Limousine and Closed Car Doors

Yale Pin Tumbler Cylinder Dead Lock. **Reversible**—To reverse turn cylinder and tumbler one-half turn. **Cylinder**—⅞ inch diameter, Buffed Nose, may be furnished nickel plated to special order. **Furnished** to special order only; **Specify** thickness of material when ordering. **Operated** by key from outside only. **Front**—Cast Bronze, 3½x⅞ inches, Bronze Bolt, Cylinder and Strike. **Backset,** 13/16 inch, **Throw** of Bolt ⅜ inch. **Two** Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 306—2x1¼ inch Copper Plated Iron Case .....Each, $.....

Packed—One in a Box.

Note.

Dust Guards furnished when so ordered, at an additional price.

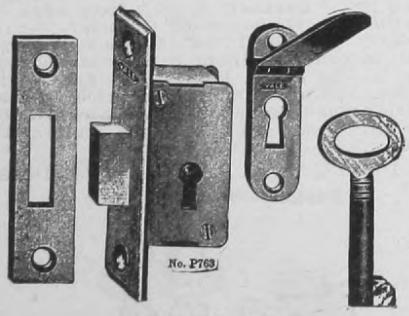
No. 307.

For Limousine and Closed Car Doors

Yale Pin Tumbler Cylinder Dead Lock. **Not** Reversible, **Specify** hand when ordering. **Cylinder**—⅞ inch diameter, Buffed Nose, may be furnished nickel plated to special order. **Furnished** to special order only; **Specify** thickness of material when ordering. **Operated** by key from outside only. **Front**—Cast Bronze, 3¾x⅞ inches, Bronze Bolt, Cylinder and Strike. **Backset**—9/16 inch. **Throw** of Bolt, ⅜ inch. **Two** Nickel-Bronze Paracentric Keys. Changes unlimited. **Can be** Master-Keyed.

No. 307—2 5/16x⅞ inch Cast Bronze Case, Each, $.....

Packed—One in a Box.



No. P763AZ.

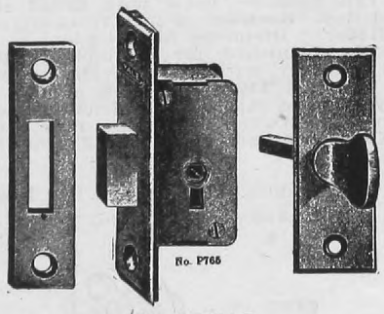
For Limousine and Closed Doors

Wrought Steel, Yale Lever-tumbler Lock. **Operated** by key from outside only. **Not** reversible, **specify** hand required when ordering. **Backset,** ¾ inch from Selvedge to Center of Key Pin. **Front**—Cast Brass, 2 13/16x1 9/32 inch. Brass Bolt and Strike. Throw of Bolt 5/16 inch. **One** Cast Brass Nickel Plated Key with each Lock. 50 Key changes. **Trim:** Cast Brass Key Plate and Drop, 1⅞x9/16 inch.

No. P763AZ—1 11/16x1x⅜ inch **Brass** Plated Steel Case .....Per Dozen, $38.94

Packed—Half Dozen Locks in a Box.

Key Plate, with Dust Shield Extra.....Each, $.....



No. P765AZ.

For Inside Fastening of Limousine and Closed Car Doors

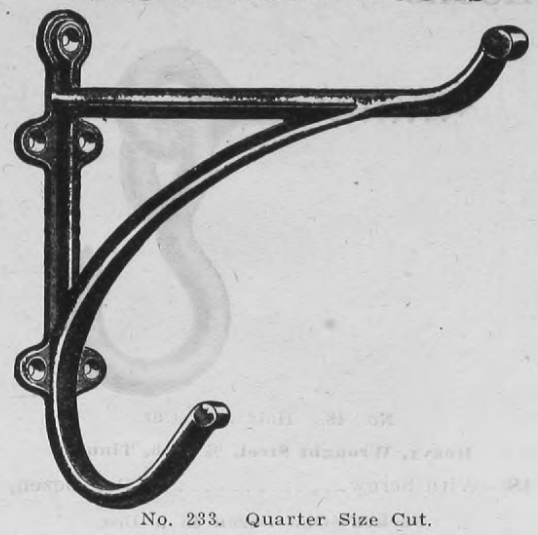
Yale Mortise Bolt. **Not** Reversible, specify hand when ordering. **Operated** by Thumb-Turn from inside only. **Front**—Cast Brass 2 13/16x1 9/32 inches, Brass Bolt and Strike. Cast Brass Thumb-Turn and Plate 2¼x1 13/16 inches. **Backset**—¾ inch. Throw of Bolt 5/16 inch. **Trim:** Cast Brass Thumb-Turn and Plate, 2¼x1 13/16 inches.

No. P765AZ—2¼x1 13/16 inch **Brass** Plated Steel Case .....Per Dozen, $42.82

Packed—One-Twelfth Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STORE RACK HOOKS



No. 233. Quarter Size Cut.

Heavy Double Store Rack Hooks, Cast Iron, Japanned.

No. 233—Projects **10** inches.....Per Dozen, **$4.60**

Packed—In Open Stock.

HARNESS HOOKS

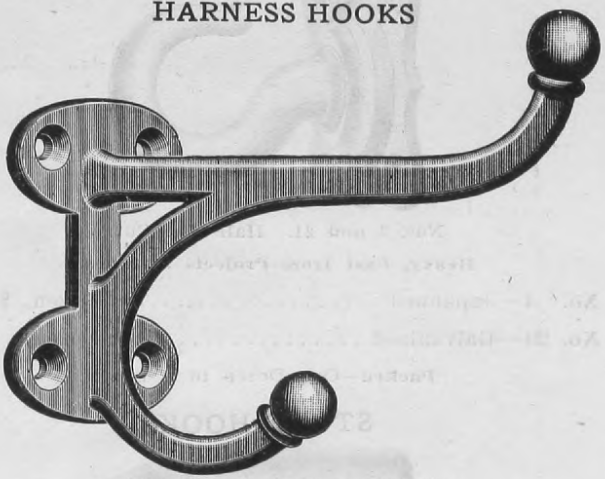
No. 15. One-Third Size Cut.

Heavy Single Harness Hooks, Cast Iron, Japanned.

No. 15—Projects 8 inches.....Per Dozen, **$1.25**

Packed—One Dozen in a Box.

HARNESS HOOKS



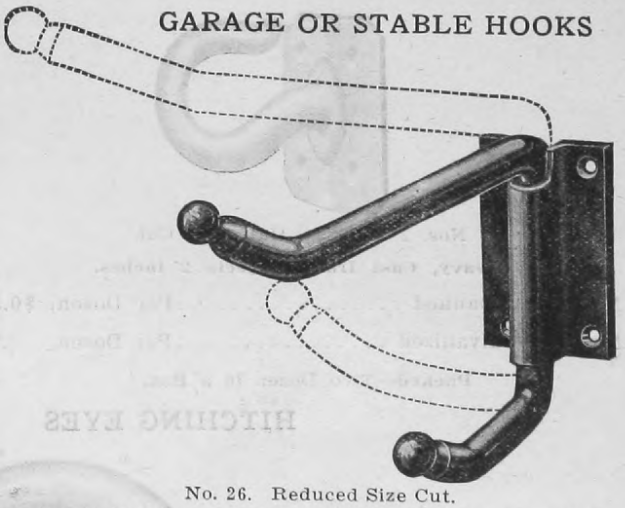
Nos. 2 to 13. Reduced Size Cut.

Extra Heavy, Double Harness Hooks, Cast Iron, Japanned.

	Per Dozen
No. 2—Projects 6 inches	$1.25
No. 12—Projects 8 inches	1.45
No. 13—Projects 12 inches	3.70

Packed—No. 13, Half Dozen; Others, One Dozen in a Box.

GARAGE OR STABLE HOOKS



No. 26. Reduced Size Cut.

Sharon Folding Garage or Stable Hooks, for hanging up tires, chains, robes, hose, etc. Made entirely of Steel, Black Japanned. Locks firmly into position when in use; folds back out of the way when not in use.

No. 26				
Projects, in.	8	10	12	
Per Dozen..	$.....	.....	.....	

Packed—One Dozen in a Box.

SIGN HOOKS

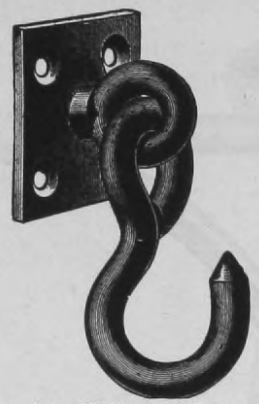
Wrought Steel Sign Hooks. Full Size Cut of 4 inch.

Length of Hook.....Inches,	4	5	6	7	8
No. 80—Plain.....Per Dozen,	$1.70	1.90	2.10	2.50	2.50

Packed—Two Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HAMMOCK HOOKS

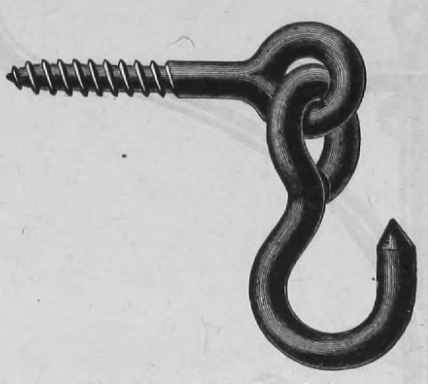


No. 38. Half Size Cut.

Heavy, Wrought Steel, ⅜ inch, Tinned.

No. 38—With 2x2 inch Plate.....Per Dozen, $2.75

Packed—One Dozen in a Box.



No. 48. Half Size Cut.

Heavy, Wrought Steel, ⅜ inch, Tinned.

No. 48—With Screw.....Per Dozen, $2.40

Packed—One Dozen in a Box.

CLOTHES LINE HOOKS

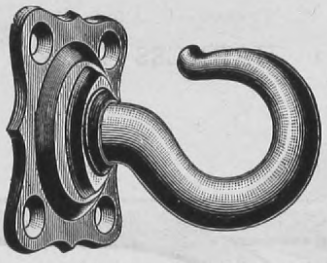
Nos. 2 and 22. Half Size Cut.

Heavy, Cast Iron, Projects 2 inches.

No. 2—Japanned.....Per Dozen, $0.55

No. 22—Galvanized.....Per Dozen, .92

Packed—Two Dozen in a Box.



Nos. 1 and 21. Half Size Cut.

Heavy, Cast Iron, Projects 3 inches.

No. 1—Japanned.....Per Dozen, $1.20

No. 21—Galvanized.....Per Dozen, 1.85

Packed—One Dozen in a Box.

HITCHING EYES

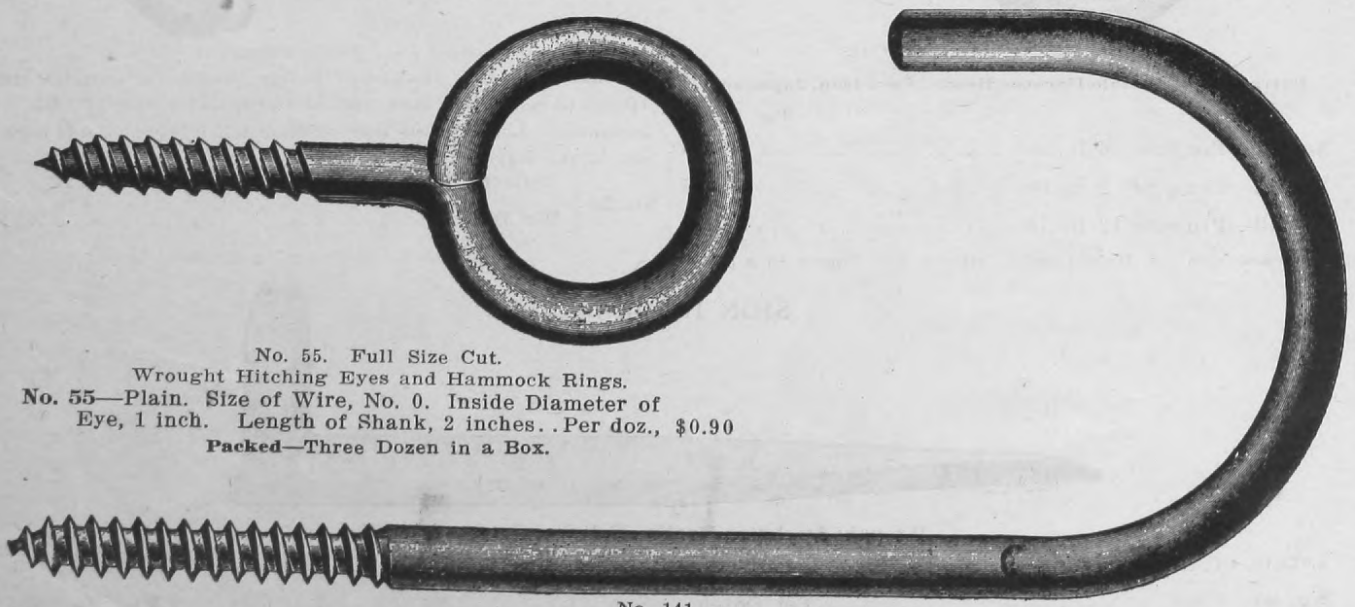
No. 55. Full Size Cut.

Wrought Hitching Eyes and Hammock Rings.

No. 55—Plain. Size of Wire, No. 0. Inside Diameter of Eye, 1 inch. Length of Shank, 2 inches..Per doz., $0.90

Packed—Three Dozen in a Box.

STORE HOOKS



No. 141.

Length over all 7½ inches. Otherwise Cut is Full Size.

No. 141—Bicycle and Store Hooks. Plain. Size of Wire, No. 0.....Per gross, $12.00

A heavy Ceiling Hook suitable for the overhead storage of Bicycles and other goods.

Packed—Quarter Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

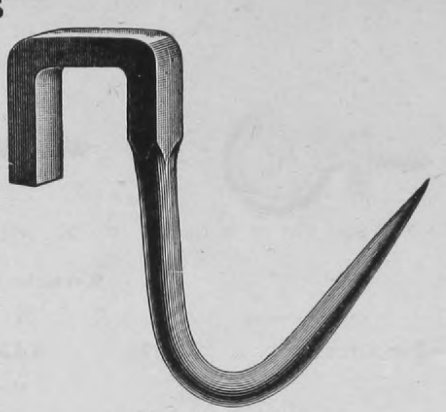
MEAT HOOKS

Nos. 22 and 24. Half Size Cut of No. 22.

Wrought Steel Meat Hooks, Tinned. To Screw In.

Nos.	22	24
Size of Steel, inch	¼	⅜
Height, inches	1⅞	2⅞
Per Gross	$11.00	21.00

Packed—No. 22, Half Gross; No. 24, Quarter Gross in a Box.



Nos. 200 to 235.

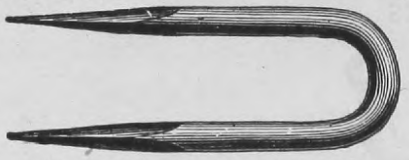
Half Size Cut of No. 200.

Wrought Steel Meat Hooks, Tinned. For Rack Bars.

Nos.	200	201	205	211	235
Size of Steel, in.	5/16	5/16	5/16	⅜	½
Size of Bar, in.	½	1	2	1	2
Per Gross	$38.00	38.00	38.00	45.00	67.00

Packed—Nos. 200 to 211, Quarter Gross; No. 235, One-Twelfth Gross in a Box.

WROUGHT STEEL STAPLES



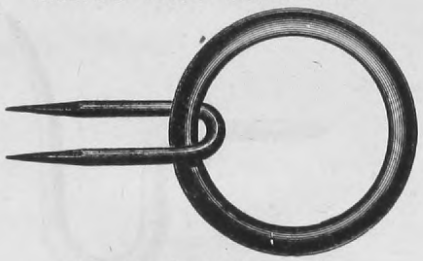
No. 5 Full Size Cut of 2 inch.

No. 5. Plain Wrought Steel Staples.

Inches	1¼	1½	1¾	2	2¼	2½	3	3½	4
No. 5—Per Gross	$1.20	1.25	1.50	1.70	2.00	2.35	3.20	3.70	5.25

Packed—1¼ to 2½ inch, One Gross; 3 to 4 inch, Half Gross in a Box.

RINGS AND STAPLES



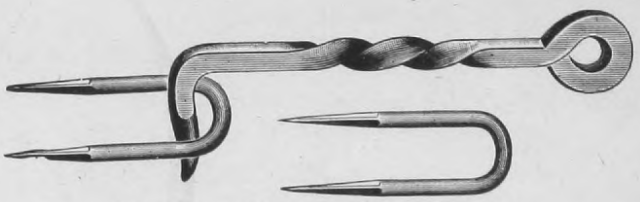
No. 55. Half Size Cut.

Wrought Iron Trap Door Rings and Staples.

No. 55—Diameter of Ring 2½ inches. Per Gross, $19.00

Packed—Quarter Gross in a Box.

HOOKS AND STAPLES



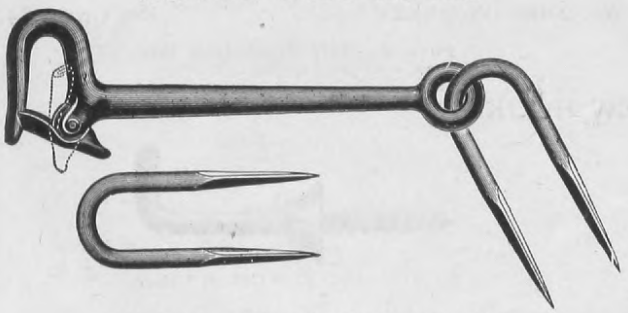
No. 10. Half Size Cut of 4½ inch.

Plain Wrought Iron Hooks and Staples.

Inches	4	4½	5	6
No. 10—Per Gross	$10.00	11.00	12.00	14.00

Packed—Quarter Gross in a Box.

SAFETY GATE HOOKS



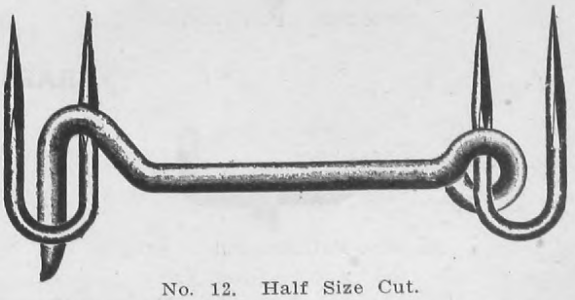
No. 100. Half Size Cut of 5 inch.

Malleable Iron Hook, Wrought Steel Staples, Tinned.

Inches	4	5	6
No. 100—Per Gross	$13.00	14.00	17.00

Packed—One-Sixth Gross in a Box.

HOOKS AND STAPLES



No. 12. Half Size Cut.

Bright Wire Hooks, with Staples, Extra Heavy.

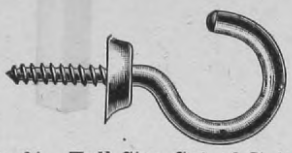
Inches	5x5/16	6x5/16
No. 12—Per Gross	$24.00	30.00

Packed—Quarter Gross in a Box.

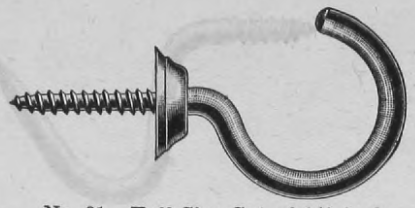
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BRASS CUP HOOKS

No. 81. Full Size Cut of ¾ inch.



No. 81. Full Size Cut of ⅞ inch.



No. 81. Full Size Cut of 1¼ inch.

Wrought Brass Metal, Polished and Lacquered.

Inches	½	⅝	¾	⅞	1	1⅛	1¼	1½
No. 81—Per Gross	$3.75	3.85	4.00	4.50	5.25	7.00	9.00	11.00

Packed—One Gross in a Box.

Note.—For **Bright Wire Cup Hooks,** see Page 1393.

KITCHEN HOOKS

No. 567. Full Size Cut.

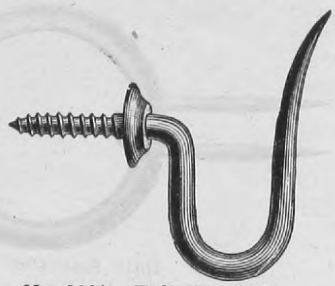
No. 567—Kitchen Hooks, made of No. 7 Wire, Brass Plated . . . . . Per Gross $4.00

Packed—One Gross in a Box.

DESK HOOKS

No. 2000. Full Size Cut.

TELEGRAPH HOOKS



No. 2001. Full Size Cut.

Wrought Brass Telegraph Hooks.

No. 2001—Polished . . . . . Per Gross, $4.40

Packed—Half Gross in a Box.

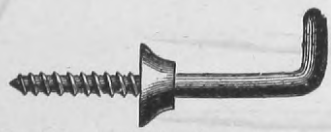
Wrought Brass Desk Hooks.

No. 2000—Polished . . . . . Per Gross, $4.40

Packed—Half Gross in a Box.

BRASS SCREW HOOKS

No. 412. Full Size Cut of ½ inch.



No. 412. Full Size Cut of 1 inch.

Wrought Brass Metal, Polished and Lacquered.

Inches	½	⅝	¾	⅞	1	1¼	1½
No. 412—Per Gross	$3.75	3.85	4.00	4.50	5.25	9.00	11.00

Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOOKS AND EYES

No. 66. Full Size Cut of 1½ inch.

Wrought Brass Hooks.

Double Convex. For Right or Left Hand.

Inches	¾	1	1¼	1½
No. 66—Per Gross	$1.70	1.80	2.00	2.25

Packed—One Gross in a Box.

No. 61. Full Size Cut of 1½ inch.

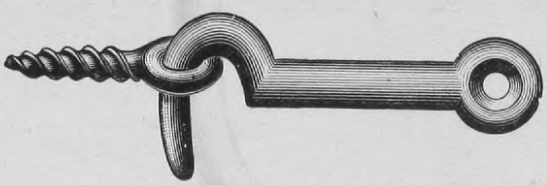
Wrought Brass Hooks and Eyes.

Double Convex. For Right or Left Hand.

Inches	1	1¼	1½
No. 61—Per Gross	$2.75	3.00	3.25

Packed—One Gross in a Box.

HOOKS AND EYES



No. 50. Full Size Cut of 2 inch.

Malleable Iron Hooks and Eyes.

Coppered, Oval. For Right or Left Hand.

Inches	1½	2
No. 50—Per Gross	$1.25	1.75

Packed—One Gross in a Box.

CABIN DOOR HOOKS

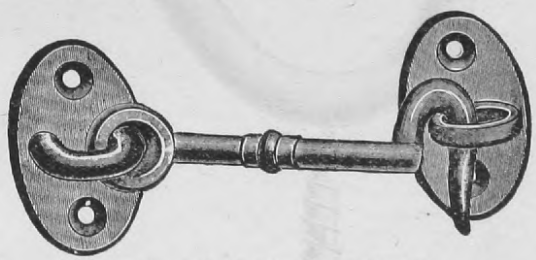
Nos. 70 and 72. Reduced Size Cut.

Cast Hook, Wrought Brass Plates

Nos. Hook, Inches	2½	3	3½	4
70—Japanned ... Per Dozen,	$0.72	.85	.95	1.10
72—Brass ..... Per Dozen,	2.70	3.10	3.60	4.30

Packed—No. 70, Three Dozen in a Box.
No. 72, Two Dozen in a Box, with Screws.

HEAVY DOOR HOOKS



No. 341. Half Size Cut of 4 inch.

Cast Brass Metal Hook and Plates, Highly Polished.

No. 340—Heavy Door Hooks, Length 3 inches.....Per Dozen, $4.00
No. 341—Heavy Door Hooks, Length 4 inches.....Per Dozen, 5.00

Packed—One Dozen in a Box.

WIRE GATE HOOKS AND EYES

No. 40. Full Size Cut of 2½ inch.

Bright Steel Wire Gate Hooks and Eyes.

Inches	1	1½	2	2½	3	3½	4	4½	5	5½	6
No. 40—Per Gross	6.50	6.50	8.00	10.00	12.00	14.50	17.00	20.00	24.00	30.00	30.00

Packed—1½ inch, One Gross; 2 to 4 inch, Half Gross; 4½ to 6 inch, Quarter Gross in a Box.

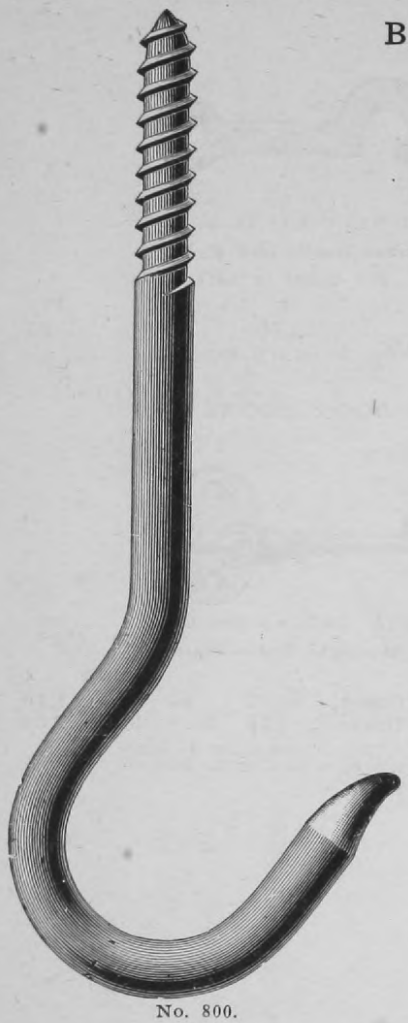
Brass Wire Gate Hooks and Eyes.

No. 1040—Brass Gate Hooks and Eyes	Inches	2	2½	3
	Per Gross	$30.00	36.00	46.00

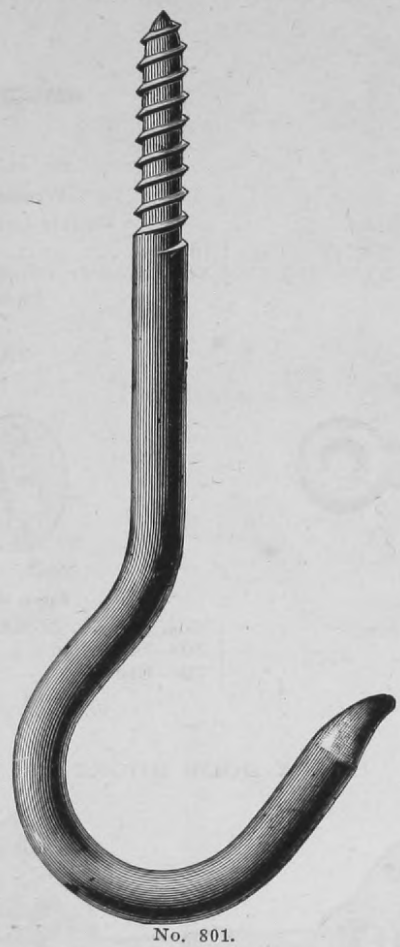
Packed—Half Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

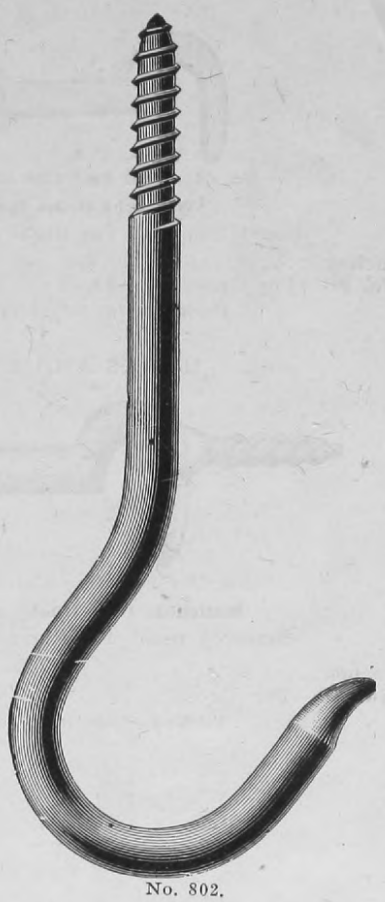
BRIGHT WIRE SCREW HOOKS



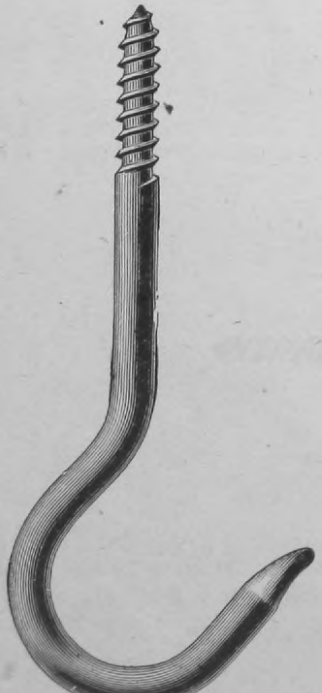
No. 800.



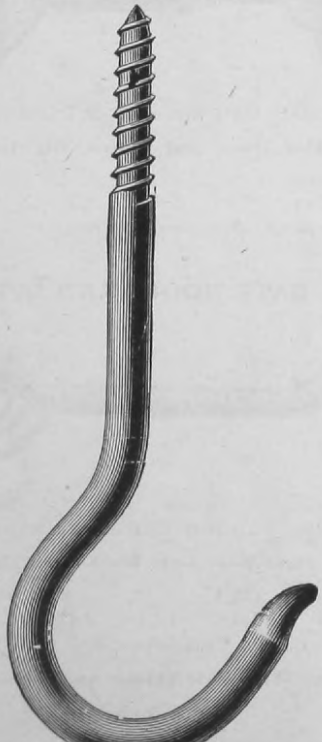
No. 801.



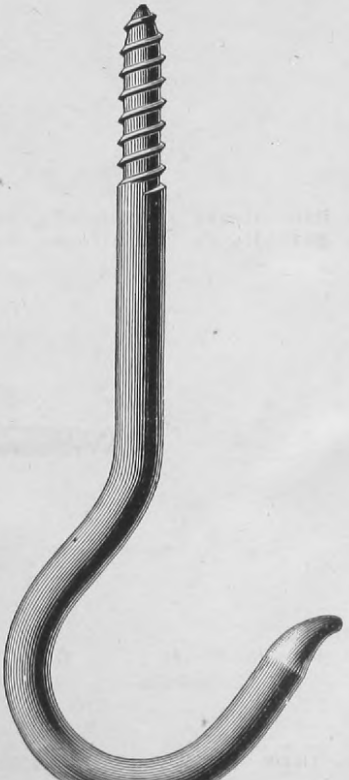
No. 802.



No. 805.



No. 804.



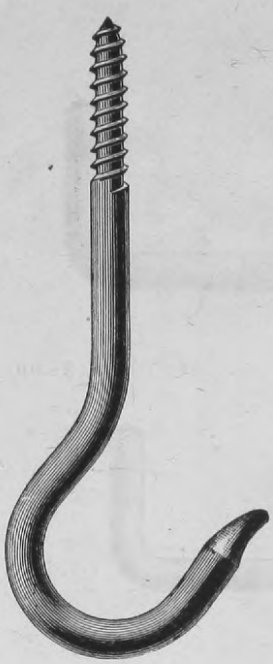
No. 803.

Note.—For list prices, see following page. Cuts are Full Size.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BRIGHT WIRE SCREW HOOKS

Full Size Cuts.

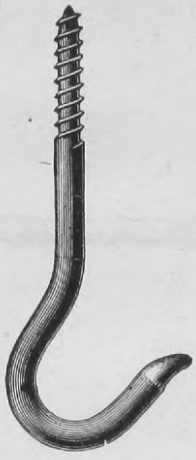


No. 806.

No. 806½.

No. 807.

No. 808.



No. 809.

No. 810.

No. 811.

No. 812.

No. 813.

No. 814.

No. 814½.

Bright Steel Wire Screw Hooks.

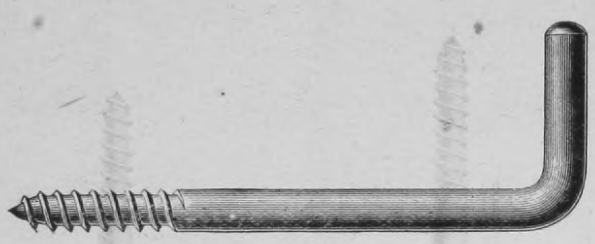
Nos.....	**800**	**801**	**802**	**803**	**804**	**805**	**806**	**806½**
Per Gross.....	$21.00	18.00	15.00	12.50	10.00	8.00	6.00	5.30
Nos.....	**807**	**808**	**809**	**810**	**811**	**812**	**813**	**814**	**814½**
Per Gross.....	$4.50	4.00	3.50	3.00	2.80	2.50	2.30	2.00	2.00

Packed—Nos. 800 to 806, Half Gross; Nos. 806½ to 814½, One Gross in a Box.

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

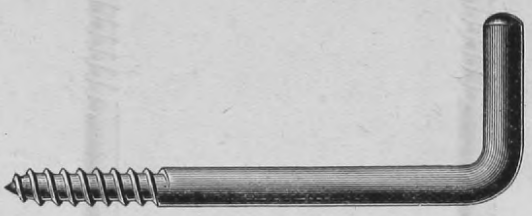
Full Size Cuts.

BRIGHT AND BRASS WIRE SCREW HOOKS



No. 904.

No. 904—Bright Steel Wire.....Per Gross, $10.00



No. 905.

No. 905—Bright Steel Wire.....Per Gross, $8.00

Nos. 906 and 1906.

No. 906—Bright Steel Wire.....Per Gross, $6.00

No. 1906—Brass Wire .....Per Gross, 30.00

No. 907.

No. 907—Bright Steel Wire.....Per Gross, $4.50

Nos. 908 and 1908.

No. 908—Bright Steel Wire.....Per Gross, $4.00

No. 1908—Brass Wire .....Per Gross, 15.00

No. 909.

No. 909—Bright Steel Wire.....Per Gross, $3.50

Nos. 910 and 1910.

Nos.	Per Gross
910—Bright Steel Wire.....	$3.00
1910—Brass Wire	10.00

No. 911.

No.	Per Gross
911—Bright Steel Wire.....	$2.80

Nos. 912 and 1912.

Nos.	Per Gross
912—Bright Steel Wire.....	$2.50
1912—Brass Wire	6.50

No. 913.

No.	Per Gross
913—Bright Steel Wire.....	$2.30

Nos. 914 and 1914.

Nos.	Per Gross
914—Bright Steel Wire.....	$2.00
1914—Brass Wire	4.00

No. 914½.

No.	Per Gross
914½—Bright Steel Wire....	$2.00

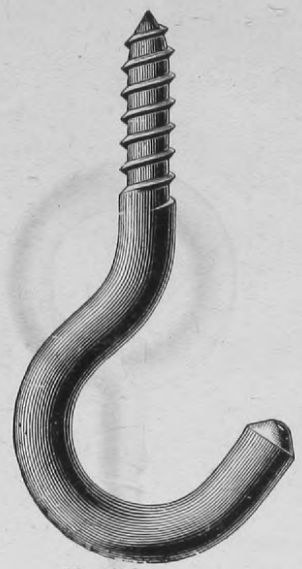
Packed—One Gross in a Box

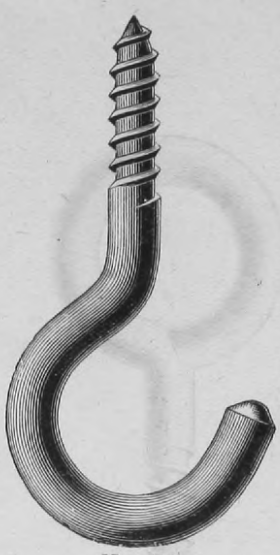
Digitized by UNIVERSITY OF MICHIGAN

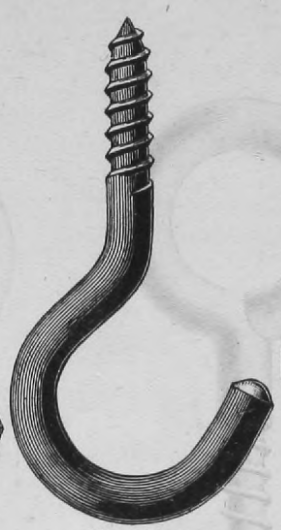
Original from UNIVERSITY OF MICHIGAN

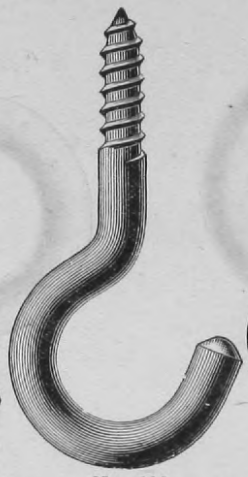
Full Size Cuts.

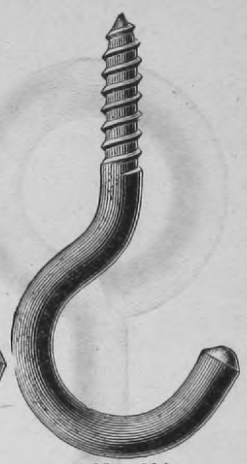
BRIGHT WIRE CUP HOOKS


No. 600.

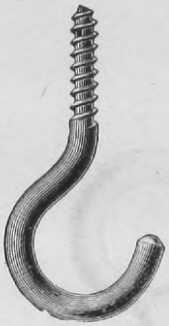

No. 601.

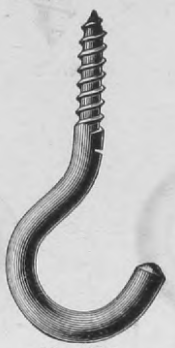

No. 602.

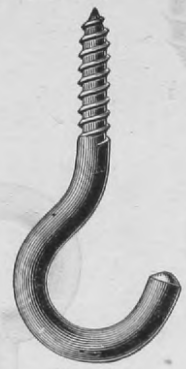

No. 603.

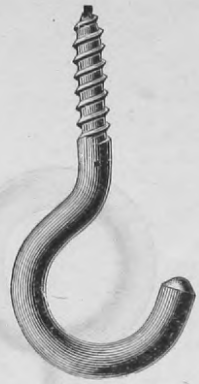

No. 604.

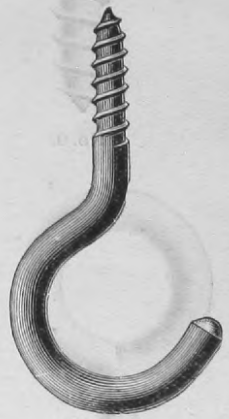
No. 610.


No. 609.


No. 608.


No. 607.


No. 606.

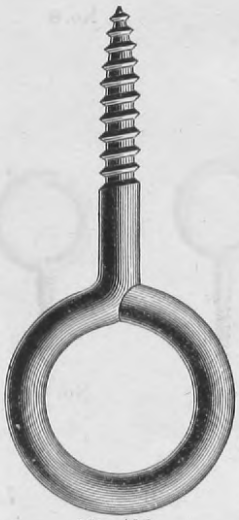

No. 605.

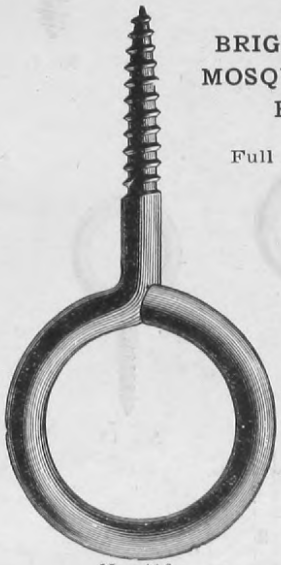
Nos.	600	601	602	603	604	605	606	607	608	609	610
Per Gross..	$21.00	18.00	15.00	12.50	10.00	8.00	6.00	4.50	4.00	3.50	3.00

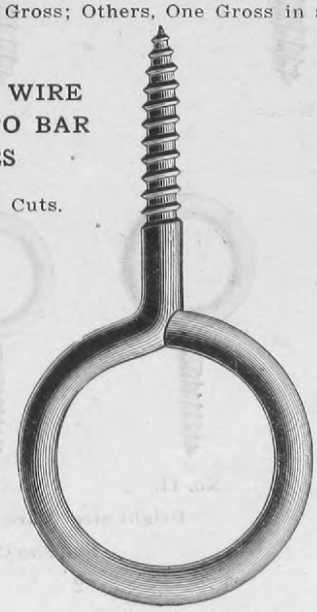
Packed—Nos. 600 to 605, Half Gross; Others, One Gross in a Box.

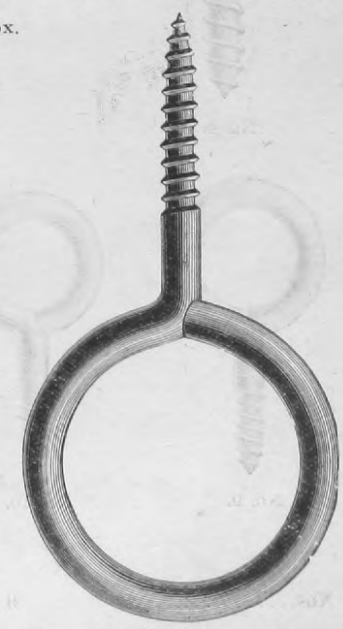
BRIGHT WIRE MOSQUITO BAR EYES

Full Size Cuts.


No. 406


No. 416.


No. 426.


No. 436.

Nos.	406	416	426	436
Inside Diameter of Eye, inches	¾	1	1⅛	1¼
Per Gross	$11.00	12.00	13.00	14.00

Packed—One Gross in a Box.

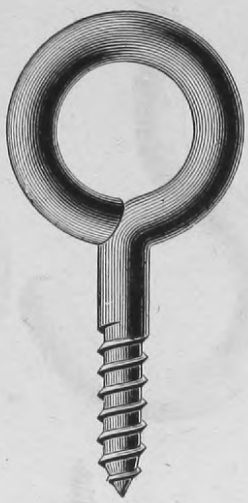
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Full Size Cuts.

BRIGHT WIRE SCREW EYES

No. 0.

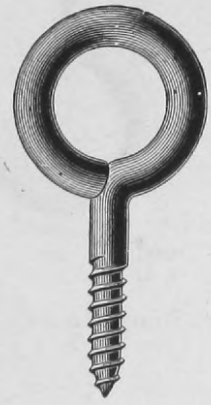
No. 1.



No. 2.

No. 3.

No. 4.



No. 5.

No. 6.

No. 7.

No. 8.

No. 9.

No. 10.

No. 11.

No. 12.

No. 13.

No. 14.

No. 14½.

Bright Steel Wire Screw Eyes.

Full Size Cuts.

Nos.	0	1	2	3	4	5	6	7
Per Gross	$16.00	13.00	11.00	9.00	7.00	5.80	4.50	3.80
Nos.	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**14½**
Per Gross	$3.30	2.80	2.50	2.00	1.70	1.50	1.50	1.50

Packed—Nos. 0 to 2, Half Gross; Nos. 3 to 14½, One Gross in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

Full Size Cuts.

BRIGHT WIRE SCREW EYES

No. 104.

No. 105.

No. 106

No. 107.

No. 108.

No. 109.

No. 110.

No. 111.

No. 112.

No. 113.

No. 114.

No. 114½.

Bright Steel Wire Screw Eyes.

Nos.....	104	105	106	107	108	109	110	111	112	113	114	114½
Per Gross,.	$7.00	5.80	4.50	3.80	3.30	2.80	2.50	2.00	1.70	1.50	1.50	1.50

Brass Wire Screw Eyes.

Nos.....	1106	1108	1110	1112	1114
Per Gross.....	$21.00	13.00	9.00	5.50	3.50

Packed—One Gross in a Box.

No. 207.

No. 208.

No. 209.

No. 210.

No. 211.

No. 212.

No. 213.

No. 214.

No. 214½.

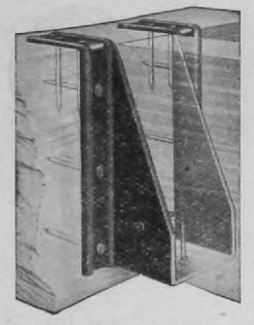
Bright Steel Wire Screw Eyes.

Nos.....	207	208	209	210	211	212	213	214	214½
Per Gross..	$3.80	3.30	2.80	2.50	2.00	1.70	1.50	1.50	1.50

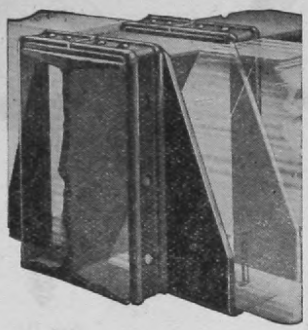
Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

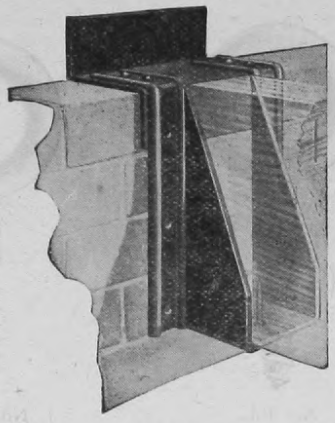
VAN DORN JOIST HANGERS



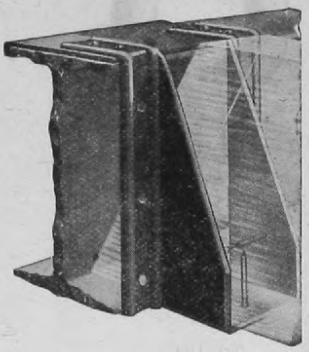
Single.



Double.



Wall.



I Beam.

The Van Dorn Hangers preserve the full strength of the Header and Joist. The bearing surface on the Header is double that of any other Hanger and allows the end of the Joist to fit tightly to the Header. It also admits of being solidly attached to the Header, which renders it stiff and immovable sidewise. Neat in appearance and easily applied.

Made from Best Quality of Uniformly Soft Ductile Steel

SINGLE HANGERS, REGULAR SIZES.

Joist Inches	Each	Joist Inches	Each	Joist Inches	Each	Joist Inches	Each	Joist Inches	Each
2 x 6	$0.26	3x 6	$0.30	5x 8	$0.70	8x 8	$0.88	12x12	$1.40
2 x 8	.28	3x 8	.32	5x10	.75	8x10	.90	12x14	1.50
2 x10	.30	3x10	.34	5x12	.80	8x12	1.02	12x16	1.60
2 x12	.32	3x12	.36	5x14	.85	8x14	1.11	12x18	1.70
2 x14	.40	3x14	.40	5x16	.90	8x16	1.18		
2 x16	.42	3x16	.44	5x18	1.00	8x18	1.25		
2 x18	.46	3x18	.50						
2½x 6	.45	4x 6	.35	6x 8	.50	10x10	.95	14x14	1.80
2½x 8	.46	4x 8	.36	6x10	.52	10x12	1.10	14x16	1.95
2½x10	.47	4x10	.40	6x12	.58	10x14	1.18	14x18	2.10
2½x12	.48	4x12	.46	6x14	.64	10x16	1.20		
2½x14	.50	4x14	.50	6x16	.68	10x18	1.30		
2½x16	.56	4x16	.52	6x18	.72				
2½x18	.60	4x18	.56						

DOUBLE HANGERS, REGULAR SIZES.

When figuring the Double Hanger, calculate it as Two Regular Single Hangers.

If for Steel Girders, 7 inches or less across the top, add to price of two Single Hangers..... $0.30
If for Steel Girders, 7½ inches or more across the top, add to price of two Single Hangers..... .40

Note.—Specify width of beam or girder that hanger is to straddle.

VAN DORN WALL, CONCRETE BLOCK AND I BEAM HANGERS, REGULAR SIZES.

No. 4 WALL HANGERS—No. 5 CONCRETE BLOCK HANGERS—No. 7 I BEAM HANGERS.

Joist Inches	Each	Joist Inches	Each	Joist Inches	Each	Joist Inches	Each	Joist Inches	Each
2 x 6	$0.52	3x 6	$0.60	5x 8	$1.32	8x 8	$1.87	12x12	$3.12
2 x 8	.54	3x 8	.62	5x10	1.38	8x10	1.90	12x14	3.24
2 x10	.56	3x10	.65	5x12	1.44	8x12	2.03	12x16	3.36
2 x12	.59	3x12	.67	5x14	1.50	8x14	2.15	12x18	3.45
2 x14	.68	3x14	.72	5x16	1.56	8x16	2.23		
2 x16	.72	3x16	.77	5x18	1.68	8x18	2.32	14x14	3.78
2 x18	.80	3x18	.84					14x16	3.96
				6x 6	1.10	10x10	2.34	14x18	4.74
2½x 6	.73	4x 6	.72	6x 8	1.20	10x12	2.51		
2½x 8	.73	4x 8	.74	6x10	1.22	10x14	2.59		
2½x10	.74	4x10	.78	6x12	1.30	10x16	2.69		
2½x12	.75	4x12	.85	6x14	1.37	10x18	2.75		
2½x14	.77	4x14	.90	6x16	1.41				
2½x16	.84	4x16	.99	6x18	1.49				
2½x18	.89	4x18	1.09						

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

DUPLEX JOIST HANGERS

Nos. 10 to 80.

Each Hanger Tested.

Nos. 90 to 93.

Duplex Joist Hangers are made of Malleable Iron and every one is thoroughly tested. They are the best and most economical hanger for timber framing, by their use the shrinkage of the joist is reduced to a minimum.

Best Malleable Iron, Japanned.

Nos.	To Carry Joist	Each
10 —2	x 6 to 2 x10 inches	$0.44
14 —2	x12 to 2 x16 inches	.68
15 —3	x 6 to 3 x10 inches	.68
18 —2½	x 6 to 2½ x16 inches	.72
20 —4	x 6 to 4 x10 inches	.76
21 —3	x12 to 3 x14 inches	.84
21X—3	x16 to 3 x20 inches	1.20
28 —4	x12 to 4 x14 inches	1.20
28X—4	x16 to 4 x20 inches	1.60
53 —5	x 8 to 5 x14 inches	1.60
53X—5	x16 to 5 x18 inches	2.00
16 —6	x 6 to 6 x 9 inches	1.10
60 —6	x10 to 6 x12 inches	1.60
60X—6	x14 to 6 x16 inches	2.00
80 —8	x 8 to 8 x12 inches	2.20

This hanger combines all the features of the No. 35 and 75 hangers, being made in one piece, however, instead of pairs.

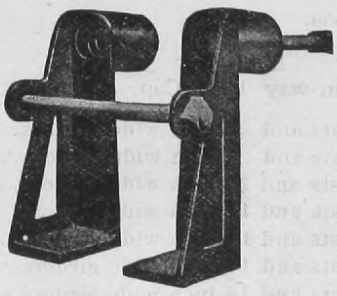
The hanger is bolted or lagged to the girder with ⅝ inch diameter bolts or lag screws, countersunk holes being provided to permit the heads to fit into the hanger. Either bolts or lag screws ½ inch diameter are used to tie the beam to the hanger.

By the use of this construction the entire building is tied together laterally. No other method of construction accomplishes this.

Best Malleable Iron, Japanned.

Nos.	To Carry Joist	Each
90—	8x14 to 8x16 inches	$3.20
91—	10x10 to 10x14 inches	3.30
92—	10x16 to 10x20 inches	4.70
93—	12x14 to 12x20 inches	5.60

DUPLEX WALL HANGERS



Nos. 35R.&L. to 77R.&L.

This is the best hanger for heavy mill construction.

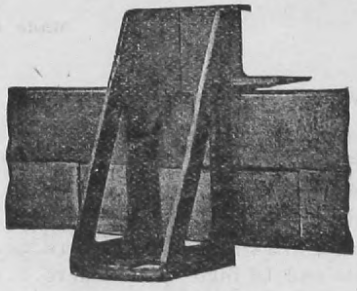
The hanger is bolted to the girder with ¾ inch diameter bolts, countersunk holes being provided to permit the bolt to fit into the hangers.

Either bolts or lag screws ½ inch diameter are used to tie the beam to the hanger.

By the use of this construction the entire building is tied together laterally. No other method of construction accomplishes this. Each pair includes one Right and Left.

Best Malleable Iron, Japanned.

	Per Pair Without Bolts
No. 35R.&L.—To carry Joist, 8x10 to 10x14 in..	$2.50
No. 75R.&L.—To carry Joist, 10x16 to 14x20 in..	4.10
No. 77R.&L.—To carry Joist, 10x22 to 16x24 in..	6.00



Nos. 100 to 280.

The manner in which the Duplex Wall Hanger is applied, proves its superiority over all other methods. Provision is also made for attaching anchors.

Gives an increased bearing for the timber.

Does not break the regular bond of masonry wall.

Prevents the decay of timber from dry rot.

Permits the timber to release itself in case of fire.

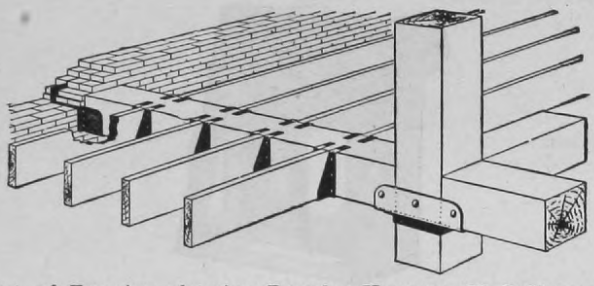
The Board of Underwriters allow a reduction in the rate of premiums on buildings where Duplex Wall Hangers are used.

Best Malleable Iron, Japanned.

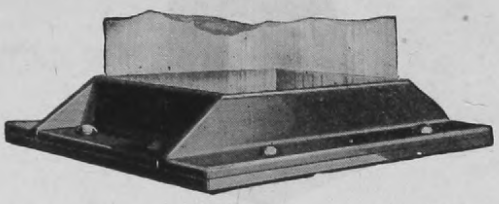
Nos.	To Carry Joist	Each
100—	2x 6 to 2x12 inches	$0.64
140—	2x14 to 2x18 inches	1.00
150—	3x 6 to 3x10 inches	.76
210—	3x12 to 3x18 inches	1.34
200—	4x 6 to 4x10 inches	1.00
280—	4x12 to 4x18 inches	1.76

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

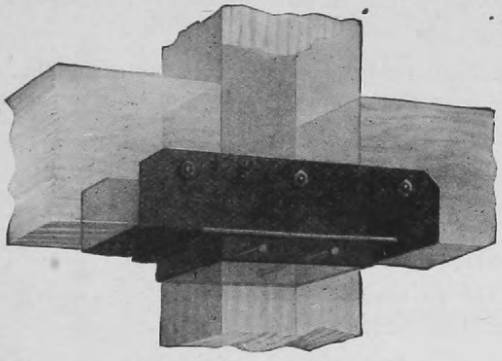
VAN DORN STEEL POST CAPS AND BASES



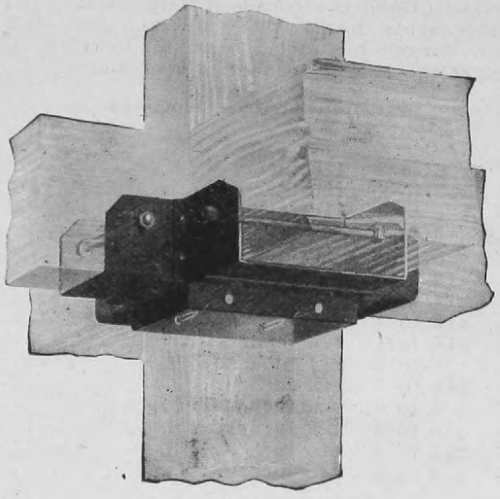
Plan of Framing showing Regular Hangers, Wall Hangers, and Three-way Post Cap.



Post Base.



Two-way Post Cap.



Four-way Post Cap.

Made from High Grade Wrought Steel.

Two-way Post Cap, Price, Each

6x 6 inch Posts and 6 inch wide girders	$3.60
8x 8 inch Posts and 8 inch wide girders	3.96
10x10 inch Posts and 10 inch wide girders	4.84
12x12 inch Posts and 12 inch wide girders	5.46
14x14 inch Posts and 14 inch wide girders	6.28
16x16 inch Posts and 16 inch wide girders	7.22
18x18 inch Posts and 18 inch wide girders	8.80

Four-way Post Cap, Price, Each

6x 6 inch Posts and 6 inch wide girders	$5.48
8x 8 inch Posts and 8 inch wide girders	5.98
10x10 inch Posts and 10 inch wide girders	7.30
12x12 inch Posts and 12 inch wide girders	8.25
14x14 inch Posts and 14 inch wide girders	9.42
16x16 inch Posts and 16 inch wide girders	10.85
18x18 inch Posts and 18 inch wide girders	13.20

Three-way Post Cap, Price, Each

6x 6 inch Posts and 6 inch wide girders	$4.58
8x 8 inch Posts and 8 inch wide girders	5.04
10x10 inch Posts and 10 inch wide girders	6.10
12x12 inch Posts and 12 inch wide girders	6.90
14x14 inch Posts and 14 inch wide girders	7.85
16x16 inch Posts and 16 inch wide girders	9.12
18x18 inch Posts and 18 inch wide girders	11.00

Post Bases, Price, Each

6x 6 inch Posts	$1.50
8x 8 inch Posts	2.00
10x10 inch Posts	2.50
12x12 inch Posts	2.75
14x14 inch Posts	4.00
16x16 inch Posts	6.00
18x18 inch Posts	7.00

NOTE.

Special Post Caps and Bases can be made any size to order.

Caps are special when girders are different widths than posts or vice versa, and in figuring them the largest width measurement, whether it be of posts or girder, will govern the price.

One-way caps are special, and should be figured same as two-way caps; a corner cap is a special two-way cap and should be estimated same as a three-way cap.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

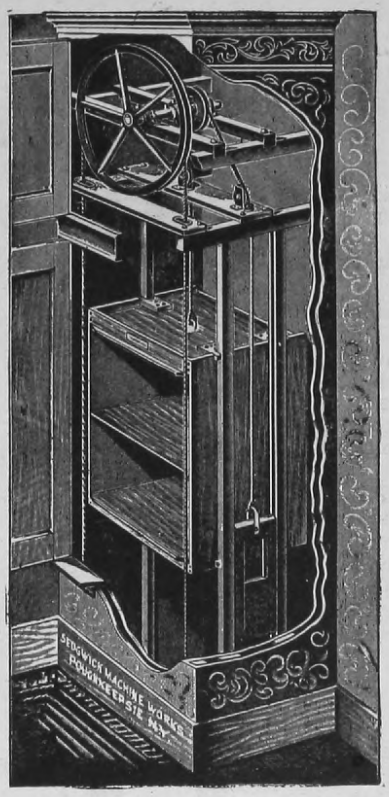


Fig. 1.

SEDGWICK DUMB WAITERS

"AUTOMATIC BRAKE"
Dumb Waiter Machines

The Sedgwick Automatic Brake Dumb Waiter Machines are a great improvement over all Automatic Lock and other Self-Retaining Machines, and are especially designed for purchasers who consider just as carefully what they are getting, as what they are paying.

The Automatic Brake is independently supported, thus relieving the machine of all end thrust, strain and unnecessary wear.

The Brake does not lock fast, but is applied and regulated by the load, holding the car securely at any point, allowing it to be raised and lowered smoothly and easily without the jumping and jarring common to all other Automatic Dumb Waiters.

These Machines are superior in principle, design, construction and finish, and are unequalled for durability and security.

They are manufactured in large quantities with special tools, insuring the greatest accuracy, and are sold at the lowest price consistent with the quality of the mechanism.

All shafting is of steel, and all bearings are fitted with steel anti-friction rollers to reduce friction, the machine running easily, quickly and smoothly.

Fig. 1—Shows the Sedgwick Dumb Waiter properly erected with Door or Panel in front of machine and Studs back of Runs with the well either ceiled or plastered.

Fig. 2—Shows the Sedgwick Dumb Waiter complete, ready for erecting in well.

Suitable for all Purposes

Where a good strong reliable machine is required.

Nos. 1 and 2 Machines are the sizes generally used in private houses.

Nos. 3 and 4 Machines are suitable for larger residences and apartment houses.

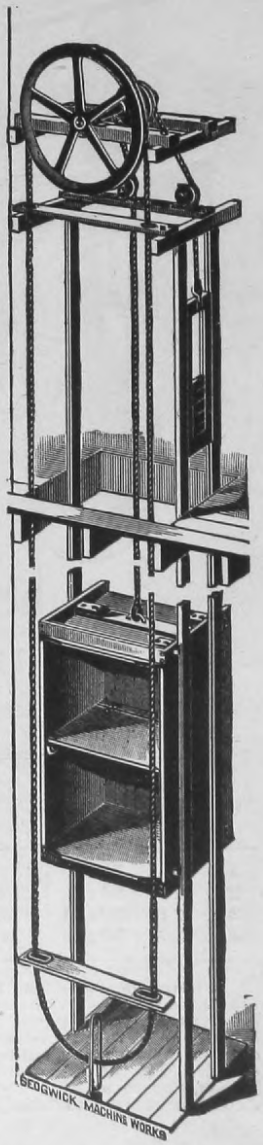


Fig. 2.

"Automatic Brake" Dumb Waiter Outfits

Order Complete Outfits to insure best results. All catalogue sizes are carried in stock by the manufacturer. In ordering give "total height over all" and state if you wish us to splice ropes, for which we make no charge.

Nos. 2, 3 and 4 Cars fitted with one hinged shelf are 36 inches high inside, No. 1 Cars 30 inches high inside.

Nos. 2, 3 and 4 Cars fitted with two solid shelves are 42 inches high inside, No. 1 Cars 36 inches high inside.

All Double-Face Cars are regularly fitted with two solid shelves.

These Outfits are designed for use when usual loads will not exceed twenty-five pounds, although they are strong enough to carry more. When usual loads will exceed twenty-five pounds, we recommend the geared outfits described on the following page.

Single-Face

Nos.	Hand Wheel Diameter Inches	Car Dimensions Outside Width Depth Inches	Space Required Width Depth Inches	Machine Only	Outfit Complete *	Add for Extra Height Per Foot	Weight Complete Outfit Pounds
1	16	20x16	23x19	$30.00	$54.00	$0.35	250
2	20	24x20	27x23	37.50	66.00	.40	300
3	24	28x24	31x27	45.00	80.00	.45	350
4	30	34x30	37x33	52.50	93.00	.50	450

Double-Face

Nos.	Hand Wheel Diameter Inches	Car Dimensions Outside Width Depth Inches	Space Required Width Depth Inches	Machine Only	Outfit Complete *	Add for Extra Height Per Foot	Weight Complete Outfit Pounds
1	16	20x16	23x20	$36.00	$63.00	$0.50	250
2	20	24x20	27x24	45.00	75.00	.55	300
3	24	28x24	31x28	52.50	90.00	.60	350
4	30	34x30	37x34	60.00	105.00	.65	450

***Complete** Outfit includes—

Machine, mounted on platform ready to erect. Also necessary rope guards.

Car, strong, light and well finished, with Guide Shoes and Thimble and Staple for rope.

Adjustable Counterweight, to properly overbalance car.

Guide Runs, for both car and counterweight, for total height of 20 feet or less over all.

All Ropes, for total height over all of 20 feet or less.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GEARED OUTFIT

SEDGWICK DUMB WAITERS

HIGH SPEED

"GEARED"

Dumb Waiter Outfits

The Sedgwick Geared Dumb Waiters, illustrated on the left, are especially desirable in Hospitals, Hotels, Restaurants and Commercial Establishments, where loads exceeding twenty-five pounds are regularly handled.

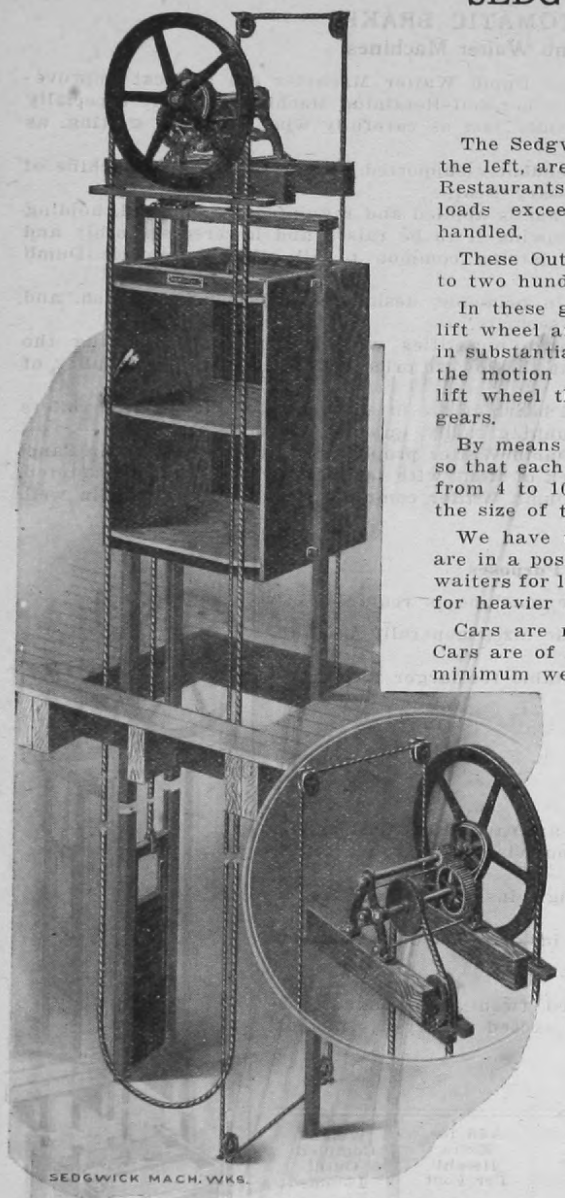
These Outfits will give good results with loads up to two hundred pounds.

In these geared machines, the hand wheel and the lift wheel are on separate shafts, which are mounted in substantial iron frames, run on roller bearings, and the motion of the hand wheel is transmitted to the lift wheel through a pair of carefully designed iron gears.

By means of these gears we can increase the ratio so that each pound of pull on the hand rope will raise from 4 to 10 pounds, depending upon the gears used, the size of the hand wheel, etc.

We have these gears in different sizes so that we are in a position to furnish very rapid running dumb waiters for light loads, and easy running dumb waiters for heavier loads.

Cars are made from selected Ash Lumber. These Cars are of special design and construction to secure minimum weight and maximum strength.



Nos. 1, 2, 3 and 4.

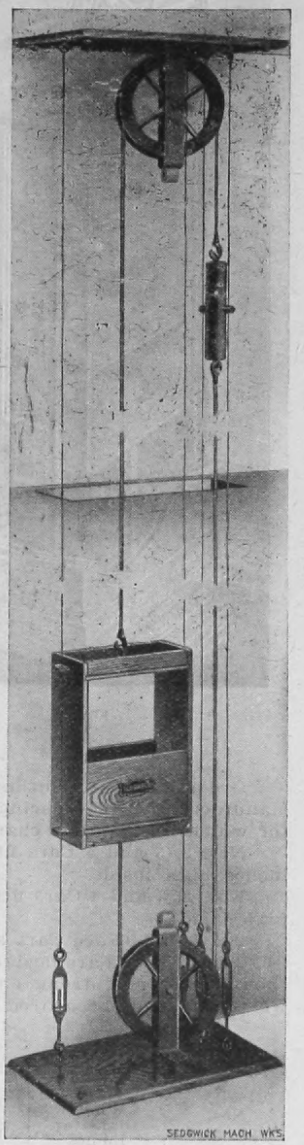
Steel Cars furnished where desired. Prices of Steel Cars (Cars only)—No. 1, $60.00; No. 2, $70.00; No 3, $80.00; No. 4, $100.00.

Order Complete Outfits to insure best results. All Catalogue Sizes are carried in stock. In ordering give "total height over all" and state if you wish us to splice ropes, for which we make no charge.

Nos. 2, 3 and 4 Cars fitted with one hinged shelf are 36 inches high inside. No. 1 Cars 30 inches high inside.
Nos. 2, 3 and 4 Cars fitted with two solid shelves are 42 inches high inside. No. 1 Cars 36 inches high inside.

These Outfits are designed for use where usual loads exceed twenty-five pounds.

Because of their strength and ease of operation they will give excellent service where other dumb waiters have been unsatisfactory.



High Speed.

"Geared" Band Brake Dumb Waiter Outfits

Single-Face

Nos.	Hand Wheel Diam. Inches	Car Dimen. Outside W'th D'th Inches	Space Required W'th D'th Inches	Machine Only	Outfit Complete *	Add for Extra Height Per Ft.	Weight Complete Outfit Pounds
1	16	20x16	23x19	$50.00	$ 90.00	$0.60	400
2	20	24x20	27x23	52.00	100.00	.70	450
3	24	28x24	31x27	56.00	110.00	.80	500
4	30	34x30	37x33	60.00	125.00	.90	550

Double-Face

Nos.	Hand Wheel Diam. Inches	Car Dimen. Outside W'th D'th Inches	Space Required W'th D'th Inches	Machine Only	Outfit Complete *	Add for Extra Height Per Ft.	Weight Complete Outfit Pounds
1	16	20x16	23x20	$57.50	$100.00	$0.90	400
2	20	24x20	27x24	60.00	112.00	1.00	450
3	24	28x24	31x28	65.00	125.00	1.10	500
4	30	34x30	37x34	70.00	142.00	1.30	550

*__Complete__ Outfit includes—__Machine,__ mounted on platform ready to erect. Also necessary rope guards. __Car,__ strong, light and well finished, with Guide Shoes and Thimble and Staple for rope. __Adjustable Counterweight,__ to properly overbalance car. __Guide Runs,__ both for car and counterweight, for total height of 20 feet or less over all. __All Ropes,__ for total height over all of 20 feet or less, including Cable to carry Car and Weight.

High Speed Dumb Waiters

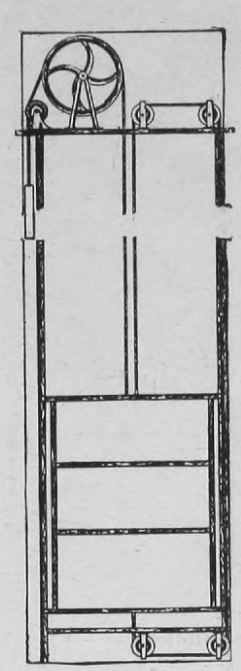
For Light Loads such as messages, newspaper copy, orders, bills, etc., this small rapid-running waiter is very suitable. It can be arranged for any height. Car measurement 10 inches wide, 6 inches deep, 17 inches high.

Outfit—Complete with Guides (for 20 ft. height)
Space required 18x8½ inches.....Each, $37.50
Extra Feet of Hoist .....Per Foot, .15

Special Dumb Waiter catalogs mailed on request.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DUMB WAITER FIXTURES



Buhl.

THE BUHL.

This Dumb Waiter is adapted to all places where 50 pounds or less are to be carried. Cut shows how same is to be erected.

Each Machine is packed in a box, containing all Pulleys and Standards necessary to complete the outfit.

Dealers can handle these goods without repacking. Any ordinary weight will answer to counterbalance the Car.

Not suitable for use in wells larger than 18 inches square.

Measurements.

Large Wheel..... 12 inches
Standard..... 4 inches
Small Wheel..... 3 inches

Buhl Dumb Waiter Fixtures only.....Per Set, $9.00

Rope, Weight, or Car not included.

Full directions for erecting packed with each Set.

THE PARAGON.

Self-Retaining and Automatic.

This Dumb Waiter is adapted for all places where 150 pounds or less are to be carried. Cut shows how same is to be erected.

Constructed so that it will hold the Car stationary at any point. It works easily and with perfect safety, for the moment the operator ceases pulling the hand rope up or down the automatic clutch in shaft will hold the Car in its place.

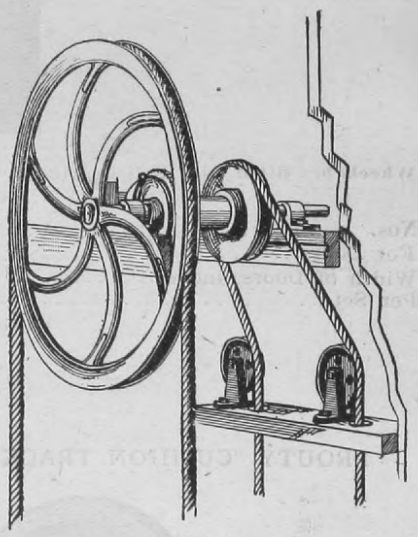
Each Machine is packed in a box, containing Pulleys and Shaft. Hoist Wheels are packed in a crate. Use ⅝ inch rope.

Paragon Dumb Waiter Fixtures Only.

Nos.	For Wells not larger than	Hoist Wheel Inches	Shaft Inches	Capacity Pounds	Single Face Per Set
P3	32×32 in.	30	24	150	$37.00
P2	27×27 in.	20	19	100	30.00

Rope, Weight, or Car not included.

Full directions for erecting packed with each Set.



Paragon

New York.

THE NEW YORK SAFETY.

Adapted to all places where 75 pounds or less are to be carried. Cut shows how same is to be erected.

Constructed with Patent Brake Grip and Safety Rope.

Set Consists of

Six 8 inch Wheels,
Two 4 inch Wheels,
Five 1¼ inch Thimbles,
One ¾ inch Thimble,
One Pulley for Weight and Safety Rope,
One Patent Brake Grip,
One Hooded Pulley for Grip,
One Ring for Brake Cord,
One Patent Plate,
Four Car Guides,
One Ring for Safety Rope.

Not suitable for well holes larger than 24 inches square.

New York Safety Dumb Waiter Fixtures only.....Per Set, $22.50

Rope, Weight, or Car not included.

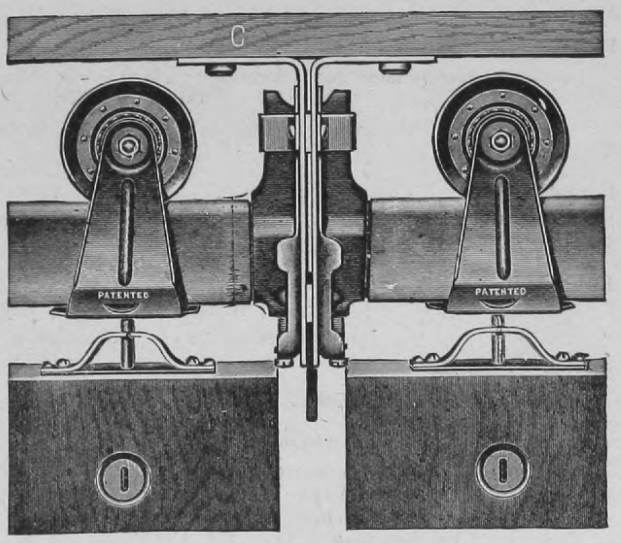
Samples of Rope and full directions for erecting packed with each Set.

Note.—When desired we can furnish the above Dumb Waiters with Counterweight, Guide Runs, Weight Runs, Car, and all Ropes complete. Prices on application.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOUSE DOOR HANGERS

BRIDGEPORT

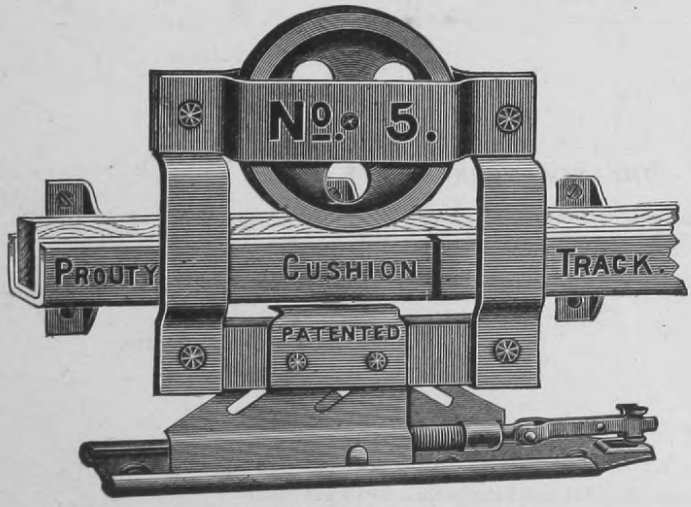


Wheels are fitted with Ball Bearings. **Track** is made of Polished Steel. **Floor Guides** are Rubber Tired Rollers.
Can be used in single 2x4 inch Stud Partitions.

Nos.	B36S	B42S	B48S	B60S	BB72D	BB84D
For Doors	Single	Single	Single	Single	Double	Double
Width of Doors, inches	30-36	30-42	44-48	54-60	60-72	76-84
Per Set	$4.00	4.25	4.50	5.00	8.00	8.50

Packed—One Set in a Box, with Stops, Guides and Screws

PROUTY "CUSHION TRACK," NOISELESS



Nos. 5S and 5D.

The Wheels are fitted with Special Noiseless Bearings. The Shaft is hardened and Sound Deadening Compression Felt Washers prevent Wheel from rattle or side play.

The Track is constructed with Kiln Dried Hard Maple Rail, mounted in a Felt Cushion, supported by a Metal Case.

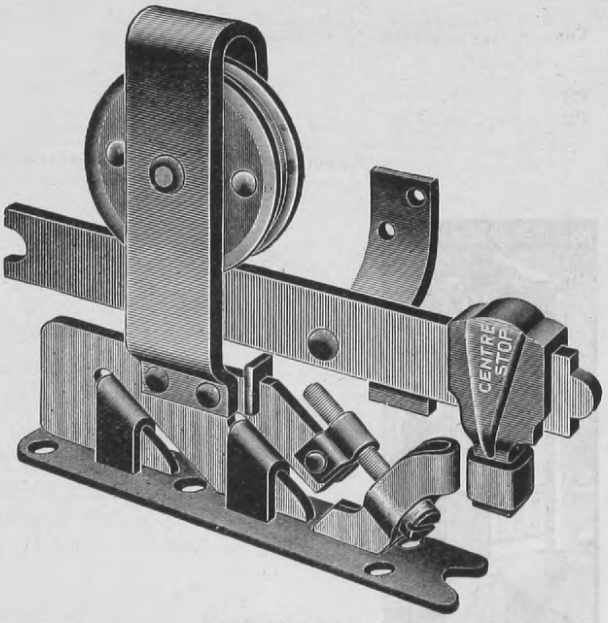
The Floor Guides are Special Rubber Tired Rollers.

No. 5S—For Single Doors, 8 feet of Track.....Per Set, $2.85

No. 5D—For Double Doors, 14 feet of Track.....Per Set, 5.70

Packed—One Set in a Box, with Stops, Guides and Screws.

R-W MODEL



Nos. 12S and 12D.

The Wheels are fitted with Double Row **Roller Bearings** and Noiseless Fibre Tread turned Flat.

The Track is of Flat Steel and fitted with end stops.

The Floor Guides are Rubber Tired Rollers, making an excellent hanger combination.

Adjustment is easily accessible. Distance from top of door to top of track 3½ inches.

No. 12S—For Single Doors, 8 feet of Track.....Per Set, $3.00

No. 12D—For Double Doors, 14 feet of Track.....Per Set, 6.00

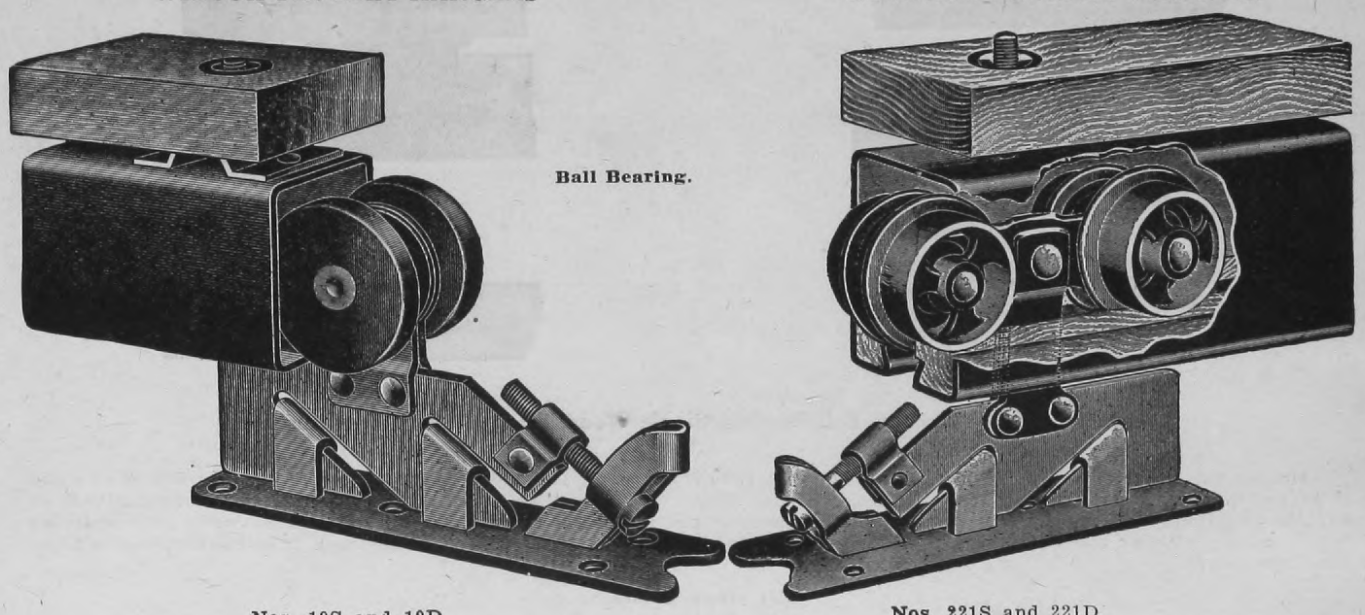
Packed—One Set in a Box, with Stops, Guides and Screws.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

HOUSE DOOR HANGERS

WILCOX TROLLEY HANGERS

ADVANCE TROLLEY HANGERS



Ball Bearing.

Nos. 19S and 19D.

Nos. 221S and 221D.

Wilcox Trolley, Ball Bearing Hangers.

The Wheels are a Special Vulcanized Fibre with Flat Tread, on Hardened Steel Shaft with Tool Steel Balls and Cones. The Track is bolted to a Wood Header and can be removed from opening after house is finished. Capable of **Liberal Adjustment** in all its parts.

For Single Doors.

A Single Door Set consists of One piece of Trolley Track for Nos. 13 to 15, Two pieces for Nos. 15½ and 16, complete with Wood Header and Adjusting Screws, One Floor Guide and Two Hangers complete.

No. 19S—Wilcox Trolley Ball Bearing Hangers..	Size, Nos.	13	13½	14	14½	15	15½	16
	Size of Opening, feet..	3	3½	4	4½	5	5½	6
	Per Set	$3.00	3.25	3.50	3.75	4.00	4.50	4.75

Packed—One Set in a Box, with Stops, Guides and Screws.

For Double Doors.

A Double Door Set consists of Two pieces of Trolley Track, complete with Wood Headers and Adjusting Screws, One Center Stop, Two Floor Guides and Four Hangers complete.

No. 19D—Wilcox Trolley Ball Bearing Hangers..	Size, Nos.	25	25½	26	26½	27
	Size of Opening, feet.....	5	5½	6	6½	7
	Per Set	$6.00	6.00	6.00	6.25	6.50

Packed—One Set in a Box, with Stops, Guides and Screws.

No. 19S—Single Door Hangers, without Track.....Per Set, $1.50

No. 19D—Double Door Hangers, without Track.....Per Set, 3.00

Advance Trolley, Noiseless Ball Bearing Hangers

The Wheels are turned to fit the track and fitted with Hardened Ball Bearings, no noise or friction. The Track is of Clincher Type with Hard Maple Runways, all bolted to a Wood Header and can be removed from opening after house is finished. The four wheel Truck has a forged steel yoke and is center hung.

For Single Doors.

A Single Door Set consists of One Piece of Trolley Track for Nos. 13 to 15, Two pieces for Nos. 15½ and 16, complete with Wood Header and Adjusting Screws, One Floor Guide and Two Hangers complete.

No. 221S—Advance Noiseless Ball Bearing Hangers..	Size, Nos.	13	13½	14	14½	15	15½	16
	Size of Opening, feet..	3	3½	4	4½	5	5½	6
	Per Set	$4.00	4.40	4.75	5.15	5.50	5.90	6.25

Packed—One Set in a Box, with Stops, Guides and Screws.

For Double Doors.

A Double Door Set consists of Two pieces of Trolley Track, complete with Wood Header and Adjusting Screws, One Center Stop, Two Floor Guides and Four Hangers complete.

No. 221D—Advance Noiseless Ball Bearing Hangers..	Size, Nos.	25	25½	26	26½	27
	Size of Opening, feet.....	5	5½	6	6½	7
	Per Set	$8.00	8.00	8.00	8.40	8.75

Packed—One Set in a Box, with Stops, Guides and Screws.

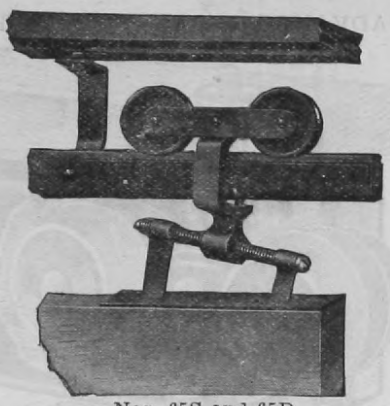
No. 221S—Single Door Hangers, without Track.....Per Set, $1.75

No. 221D—Double Door Hangers, without Track.....Per Set, 3.50

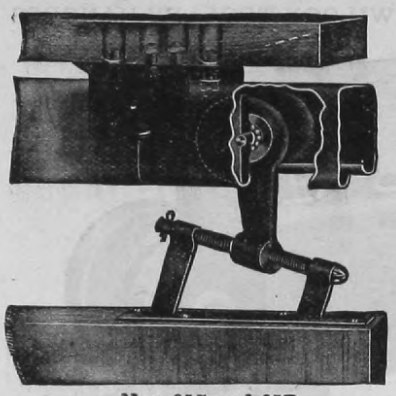
Note.—When ordering any of the above, give both **Hanger No.** and **Size No.**

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

COBURN HOUSE DOOR HANGERS



Nos. 65S and 65D.



Nos. 85S and 85D.

No. 65 Coburn Noiseless, Ball Bearing, Single Wood Track Adjustable Hangers

Header can be attached to heading timber without removing track. Doors can be taken off and put on track after same is in position without removing track. Encased Wood Track can be taken out and adjusted, if necessary, and put back at any time by simply removing one screw. The adjustment in the hanger is most accessible and can be made with ordinary screw driver without the trouble of removing cotter pins or other locking devices. The track is so constructed as to be extremely rigid.

For Single Doors.

A Single Door Set consists of One piece of Track, complete with Wood Header, Castings and Adjusting Screws, One Floor Guide and Two Hangers complete.

No. 65S...								
Size, Nos.	612	614	616	618	619	620	621	622
Size of Opening, feet	2½	3	3½	4	4½	5	5½	6
Per Set	$3.25	3.50	3.75	4.25	4.50	4.75	5.00	5.25

Packed—One Set in a Box, with Stops, Guides and Screws.

For Double Doors.

A Double Door Set consists of Two pieces of Track, complete with Wood Header, Castings and Adjusting Screws, One Center Stop, Two Floor Guides and Four Hangers complete.

No. 65D...										
Size Nos.	623	624	625	626	627	628	629	630	631	632
Size of Open., ft.,	4	4½	5	5½	6	6½	7	7½	8	9
Per Set	$6.25	6.50	6.75	6.75	6.75	7.00	7.25	7.50	7.75	8.25

Packed—One Set in a Box, with Stops, Guides and Screws.

No. 65S—Single Door Hangers, **without** Track.....Per Set, $1.75
No. 65D—Double Door Hangers, **without** Track.....Per Set, 3.50

No. 85 Coburn Trolley House Door Hangers

Hardened Steel Roller Bearings, 1⅞ inch Single Fibre Trolleys. Adjustable Pendants. Track is adjustable on Wood Headers.

For Single Doors.

A Single Door Set consists of Two pieces of Round Trough Trolley Track, complete with Wood Header, Castings and Adjusting Screws; One Floor Guide and Two Hangers complete.

No. 85S...								
Size, Nos.	1D	2D	3D	4D	5D	6D	7D	8D
Size of Opening, feet	2½	3	3½	4	4½	5	5½	6
Per Set	$3.00	3.00	3.50	4.00	4.25	4.50	4.50	4.50

Packed—One Set in a Box, with Stops, Guides and Screws.

For Double Doors.

A Double Door Set consists of Two pieces of Round Trough Trolley Track, complete with Wood Header, Castings and Adjusting Screws; Two Floor Guides and Four Hangers complete.

No. 85D...										
Size, Nos.	11D	12D	13D	14D	15D	16D	17D	17½D	18D	18½D
Size of Open., ft.,	4	4½	5	5½	6	6½	7	7½	8	8½
Per Set	$5.50	5.75	6.00	6.00	6.00	6.25	6.50	6.75	7.00	7.25

Packed—One Set in a Box, with Stops, Guides and Screws.

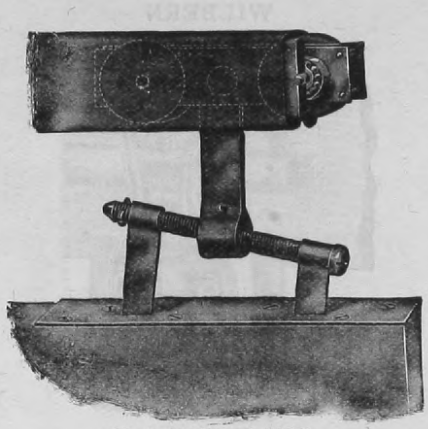
No. 85S—Single Door Hangers, **without** Track.....Per Set, $1.50
No. 85D—Double Door Hangers, **without** Track.....Per Set, 3.00

Track Only. When ordering Track without Hangers for Nos. 65 or 85 the list price is found by deducting the list price of Hangers only from the list price of the various sizes of Openings listed above.

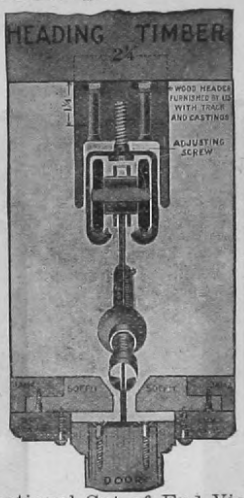
Note.—When ordering any of the above, give both Hanger No. and Size No. which designates the size of opening wanted.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN HOUSE DOOR HANGERS



Nos. 220S and 220D.



Sectional Cut of End View.

No. 220 Coburn Noiseless Trolley House Door Hangers

Hardened Steel Roller Bearings, Double Iron Trolleys, Adjustable Pendants, **Maple Lined Track.** Track is adjustable on Wood Headers.

For Single Doors.

A Single Door Set consists of Two pieces of Round Trough Maple Lined Trolley Track, complete with Wood Header, Castings, and Adjusting Screws; One Floor Guide and Two Hangers complete.

No. 220S..	1E	2E	3E	4E	5E	6E	7E	8E
Size Nos.								
Size of Opening, feet	2½	3	3½	4	4½	5	5½	6
Per Set	$5.25	5.25	5.75	6.25	6.50	6.75	6.75	6.75

One Set in a Box, with Stops, Guides and Screws.

For Double Doors.

A Double Door Set consists of Two pieces of Round Trough Maple Lined Trolley Track, complete with Wood Header, Castings, and Adjusting Screws; Two Floor Guides and Four Hangers complete.

No. 220D..	11E	12E	13E	14E	15E	16E	17E	17½E	18E	18½E
Size Nos.										
Size of Opening, feet,	4	4½	5	5½	6	6½	7	7½	8	8½
Per Set	$8.00	8.25	8.50	8.50	8.50	8.75	9.00	9.25	9.50	9.75

One Set in a Box, with Stops, Guides and Screws.

No. 220S—Single Door Hangers, **Without** Track.....Per Set, $2.00
No. 220D—Double Door Hangers, **Without** Track.....Per Set, 4.00

Track Only. When ordering Track without Hangers the list price is found by deducting the list price of Hangers only from the list prices of the various sizes of Openings listed above.

Note.—When ordering any of the above, give both Hanger No. and Size No. which designates the size of opening wanted.

Coburn Auditorium Ball Bearing Hangers

With Swiveled Ball Bearing Carriers.

For Folding, Sliding and Partition Doors. Any number of Doors can be used, beginning with a Half Door Hinged to a Strip attached to the Jamb on one side, or both sides according to the proposed way of folding the Doors. Half Door must be exactly one-half the width of full size Doors, **less the Thickness of Strip to which they are attached.** Full Sized Doors must be of an exact width Top and Bottom, with edges perfectly Parallel.

Hinge Doors together, fold them and strike a center line. Across them all, attach Carriers on the center of this line, with center of pendant on exact center of door, considering both width and thickness.

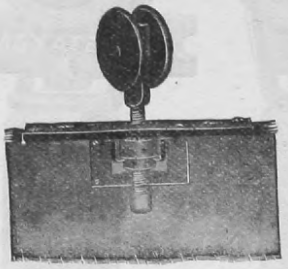
If thickness of Door equals or exceeds diameter of Carrier Wheel, attach one Carrier to each full sized Door. If less than diameter of Carrier Wheel, attach one Carrier to every other door.

Distance from Under side of Header to Top of Door will be 4⅞ inches.

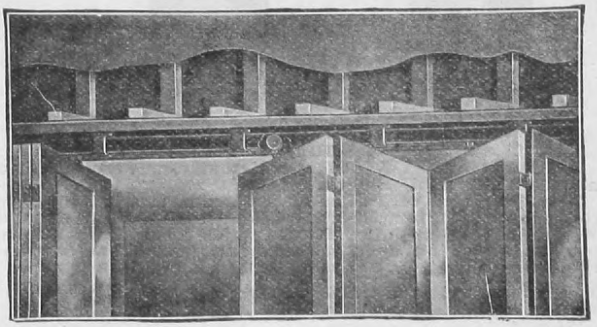
No. 600A—Carrier For No. 1 Track, Capacity 200 pounds, Trolleys 1⅞ inch Diameter....Each, $3.00

No. 1—Track Brackets, Parallel Ear, place one every two feet.....Each, .25

No. 1—Coburn Round Trough Trolley Track.....Per Foot, .20



No. 600A.



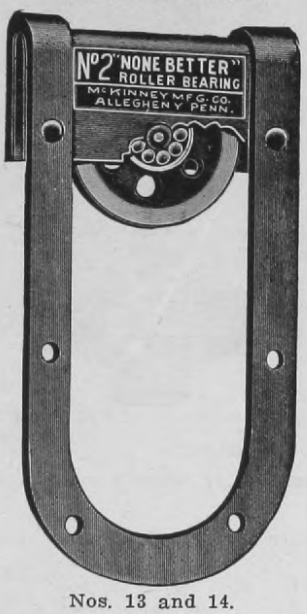
No. 600A, As applied.

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN

UNIVERSITY OF MICHIGAN

BARN DOOR HANGERS

NONE BETTER



Nos. 13 and 14.

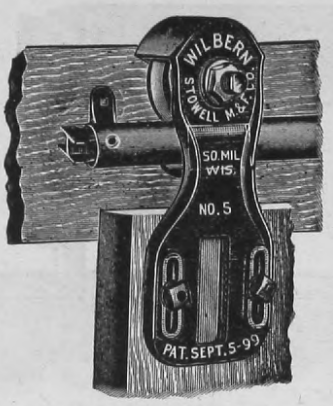
The Wheels are fitted with Hardened Steel Roller Bearings and Cold Rolled Steel Shaft.

The Frame is made entirely of Steel, so constructed as to entirely cover and protect the Wheel.

Nos.	13	14
Wheel .....Inches,	3	4
Per Dozen Pairs.....	$15.00	18.00

Packed—One Dozen Pairs in a Crate.

WILBERN



No. 5W.

The Wheels are 2⅞ inches in diameter and are fitted with Hardened Steel Roller Bearings.

The Frame is of Malleable Iron and so constructed as to cover and protect the wheel.

Vertical Adjustment is secured by means of the threaded axle.

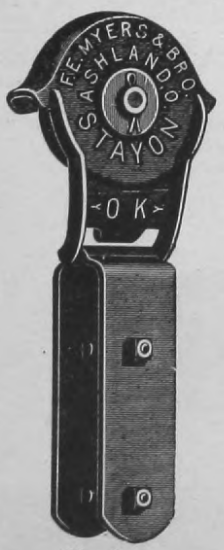
Lateral Adjustment is secured by corrugations on Hanger and plate.

Cannot jump the track.

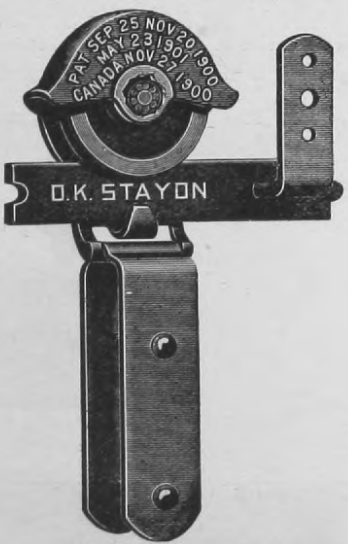
No. 5W—Wilbern, for Round Track.....
.....Per Dozen Pairs, $.....

Packed—Each Pair in a Separate Carton.
One Dozen Pairs in a Case, with Stops, Bolts and Screws.

O. K. STAYON



No. 1.
Outside View.



Inside View.
Showing Safety Lug.

Myers "O. K. Stayon" Barn Door Hangers Hinged.

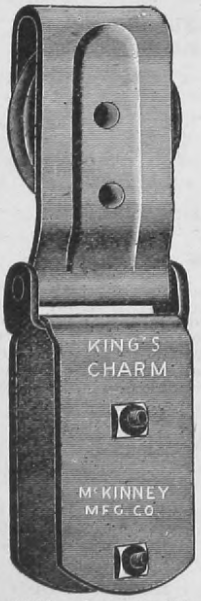
The Wheels are 3¼ inches in diameter, with Wide Groove, Hardened Steel Roller Bearings and Axle.

The Frame is of Malleable Iron, constructed to form a Protecting Hood for the Wheel, and with a Lug extending upward around bottom of Track, which locks it and prevents derailing, allowing door to be swung out from bottom to any angle.

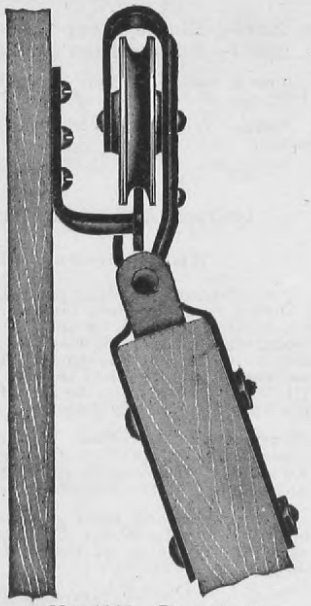
No. 1—O.K. Stayon Barn Door Hangers.....
.....Per Dozen Pairs, $18.00

Packed—Each Pair in a Separate Carton.
One Dozen Pairs in a Case, with Bolts.

KING'S CHARM



No. 1902. Outside View.



No. 1902. End View.

The Wheels are constructed with Hardened Steel Roller Bearings and are easy to operate.

The Frame is made entirely of Steel with a Protecting Hood for the wheel, and has a Guard extending under the Rail, making it impossible to derail the Hanger. The manner in which the Guard is attached reinforces the neck of the Hanger and makes it doubly strong at a point where strength is most needed.

No. 1902—King's Charm Flexible Barn Door Hangers.....Per Dozen Pairs, $15.00

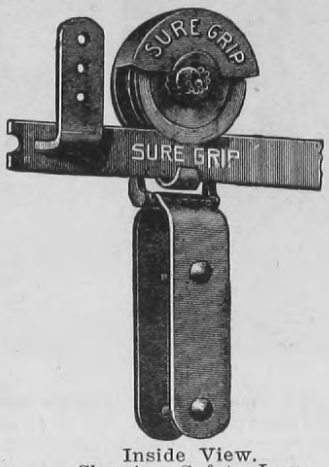
Packed—One Dozen Pairs in a Case, with Bolts.

Digitized by
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

BARN DOOR HANGERS

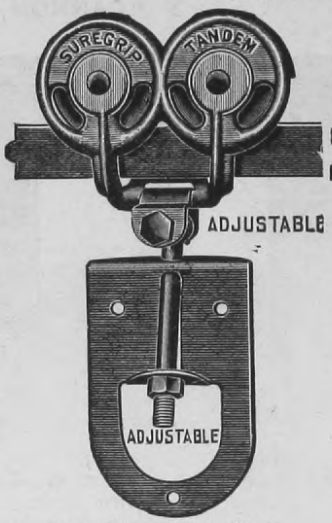
SURE GRIP FLEXIBLE

No. 2.
Outside View.

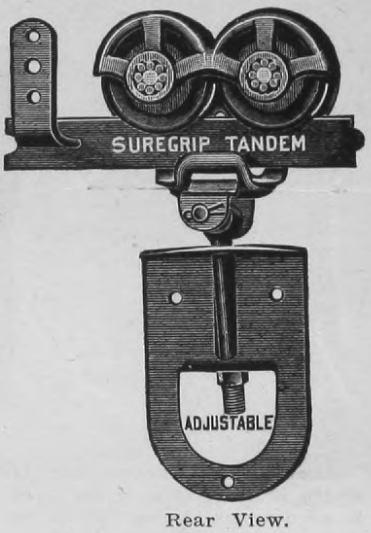


Inside View.
Showing Safety Lug.

SURE GRIP TANDEM



No. 5M. Front View.



Rear View.

"Sure Grip" Barn Door Hangers, Hinged

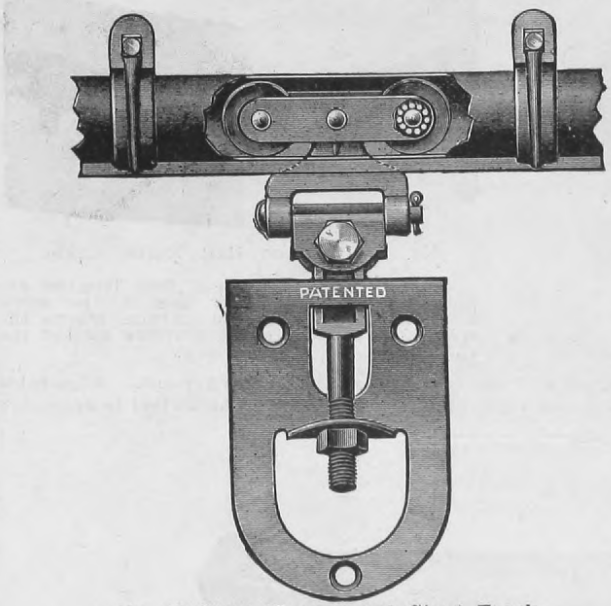
The Wheels are 3¼ inches in diameter, with Wide Groove, Hardened Steel Roller Bearings and Axles. The Frame is of Malleable Iron, constructed to form a protecting hood for the wheel, and with a lug extending upward around bottom of track, which locks it and prevents derailing, allowing door to be swung out from bottom to any angle.

The No. 5M Hangers are adjustable in all parts, the perpendicular and lateral adjustments can be made with an ordinary wrench at the will of the user.

No. 2 —Ashland Sure Grip Flexible Barn Door Hangers .....Per Dozen Pairs, $18.00

No. 5M—Myers Sure Grip Tandem **Adjustable** Barn Door Hangers .....Per Dozen Pairs, 26.40

Packed—Each Pair in a Separate Carton, One Dozen Pairs in a Case, with Bolts.



No. 15 Giant Hanger and Giant Track.

Giant Adjustable Tandem Door Hangers

Machine Turned Hard Steel Wheels, Revolving on Hard Steel Roller Bearings. Adjustable to and from the building and to raise and lower the door.

No. 15—Giant Door Hangers...Per Dozen Pairs, $36.00

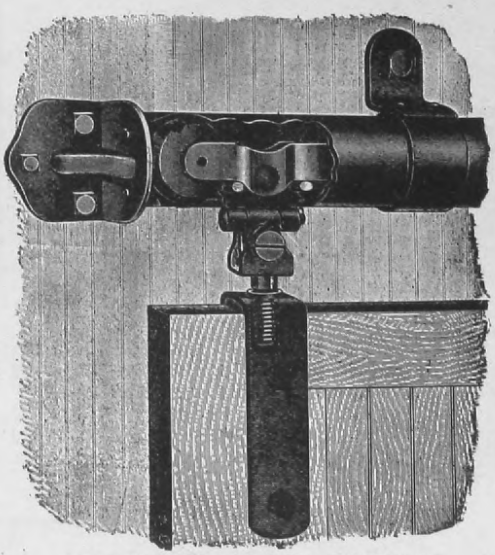
Packed—Each Pair in a Separate Carton, with Bolts; Half Dozen Pairs in a Case.

Giant Tubular Track in 4, 6 and 8 foot lengths .....Per Foot, $0.30

Giant End Track Brackets.....Per Dozen, 2.25

Giant Center Track Brackets.....Per Dozen, 2.25

Packed—Track Assorted—3, 4 foot; 4, 6 foot and 8, 8 foot pieces, 100 feet in a Crate. Brackets Separate.



No. 507 Hanger and No. 387 Track.

Cannon Ball Adjustable Hangers, Hinged

Solid Ball Wheels, Roller Bearings, Malleable Truss Frame and Double Door Strap. Adjustable to and from the building and to raise and lower the door.

No. 507—Cannon Ball Hangers..Per Dozen Pairs $32.00

Packed—Each Pair in a Separate Carton, with Bolts; Half Dozen Pairs in a Case.

Cannon Ball Track. Made of 14 Gauge Steel 2¼ inch Diameter. In 3 foot Sections.

No. 387—Cannon Ball Track.....Per Foot $0.32

No. 682—Center Track Brackets.....Per Dozen, 2.00

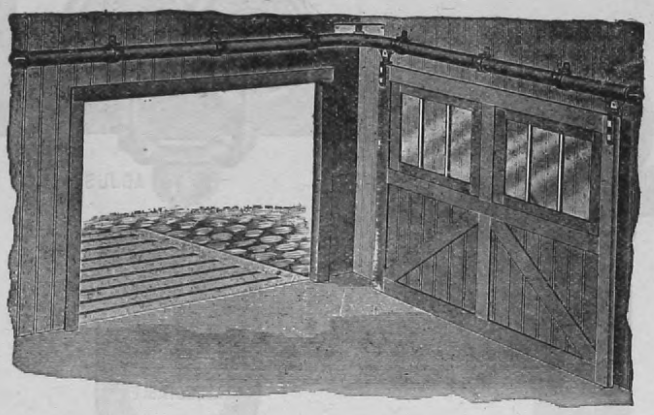
No. 680—End Track Brackets.....Per Dozen, 2.00

Packed—Track, 32 Pieces, 96 Feet, in a Crate.
Brackets Separate.

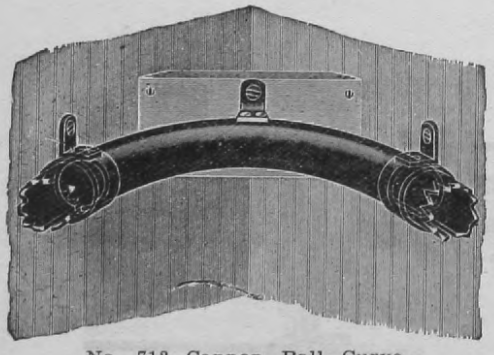
Digitized by Google Original from
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

GARAGE DOOR HANGERS

CANNON BALL

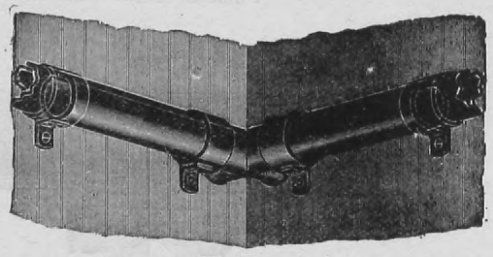


Cannon Ball Garage Door Hangers permit the door to be carried to the inside of the garage against the side wall, where it occupies only the space required by its own thickness. See illustration above. If desired a rolling door can be used where the opening is nearly as wide as the building itself. This is accomplished by using the Cannon Ball Curve shown below. This consists of a curved length of Standard Cannon Ball Track. It fits into brackets like the straight lengths. A special support riveted to the top of curve and fastened to the brace as shown keeps the curve from twisting or sagging. The center radius of the curve is 12 inches. The door should be built at least 20 inches from the corner so that both door hangers rest in the straight track when door is closed. Where the opening is placed to the extreme side of the building, use No. 716 Cannon Ball Right Angle illustrated below.



No. 712 Cannon Ball Curve.

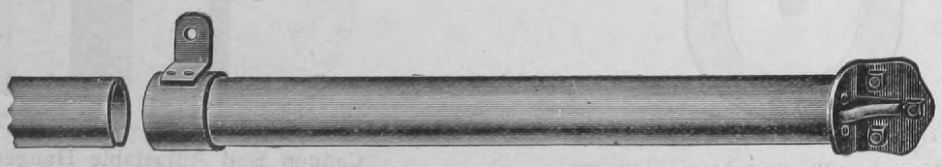
No. 715 Hanger.



No. 716 Cannon Ball Right Angle.

This consists of two 3 foot lengths arranged and welded for use in the same manner as the curve in garage where the opening is placed to the extreme side of the building.

No. 715 Cannon Ball Garage Door Hangers are built with special straps and swivelling arrangement. Adjustable to doors of any thickness and reversible, allowing attachment at either right or left end of door. The Swivel is necessary for operation in the curve or right angle.



No. 387 Cannon Ball Track.

This Track is identically the same as the Standard Cannon Ball Barn Door Track.

No. 715—Cannon Ball Garage Door Hangers	Per Dozen Pairs,	$24.00
No. 712—Cannon Ball Track Curve with Center Support only	Each,	2.00
No. 716—Cannon Ball Right Angle with 2 Brackets only	Each,	4.00
No. 387—Cannon Ball Track in 3 foot sections	Per Foot,	.32
No. 682—Center Track Brackets only	Per Dozen,	2.00
No. 680—End Track Brackets only	Per Dozen,	2.00

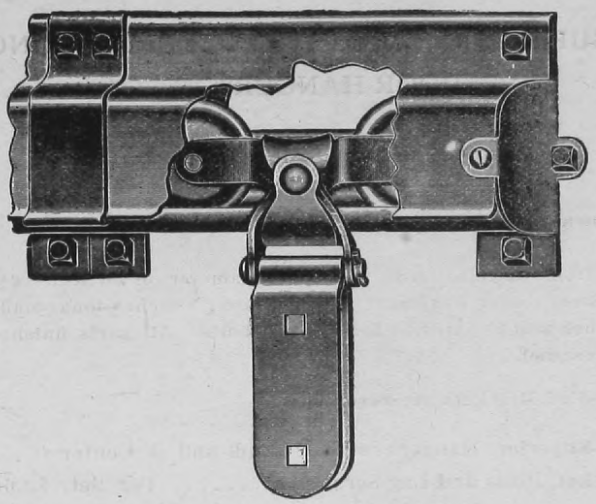
Packed—Hangers, One Pair in a Carton, with Bolts. Track and Brackets, Separate.

Note.—For Regular Cannon Ball Hangers See Page 1407.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

BARN DOOR HANGERS

WEATHERPROOF



No. 567 Hanger and No. 566 Track.

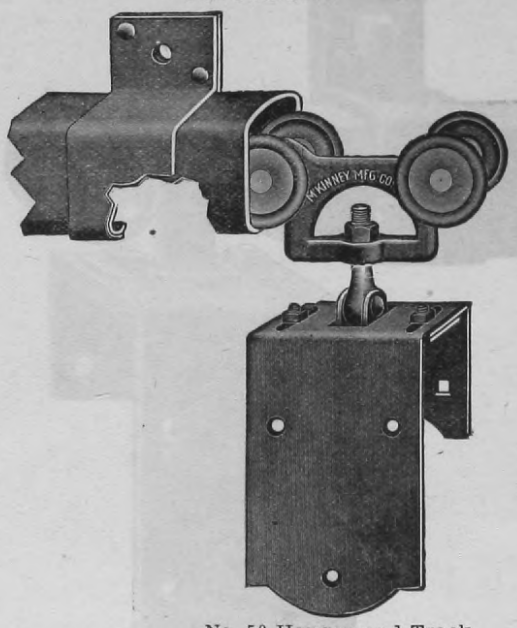
Semi-Steel Tandem Wheels with Roller Bearings. Heavy and Substantial in every feature. The Hood covers the Track and protects it and the working parts of the hangers from rain, snow, ice and dirt. Not adjustable.

No. 567—Weatherproof Hangers with Bolts.... .....Per Dozen Pairs, $24.00

No. 566—Weatherproof Track, in 4, 6 and 8 foot lengths with end and splice brackets..... ..... Per Foot, .34

Packed—One Pair in a Carton, Half Dozen Pairs in a Case.

PITTSBURG



No. 50 Hanger and Track.

Pressed Steel Wheels on Cold Rolled Steel Axles. Roller Bearings and Malleable Iron Frame. Wheels and Frame are heavily Galvanized. Double Apron Pendant of heavy Wrought Steel, Japanned. **Adjustable**—Both Lateral and Vertical and to thickness of doors.

No. 50—Pittsburg Hangers, with 1 Center and 2 End Brackets, Bolts and Lag Screws..... .....Per Dozen Sets, $24.00

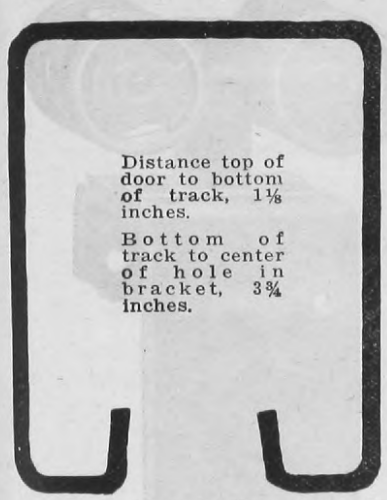
No. 50—Pittsburg Trolley Track in 4, 6, 8 and 10 ft. lengths.....Per Foot, .20

Center Wall Brackets only.....Per Dozen, 2.00

End Wall Brackets only.....Per Dozen, 2.00

Double { **Center** Wall Brackets.....Per Dozen, 7.00 / **End** Wall Brackets.....Per Dozen, 7.00

Packed—One Set in a Carton, One Dozen Sets in a Case.



Full Size Cross Section of No. 31 Trolley Track.

1x31 Center Bracket

2x31 End Bracket Reversible

R-W GEM TROLLEY ROLLER BEARING DOOR HANGERS

Suitable for Doors Weighing 300 Pounds.

Gray Iron Wheels, Lathe Turned, Diameter of Wheels, 2⅛ inches. Steel Roller Bearings, Heavy Apron, 6 in. long, made of ⅛x3½ in. Stock, punched for 5/16 in. bolts. All parts finished in Black Enamel.

Adjustment—Lateral only. For Doors 1¾ to 2½ inches thick.

No. 20 —Gem Hangers, with 2 End and 1 Center Bracket, Bolts and Lag Screws .....Per Set, $2.30

No. 31 —Track in 4, 5, 6, 7, 8, 9 and 10 ft. lengths .....Per Foot .19

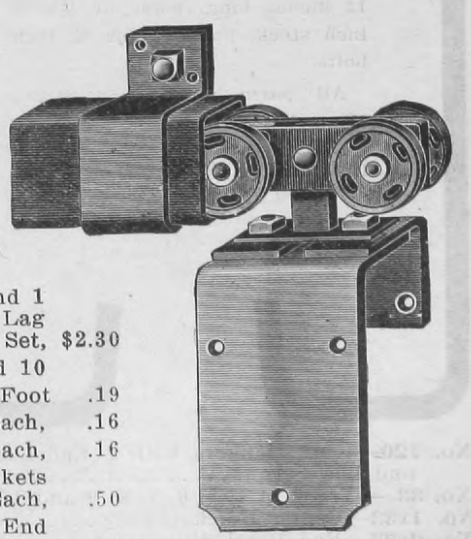
No. 1x31—Center Brackets only.....Each, .16

No. 2x31—End Brackets only.....Each, .16

No. 22-31—Side Double Center Brackets only .....Each, .50

No. 23-31—Side Double R. or L. End Brackets only .....Each, .50

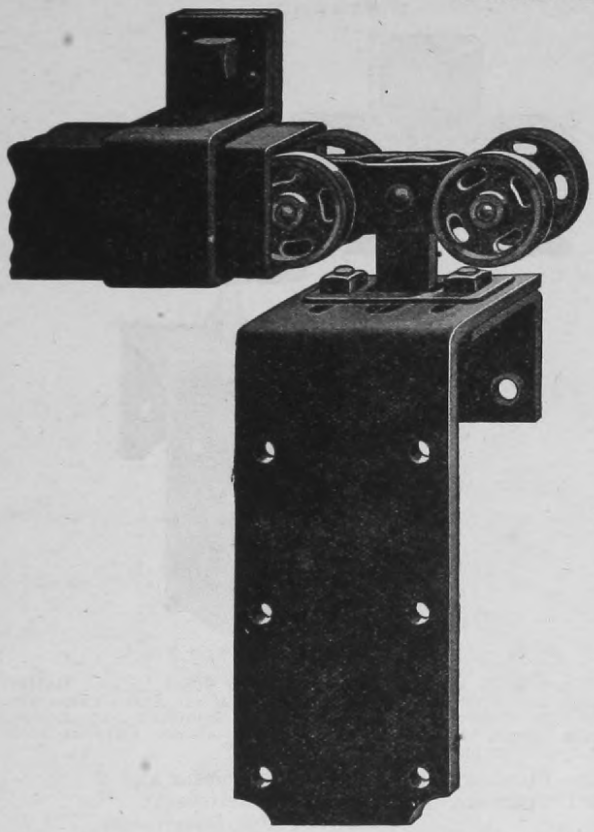
Packed—One Set in a Carton, Twelve in a Case.



No. 20 Hanger and No. 31 Track.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BARN DOOR HANGERS



R-W SUPERIOR TROLLEY ROLLER-BEARING DOOR HANGERS

Suitable for Doors weighing 400 Pounds.

Adjustment—Lateral only. For Doors 2¼ to 2¾ inches thick.

Gray Iron Wheels, Lathe Turned, Diameter of Wheels, 2⅛ inches. Steel Roller Bearings. Heavy Apron 9 inches long, made of 3/16x4 inch stock, punched for 5/16 inch bolts. All parts finished in black enamel.

Note.—End Brackets are **reversible.**

No. 24—Superior Hangers with 2 End and 1 Center Bracket, Bolts and Lag Screws.....Per Set, $2.60

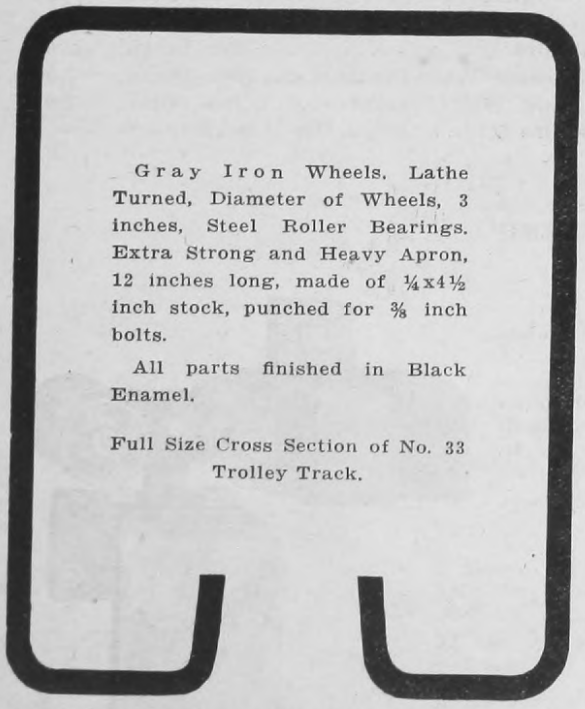
No. 31—Track in 4, 5, 6, 7, 8, 9 and 10 ft. lengths.. .....Per Foot, .19

No. 1x31—Center Brackets only.....Each, .16

No. 2x31—End Brackets only .....Each, .16

Packed—One Set in a Carton, Twelve Sets in a Case.

R-W KING TROLLEY ROLLER-BEARING DOOR HANGERS



Gray Iron Wheels. Lathe Turned, Diameter of Wheels, 3 inches, Steel Roller Bearings. Extra Strong and Heavy Apron, 12 inches long, made of ¼x4½ inch stock, punched for ⅜ inch bolts.

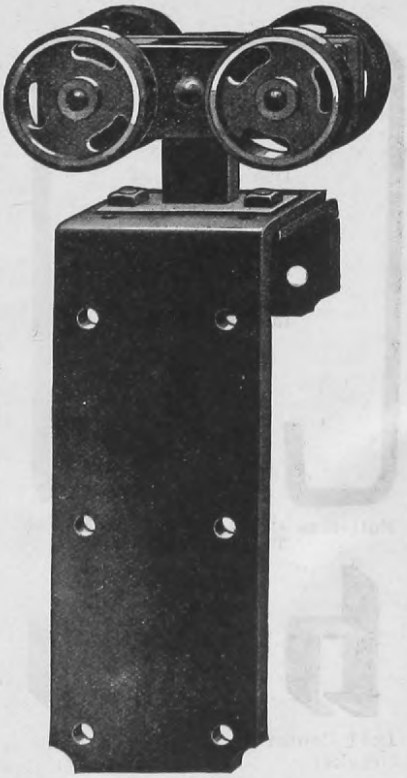
All parts finished in Black Enamel.

Full Size Cross Section of No. 33 Trolley Track.

Suitable for Doors weighing 800 pounds.

Adjustment—Lateral only. For Doors from 2¼ to 3 inches thick.

Note.—End Brackets are **reversible.**



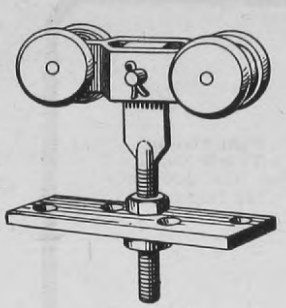
No. 120.

No. 120—King Hangers with 2 End and 1 Center Bracket with Bolts and Lag Screws.....Per Set, $4.70
No. 33 —Track in 4, 5, 6, 7, 8, 9 and 10 ft. lengths.....Per Foot, .44
No. 1x33—Center Brackets only.....Each, .44
No. 2x33—End Brackets only.....Each, .44

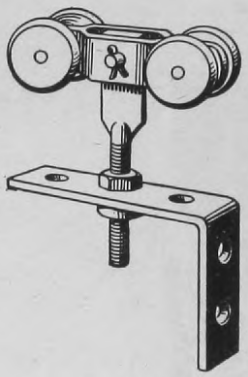
Packed—One Set in a Carton, Six Sets in a Case.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN SLIDING DOOR HANGERS



No. 150.



No. 185.

No. 196.

No. 150 Barn Door Hangers

Roller Bearing, Iron Trolleys, Vertical Adjustment, Steel Pendant, Bronze Adjusting Nut. Adapted for use on several doors hung on parallel tracks, all to enter the same pocket.

No. 150A—For use with No. 1 Track (capacity 300 pounds) ..... Per Pair, $3.50
No. 150B—For use with No. 2½ Track (capacity 400 pounds) ..... Per Pair, 4.50
No. 150C—For use with No. 4 Track (capacity 600 pounds) ..... Per Pair, 6.00

Packed—One Pair in a Box, with Screws.

No. 185 Schoolhouse Door Hangers

Roller Bearing, Iron Trolleys, Vertical Adjustment, with Corner Plate. Adapted for use on various kinds of sliding doors, especially doors sliding by each other.

No. 185A—For use with No. 1 Track (capacity 300 pounds) ..... Per Pair, $4.50
No. 185B—For use with No. 2½ Track (capacity 500 pounds) ..... Per Pair, 6.00
No. 185C—For use with No. 4 Track (capacity 800 pounds) ..... Per Pair, 7.50

Packed—One Pair in a Box, with Screws.

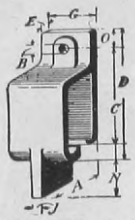
No. 196 Garage Door Hangers

Ball Bearing, Iron Trolleys, Vertical Adjustment.

No. 196A—For use with No. 1 Track (capacity 300 pounds) ..... Per Pair, $4.00
No. 196B—For use with No. 2½ Track (capacity 400 pounds) ..... Per Pair, 5.00
No. 196C—For use with No. 4 Track (capacity 600 pounds) ..... Per Pair, 6.00

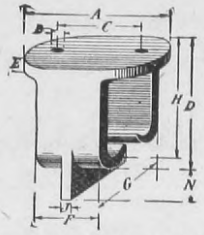
Note.—See following pages for Track Nos. 1, 2½ and 4.
Packed—One Pair in a Box, with Screws.

CENTER STOP AND CORNER BRACKETS



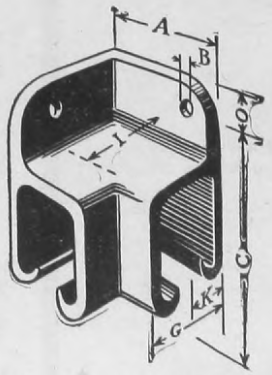
Nos. 727, 728 and 730.
Center Stop Wall Brackets

Nos.		Each
727—For No. 1	Track.....	$0.35
728—For No. 2½	Track....	.60
730—For No. 4	Track.....	1.00



Nos. 1287, 886 and 880.
Center Stop Parallel Ear Brackets.

Nos.		Each
1287—For No. 1	Track....	$0.40
886—For No. 2½	Track....	.65
880—For No. 3 or 4	Track..	1.25

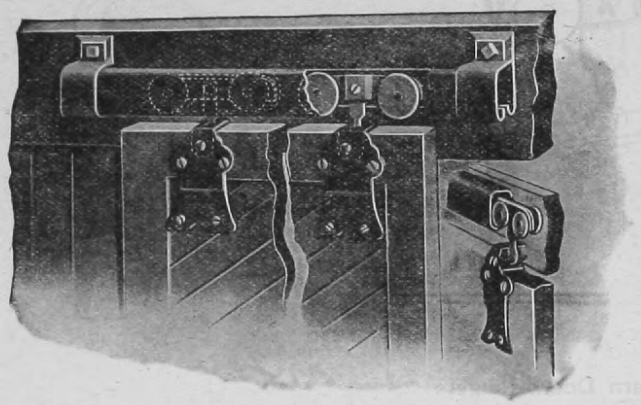


Nos. 2614, 2616 and 2661.
Corner Brackets.

Nos.		Each
2614—For No. 1	Track....	$1.00
2616—For No. 2½	Track....	1.50
2661—For No. 4	Track....	2.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN BARN DOOR HANGERS



Nos. 120 and 122 as applied.

Full Size of Track No. 1.
For Nos. 120 and 122 Hangers.

No. 1. Trolley Track.

Coburn Trolley Barn Door Hangers

Poised Carriers, Hardened Steel Roller Bearings, Turned Iron Double Trolleys. Lateral Adjustment.

Suitable for Doors Weighing 300 Pounds.

No. 120—Hangers for Doors 1¾ to 2¼ in. thick, with 3 Side Wall Track Brackets (1 center and 2 end) Per Set, $3.10

No. 122—Hangers for Doors 2¼ to 3 in. thick, with 3 Side Wall Track Brackets (1 center and 2 end) Per Set, 3.10

No. 1—Center Track Brackets, for Side Wall..... Each, .20

No. 1—Coburn Round Trough Trolley Track in 3, 4, 5, 6, 7, 8 and 10 foot lengths.....Per Foot, .20

Packed—Hangers, One Set in a Box; Six Sets in a Crate.

Full Size of Track No. 2½.

For No. 122½ Hangers.

No. 2½. Trolley Track.

Coburn Trolley Barn and Heavy Door Hangers

Poised Carriers, Hardened Steel Roller Bearings, Turned Iron Double Trolleys, 3 inches in diameter. Lateral Adjustment.

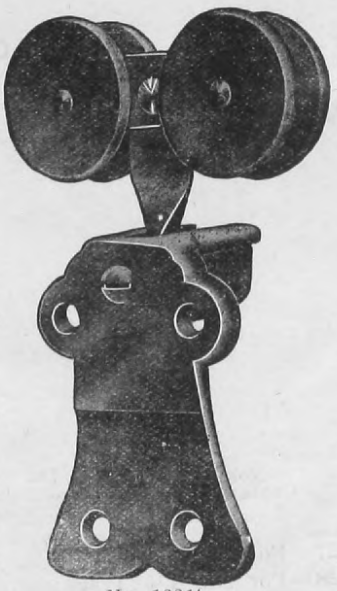
Suitable for Doors Weighing from 300 to 500 Pounds.

No. 122½—Hangers for Doors 2¼ to 3 inches thick, with 3 Side Wall Track Brackets (1 center and 2 end).....Per Set, $4.35

No. 2½—Center Track Brackets for Side Wall .....Each, .35

No. 2½—Coburn Round Trough Trolley Track, 3, 4, 5, 6, 7, 8 and 10 ft. lengths..Per Foot .30

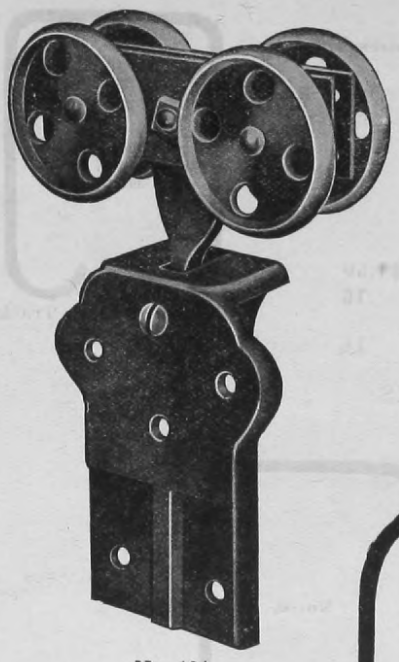
Packed—Hangers, One Set in a Box; Six Sets in a Crate.



No. 122½.
For application see cut above.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN BARN, MILL AND FACTORY DOOR HANGERS



No. 124.

Coburn Trolley Barn, Mill and Factory Door Hangers

With Lateral Adjustment.

Poised Carriers, Hardened Steel Roller Bearings, Turned Iron Double Trolleys, 3½ inches in diameter.

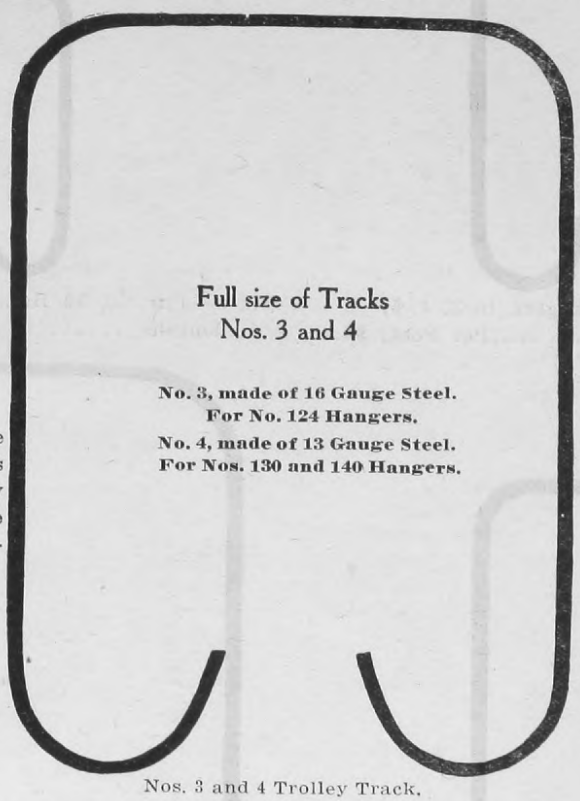
Suitable for Doors Weighing from 500 to 800 Pounds.

No. 124—Hangers for Doors 1¾ to 2¼ inches thick, with 3 Side Wall Track Brackets (1 center and 2 end) ..... Per Set, **$6.50**

No. 3—Center Track Brackets for Side Wall, medium heavy ..... Each, .50

No. 3—Coburn Round Trough Trolley Track in 3, 4, 5, 6 and 8 foot lengths ..... Per Foot, .40

Packed—Hangers, One Set in a Box; Six Sets in a Crate.



Full size of Tracks
Nos. 3 and 4

No. 3, made of 16 Gauge Steel. For No. 124 Hangers.

No. 4, made of 13 Gauge Steel. For Nos. 130 and 140 Hangers.

Nos. 3 and 4 Trolley Track.

Nos. 130 and 140 Hangers have 12 inch Petticoats. No. 140 is built extra heavy and is specially designed for use on Doors of the heaviest character, such as Warehouses and Car-Barns.

Coburn Heavy and Extra Heavy Trolley Barn, Mill and Factory Door Hanger

With Lateral Adjustment.

Poised Carriers, Hardened Steel Roller Bearings, Turned Iron Double Trolleys, 3½ inches in diameter.

With Three Side Wall Track Brackets.

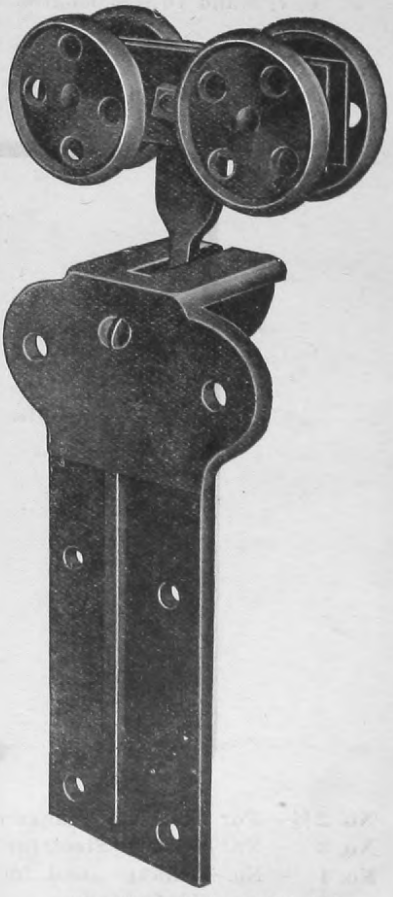
No. 130—Hangers, Heavy, for Doors not over 3 inches thick, from 800 to 1200 pounds, with 1 center and 2 end brackets ..... Per Set, $7.90

No. 140—Hangers, Extra Heavy, for Doors 3 to 4 inches thick, from 1200 to 2000 pounds, with 1 center and 2 end Brackets ..... Per Set, 8.90

No. 4—Center Track Brackets for Side Wall, Heavy Style ..... Each, .80

No. 4—Coburn Round Trough Trolley Track in 3, 4, 5, 6 and 8 foot lengths ..... Per Foot, .50

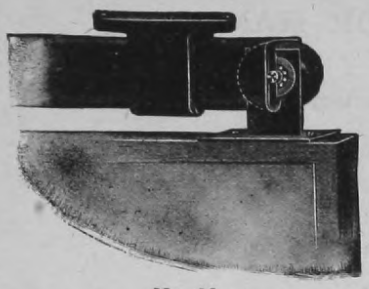
Packed—Hangers, One Set in a Box; Six Sets in a Case.



No. 130. Style of No. 140.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN "NO. 99" TROLLEY HANGERS



No. 99.

For Very Light Doors, Glass Sash, Show Cases, Etc.

Hardened Steel Roller Bearings, Single Iron Trolleys, Rigid Pendant.

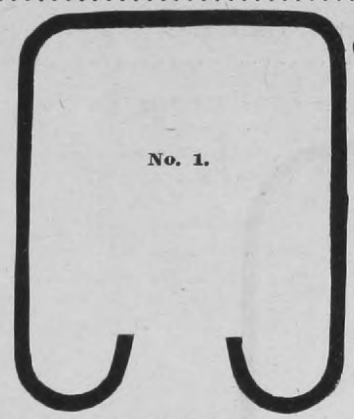
Full Size of Track No. 0. For No. 99 Hanger.

No. 0. Trolley Track.

No. 99—Hangers, without Track Brackets.....Per Pair, **$1.50**
Side Wall or Parallel Ear Brackets.....Each, **.15**
No. 0—Coburn Round Trough Trolley Track, in 2, 2½ and 3 foot lengths.....
.....Per Foot, **.16**

COBURN TROLLEY TRACKS

Full Size Cuts.

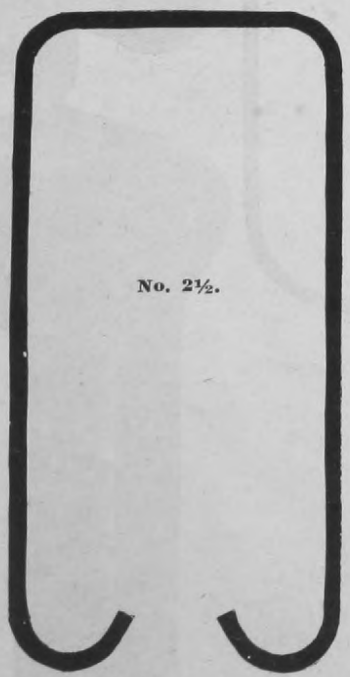


No. 1.

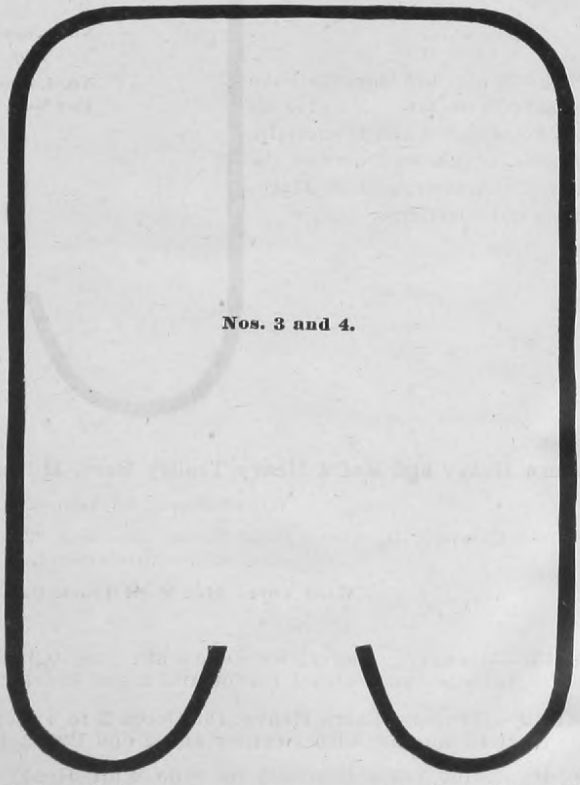
No. 0.

No. 1—For Nos. 120 and 122 Hangers, in 3, 4, 5, 6, 7, 8 and 10 foot lengths.....Per Foot, $0.20

No. 0—For No. 99 Hangers, in 2, 2½ and 3 foot lengths .....Per Foot, $0.16



No. 2½.



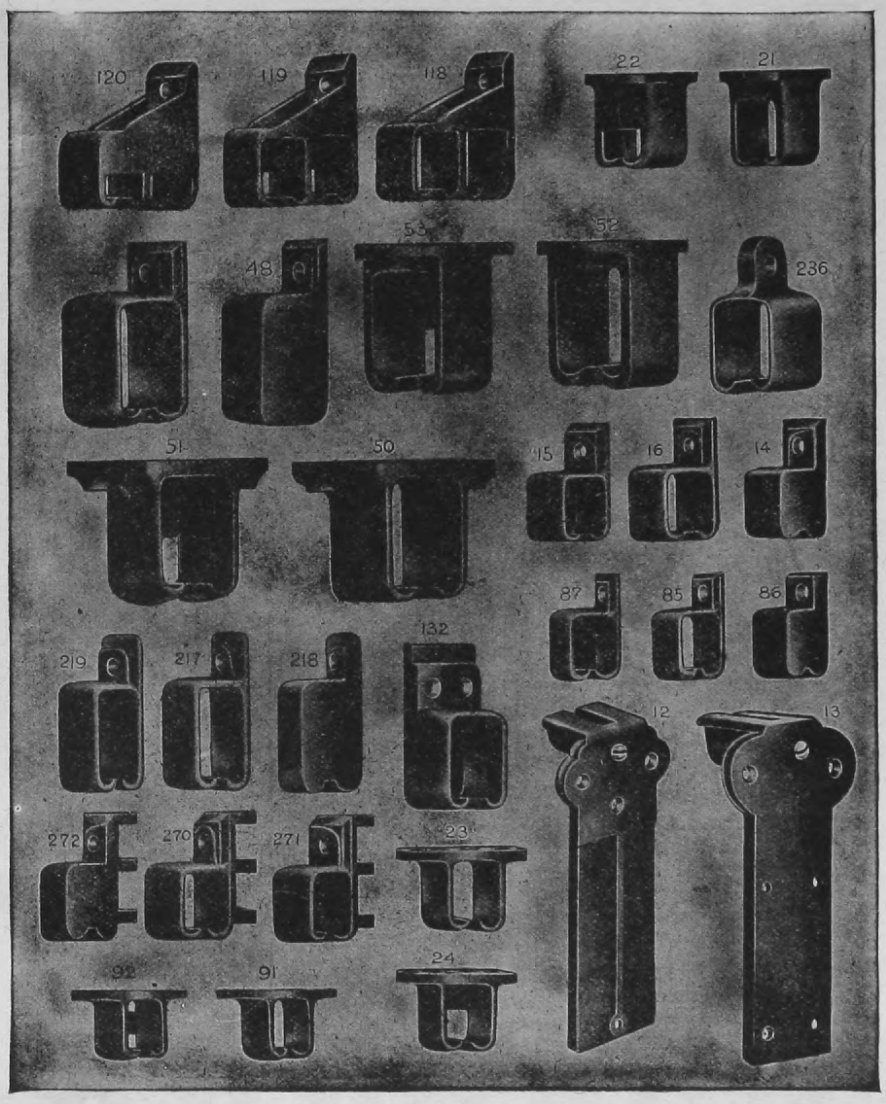
Nos. 3 and 4.

No. 2½—For No. 122½ Hangers, in 3, 4, 5, 6, 7, 8 and 10 foot lengths .....Per Foot, $0.30
No. 3 —No. 16 Gauge Steel, for No. 124 Hangers, in 3, 4 and 5 foot lengths.....Per Foot, .40
No. 4 —No. 13 Gauge Steel, for Nos. 130 and 140 Hangers, in 3, 4 and 5 foot lengths.....Per Foot, .50

Packed—In Bundles as Ordered.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN TROLLEY TRACK BRACKETS



Nos.	Brackets	For Track	Each
14—Right End Closed Side Wall		No. 1	$0.20
15—Left End Closed Side Wall		No. 1	.20
16—Center or Open Side Wall		No. 1	.20
21—Center or Open Parallel Ear		No. 1	.25
22—Closed End Parallel Ear		No. 1	.25
23—Open Side Ear		No. 1	.30
24—Closed End Side Ear		No. 1	.30
47—Open Side Wall		No. 3	.50
48—Right End Closed Side Wall		No. 3	.50
49—Left End Closed Side Wall*		No. 3	.50
50—Open Side Ear		No. 4	1.50
51—Closed Side Ear		No. 4	1.50
52—Open Parallel Ear		No. 3, 4	.80
53—Closed Parallel Ear		No. 3, 4	$0.80
85—Open Side Wall		No. 0	.16
86—Right End Closed Side Wall		No. 0	.16
87—Left End Closed Side Wall		No. 0	.16
91—Open Side Ear		No. 0	.16
92—Closed End Side Ear		No. 0	.16
118—Open Double Run Side Wall		No. 1	1.00
119—Left End Double Run Side Wall		No. 1	1.00
120—Right End Double Run Side Wall		No. 1	1.00
132—"Special" Right Angle Side Wall		No. 1	.35
217—Open Side Wall		No. 2½	.35
218—Right End Side Wall		No. 2½	.35
219—Left End Side Wall		No. 2½	.35

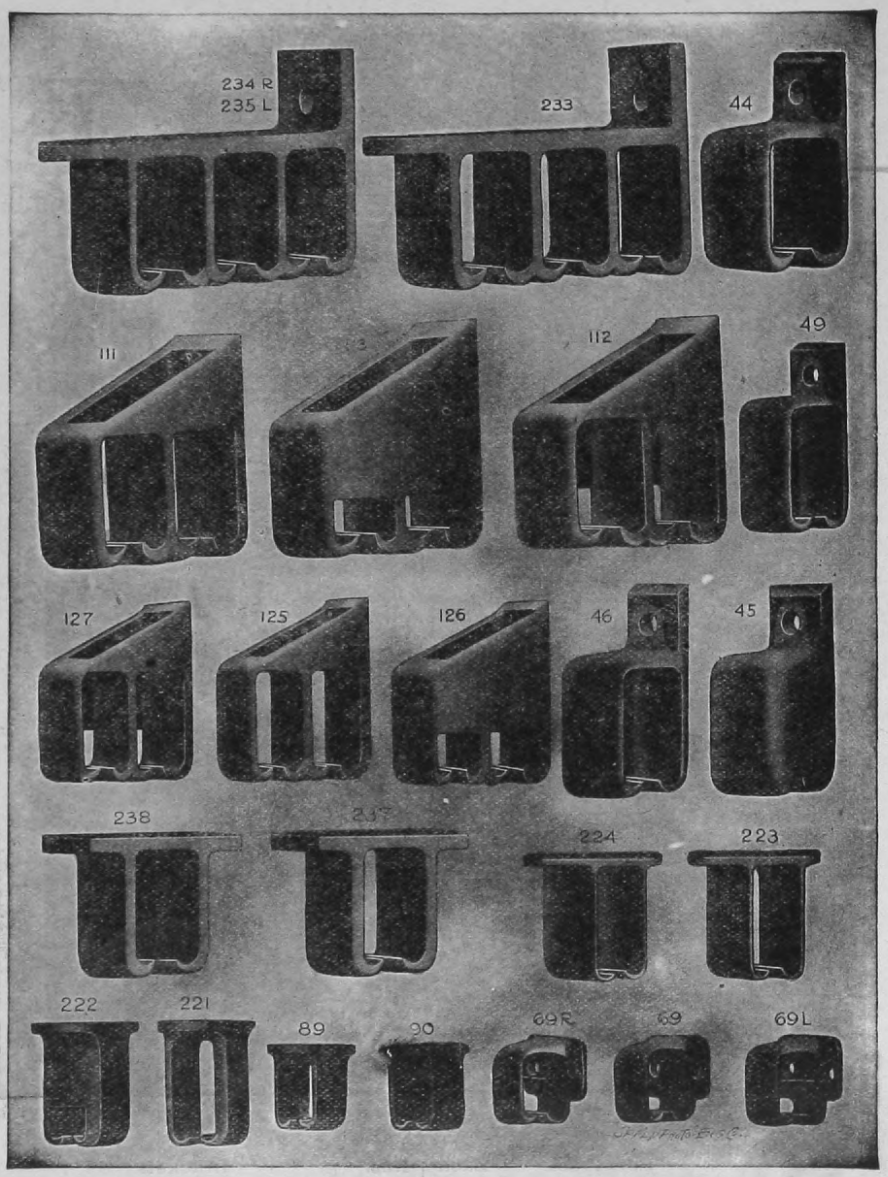
* For illustration of No. 49, see next page.

Petticoats

No. 12—With 2¼ inch Adjustable Screw Cup, for No. 130 Hangers ..... Each, $0.75
No. 13—With 2¾ inch Adjustable Screw Cup, for No. 140 Hangers ..... Each, 1.10

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COBURN TROLLEY TRACK BRACKETS



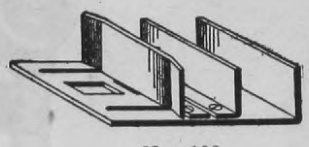
Nos.	Brackets	For Track	Each
44—Center Open Side Wall		No. 4	$0.80
45—Right End Closed Side Wall		No. 4	.80
46—Left End Closed Side Wall		No. 4	.80
47—Open Side Wall*		No. 3	.50
48—Right End Closed Side Wall*		No. 3	.50
49—Left End Closed Side Wall		No. 3	.50
69—Open Cornice Facia "Special"		No. 1	.35
69R—Right Cl'd End Corn. Facia "Spec."		No. 1	.35
69L—Left Cl'd End Corn. Facia "Spec."		No. 1	.35
89—Open Parallel Ear		No. 0	.16
90—Closed Parallel Ear		No. 0	.16
111—Open Double Run Side Wall		No. 4	2.25
112—Left Closed End Dbl. Run Side Wall		No. 4	2.25
113—Right Cl'd End Dbl. Run Side Wall		No. 4	$2.25
125—Open Double Run Side Wall		No. 2½	1.25
126—Right Cl'd End Dbl. Run Side Wall		No. 2½	1.25
127—Left Cl'd End Dbl. Run Side Wall		No. 2½	1.25
221—Open Parallel Ear		No. 2½	.40
222—Closed Parallel Ear		No. 2½	.40
223—Open Side Ear		No. 2½	.45
224—Closed Side Ear		No. 2½	.45
233—Open Triple Run		No. 4	3.25
234R—Right Closed End Triple Run		No. 4	3.25
235L—Left Closed End Triple Run		No. 4	3.25
237—Open Side Ear "Fort"		No. 4	1.00
238—Closed Side Ear "Fort"		No. 4	1.00

*For illustrations of Nos. 47 and 48, see preceding page.

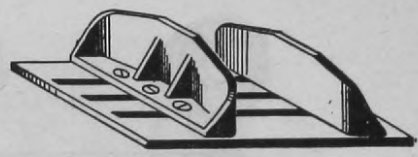
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SLIDING DOOR GUIDES AND STOPS

No. 191.



No. 192.



No. 195.

No. 191—Floor Guide and Stop, Adjustable to thickness of Doors ..... Each, $0.60

No. 192—Floor Guide, Adjustable to thickness of Doors ..... Each, .90

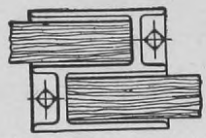
No. 195—Adjustable Center Door Guides ..... Each, .80

No. 92 —Steel Bumper Shoes for 2 in. Doors (not illustrated) ..... Per Pair, .20

No. 92½—Steel Bumper Shoes for 2½ in. Doors (not illustrated) ..... Per Pair, .20

No. 93 —Steel Bumper Shoes for 3 in. Doors (not illustrated) ..... Per Pair, .20

No. 193 Cast Center Stop.



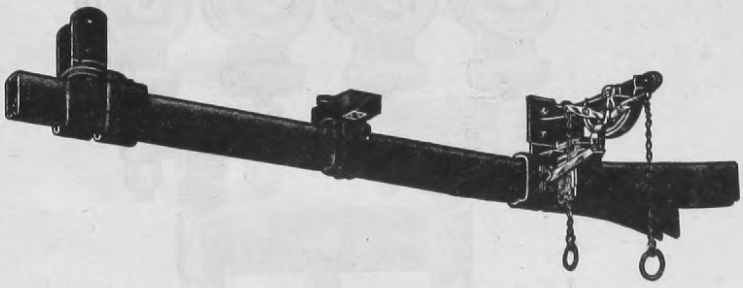
No. 194 Cast Center Stop.

For Doors, in.	2	2½	3
No. 193—Per Dozen	$6.00	7.50	9.00

For Doors, in.	2	2½	3
No. 194—Per Dozen	$12.00	15.00	18.00

OVERHEAD CARRYING SYSTEMS

REGULAR SINGLE SWITCHES

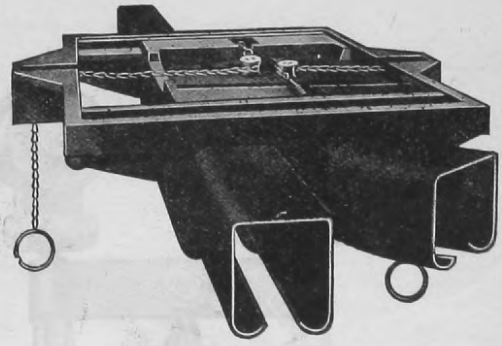


This Switch is regularly used with Nos. 2½, 4 and 4½ Rail.

For Track No.		Single	Double
2½	Each,	$20.00	24.00
4	Each,	24.00	32.00
4½	Each,	24.00	32.00

Tongues made in 4 and 5 foot lengths.

LIMIT SWITCHES



Limit Switches are used when space does not permit the use of regular single switches. Used with Nos. 1, 2½, 4 and 4½ Rail.

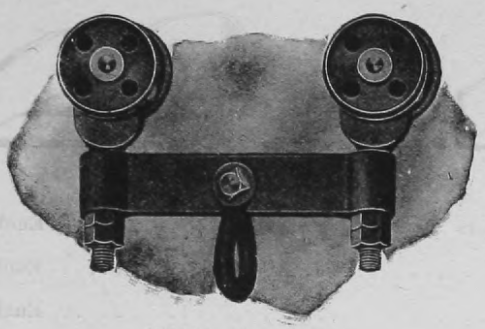
For Track No.		Single	Double
1	Each,	$20.00	24.00
2½	Each,	24.00	28.00
4	Each,	40.00	50.00
4½	Each,	40.00	50.00

Note.—For Track Brackets see pages 1415 and 1416.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OVERHEAD CARRYING SYSTEMS

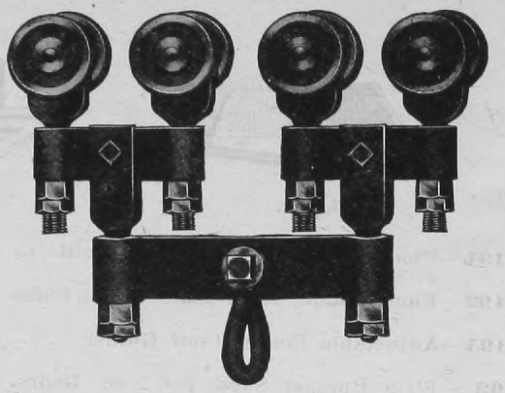
REGULAR SINGLE CARRIERS



Roller Bearings.

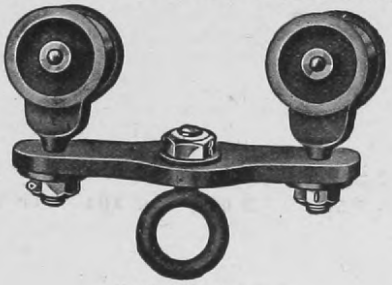
For Track	Capacity	Each
No. 1	—Up to 150 pounds	$7.00
No. 2½	—Up to 300 pounds	10.00
No. 4	—Up to 500 pounds	15.00
No. 4½	—Up to 1000 pounds	20.00

REGULAR DOUBLE CARRIERS



For Track	Capacity	Each
No. 1	—Up to 300 pounds	$16.00
No. 2½	—Up to 500 pounds	20.00
No. 4	—Up to 2000 pounds	30.00
No. 4½	—Up to 3000 pounds	40.00

SWIVEL SINGLE CARRIERS

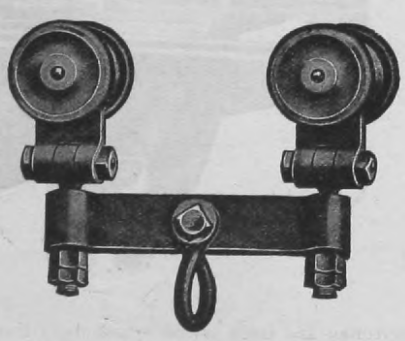


Ball Bearings.

For Track No. 4, Capacity 1000 lbs. ..... Each, $30.00

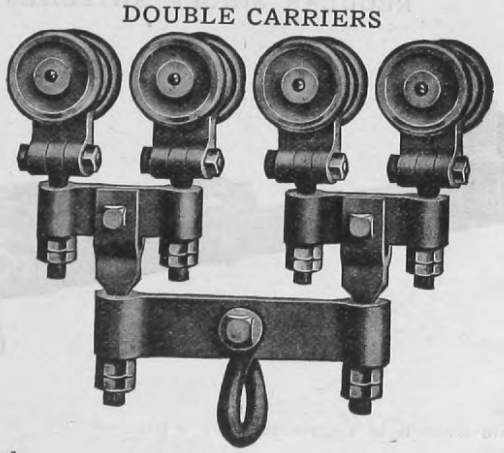
SWINGING PENDANT

SINGLE CARRIERS



For Track	Capacity	Each
No. 2½	—Up to 250 pounds	$15.00
No. 4	—Up to 1000 pounds	50.00
No. 4½	—Up to 1000 pounds	50.00

DOUBLE CARRIERS



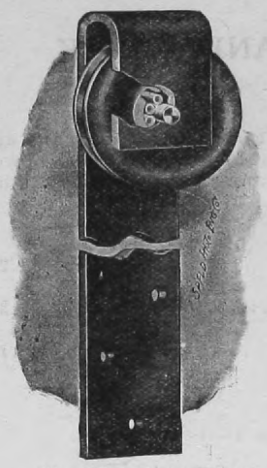
For Track	Capacity	Each
No. 2½	—Up to 500 pounds	$30.00
No. 4	—Up to 3000 pounds	60.00
No. 4½	—Up to 3000 pounds	60.00

OVERHEAD CARRYING TRACK

Nos.	Capacity	Straight	Curved
1	—Up to 300 pounds, in lengths up to 10 ft.	Per Foot, $0.40	1.00
2½	—Up to 500 pounds, in lengths up to 10 ft.	Per Foot, .60	1.50
4	—Up to 2000 pounds, in lengths up to 8 ft.	Per Foot, .80	2.00
4½	—10 Gauge Up to 4000 pounds	Per Foot, 1.00	2.50

Special Catalogues giving full details and necessary data upon request.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN



No. 180. Rear View. Sectional Cut showing construction of Carrier.

FIRE DOOR HANGERS AND TRACK

Approved by the Board of Fire Underwriters

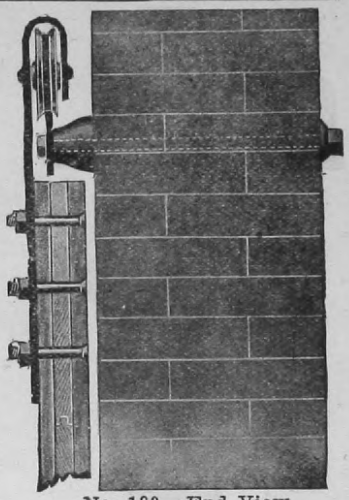
For Door of any thickness and weight. Hardened Steel Roller Bearing Carriers, with 5 inch Wheels turned true to center.

Pendants are made of 3½x⅜ inch Tire Steel.

No. 180—Hangers, with bolts for 2⅝ inch doors .....Per Pair, $4.00

No. 80—Track, 3½x⅜ inch Tire Steel, drilled for ¾ inch Machine bolts, with Cone Brackets .....Per Foot, $0.40

Wall Bolts are **Extra**—If wanted **specify** thickness of Wall.



No. 180. End View. Showing application of Track, Track Brackets and Washers to Wall and Carriers to Door.

General Information.

Important—When figuring the amount of 3½x⅜ inch Track required for Fire Doors, add 1 foot, 9 inches to twice the width of opening to meet the requirements of the Board of Fire Underwriters. Track will be furnished the required length in one piece. The Board of Fire Underwriters require Two Hangers on all doors up to 6 feet wide and three Hangers on all doors over 6 feet wide, and one set of Automatic Fixtures. Doors should lap opening 4 inches at the top and sides, with top beveled to correspond to the pitch of track, which should be ¾ inch to the foot.

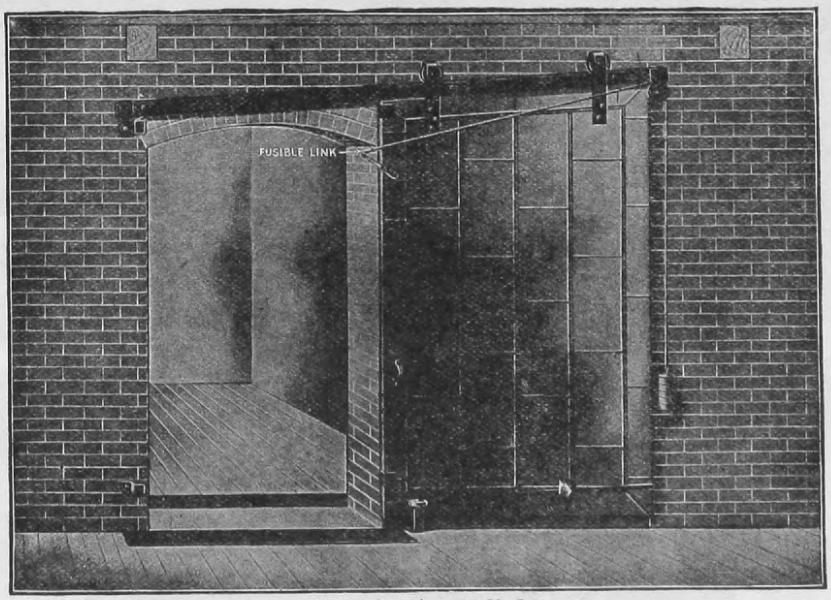
For fixtures on one side of wall—Estimate 2 end track bolts 4 inches longer than thickness of wall and intermediate track bolts 3 inches longer than thickness of wall; binder bolts thickness of wall plus 2 inches and guide roller bolt, thickness of wall plus 1 inch.

For fixtures on both sides of wall—Estimate as follows: For track, 2 end bolts 6 inches longer than thickness of wall and intermediate bolts 5 inches longer than thickness of wall. For binders, all bolts 2 inches longer than thickness of wall. For guide roller, bolts same length as thickness of wall.

AUTOMATIC FIRE DOOR FIXTURES

For Gravity Closing Fire Doors

Inspected, labeled and tagged under the supervision of the Underwriters Laboratories, Inc.



Style A. As applied.

Each Set consists of Two Wall Stops, Corner Wall Binder and Guide Roller, Front Stop and Rope Pulley and Back Stop, for attaching to track, One Set of Weights and Holder, Cast Wedge, Fusible Link and Ring, Link Bracket and sufficient Cord, Two Half Oval Chafing Strips, Two Flat Strips for front of door, Guide Roller Strip, Flush Handle, Door Pull, Eight Steel Bumper Shoes, Five Cast Washers for Wall Bolts and all bolts and screws for attaching parts to door, **except** Wall Bolts which are **not** included, but will be furnished at an **extra price** if thickness of wall is given.

Automatic Closing Fixtures, Without Hangers or Track

Width of Opening, ft.	4	6	8
Style A--Per Set, with One Fusible Link	$8.50	9.50	10.50

Packed—One Set in a Box. Specify width of Opening when ordering.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

No. 542C.

WILCOX FIRE DOOR HANGERS AND TRACK

Made in accordance with the latest rules of the Board of Fire Underwriters and approved by them. Made of Malleable Iron with 4⅜ inch Roller Bearing Wheels. Lower Guide Wheels under track prevent derailment. For Doors of any thickness and weight.

No. 542C—Hangers, with bolts for 2⅝ inch Doors.....Per Pair, $4.20

No. 542C—Tubular Track, with brackets every two feet.....Per Foot, .30

No. 542C—Extra Brackets .....Each, .16

Note—Brackets are fitted for ¾ inch Machine Bolts.

Wall Bolts are **Extra,** if wanted **specify** thickness of Wall.

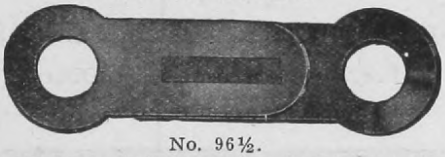
General Information

When figuring the amount of Tubular Track required for Fire Doors add 14 inches to twice the width of opening to meet the requirements of the Board of Fire Underwriters. Track will be furnished the required length in one piece. The Board of Fire Underwriters require Two Hangers on all doors up to 6 feet wide and Three Hangers on all doors over 6 feet wide, and One Set of Automatic fixtures. Doors should lap opening 4 inches at the top and sides, with Top beveled to correspond to the pitch of track, which should be ¾ inch to the foot.

For Fixtures on One Side of Wall—Front track bolt should be 6 inches longer than thickness of wall. Rear track bolt 7 inches longer than thickness of wall. **Intermediate** track bolts and binder bolts 2 inches longer than thickness of wall. Guide roller bolt 1 inch longer than thickness of wall.

For Fixtures on Both Sides of Wall—The front track bolt should be 9 inches longer than thickness of wall. Rear track bolt 12 inches longer than thickness of wall. Intermediate track bolts and binder bolts 2 inches longer than thickness of wall. Guide roller bolt same thickness as wall.

FUSIBLE LINKS



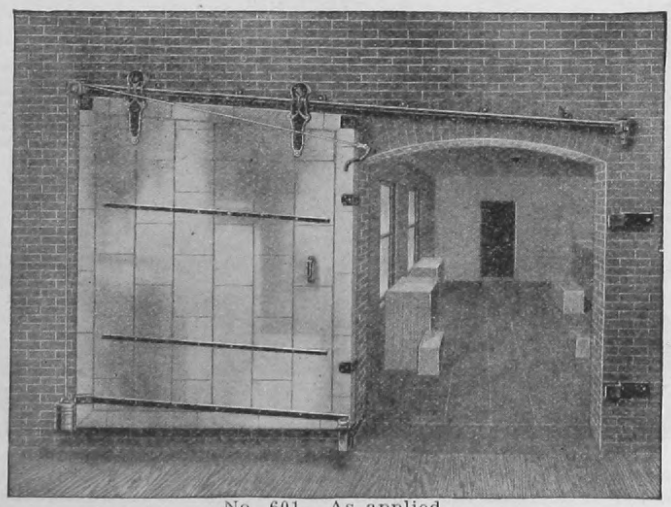
No. 96½.

No. 96½—Fusible Links for use on all windows and doors constructed to close automatically by heat. Links melt at 160 degrees .....Each, $0.20

AUTOMATIC FIRE DOOR FIXTURES

For Incline Gravity Closing Fire Doors

Inspected, Labeled and Tagged under the Supervision of the Underwriters Laboratories, Inc.



No. 601. As applied.

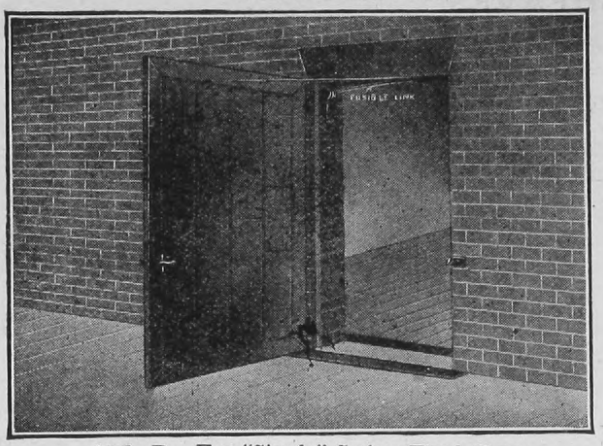
Each Set consists of Two Wall Stops, Corner Wall Binder and Guide Roller, Sheave, Two Combination Bracket and End Stops for track, One Set of Weights and Holder, Cast Wedge, Fusible Link with Hooks, Link Bracket and sufficient cord, Two Half Oval Chafing Strips, Two Flat Strips for front of door, Guide Roller Strip, Flush Handle, Door Pull, Eight Steel Bumper Shoes, Five Cast Washers for wall bolts and all bolts and screws for attaching parts to door, **except** Wall Bolts which are **not** included, but will be furnished at an **extra price** if thickness of wall is given.

No. 601—Richards-Wilcox Automatic Fire Door Fixtures, with One Fusible Link, for use with Round Track Fire Door Hangers. Hangers and Track are not included .....Per Set, $8.00

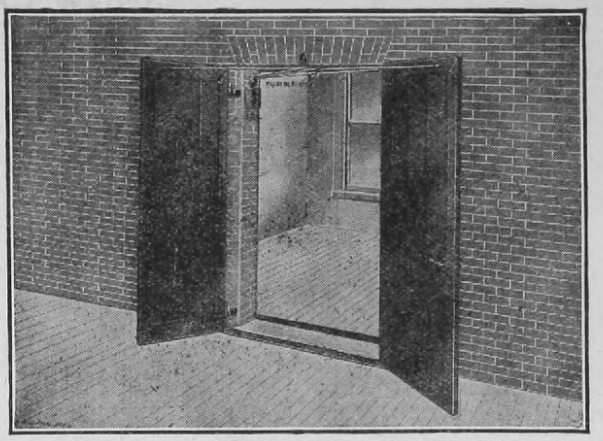
Packed—One Set in a Box. **Specify** size of opening when ordering.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

AUTOMATIC SWING FIRE DOOR FIXTURES



Style R. For "Single" Swing Flush Door.



Style R. R. For "Double" Swing Flush Doors.

Style "R" For Single Door

Complete Set including Hinges, Latch and Catch and Automatic Fixtures.

For Single "Flush" Door, 2 foot opening	Per Set,	$10.00
For Single "Overlap" Door, 2 foot opening	Per Set,	11.00
For Wider Doors, either style	Add Per Foot,	.75
Automatic Fixtures only*	Per Set,	5.00

***Automatic** Fixtures only, include Chain, Weight, Fusible Link, Wire and Connection; Weight Bracket, Swivel Pulley and Expansion Screw Eye and Chain Holder.

Note.—Doors equipped with single swing automatic device should never be opened to much more than an angle of ninety degrees; a stop should be placed upon the floor to prevent the door from being swung back against the wall.

Style "RR" For Double Doors

Complete Set including Hinges, Latch and Catch, and Automatic Fixtures.

For Double "Flush" Doors, 4 foot opening	Per Set,	$14.00
For Double "Overlap" Doors, 4 foot opening	Per Set,	15.00
For Wider Doors, either style	Add Per Foot,	.75
Automatic Fixtures only*	Per Set,	7.00

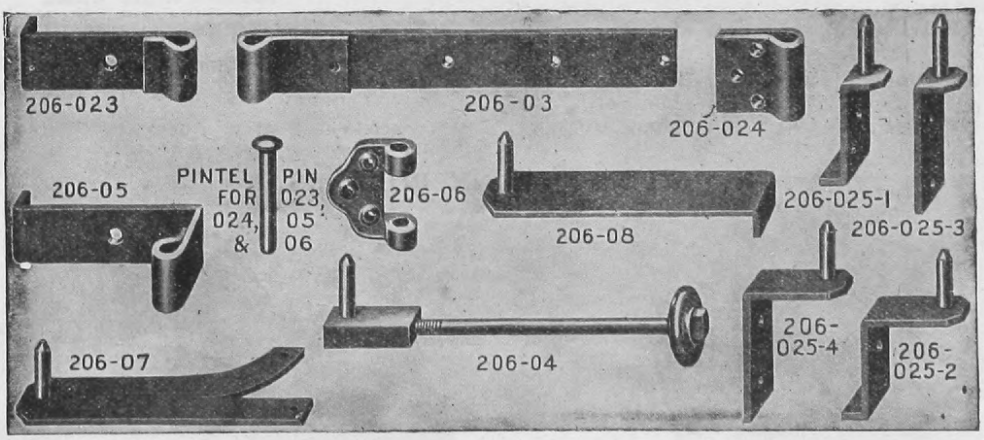
***Automatic** Fixtures only, include Chain, 2 Weights, Fusible Link, Wire and Connections; Weight Bracket, 2 Swivel Pulleys and 2 Chain Holders.

Note.—Doors equipped with Double Swing Automatic Device should never be opened to an angle of over 110 degrees from the opening. Stops should be placed upon the floor to prevent the doors from being opened too wide. The space back of the doors may be used for storage.

Note.—Carriage Bolts are furnished for attaching hinges and parts. Latches are Extra Heavy, and Latches for Overlap doors are Extra Long and have Adjustable Catches.

Detail of Pintels and Hinge for Swing Fire Door Fixtures

Underwriters require hinges to cover ¾ the width of door.



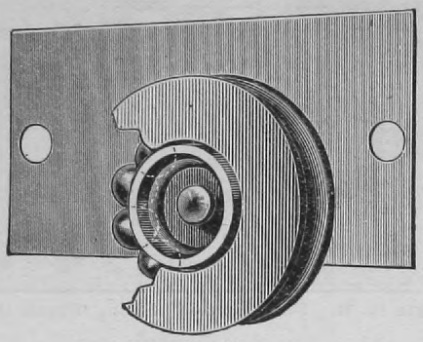
Hinge straps are made of 2½x⅜ inch steel.

Nos.	Items	Per Pair
206-03	—Hinge Straps, 24 inch or under	$1.20
206-03	—Hinge Straps, 30 inch	1.50
206-03	—Hinge Straps, 36 inch	1.80
206-04	—Hinge Pintels for 12-inch wall or under, flush or lap	2.00
206-04	—Hinge Pintels for 18 inch wall, flush or lap	2.20
206-04	—Hinge Pintels, for 24 inch wall, flush or lap	2.40
206-05	—Hinge Pintels, for lap door	1.20
206-06	—Hinge Pintels, for flush door	1.20
206- 07	—Hinge Pintels, for flush or lap door	$1.50
206- 08	—Hinge Pintels, for flush or lap door	1.00
206-023	—Hinge Pintels, for flush door	1.20
206-024	—Hinge Pintels, for flush door	1.80
206-025-1	—Hinge Pintels, for flush door	1.00
206-025-2	—Hinge Pintels, for lap door	1.25
206-025-3	—Hinge Pintels, for flush door	1.00
206-025-4	—Hinge Pintels, for lap door	1.25
No. 303 St. C	—Chain	Per Foot, .10

Note.—Pintel Pin is furnished with Pintel.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SHOW CASE SHEAVES



No. 3.

Wrought Steel Case, Cast Metal Wheel, Hardened Steel Ball Bearings.

No. 3—1⅜ inch Wheels.....Per Dozen, $1.50

No. A36.

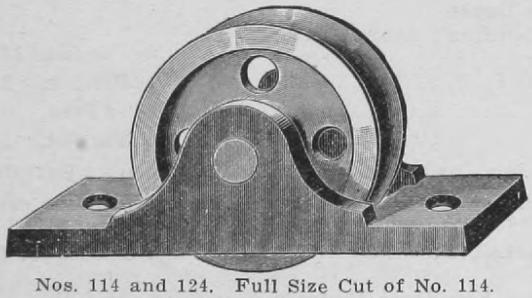
For Glass Doors without Frames.

Frames are Slotted to receive metal dividing Strip or Track. This positively prevents glass doors from striking each other. **Fibre** Wheels, 1$\frac{3}{16}$x$\frac{5}{16}$ inch. Wrought Steel Case.

No. A36—Ball Bearing.....Per Dozen, $4.50

No. F36—Plain Bearing.....Per Dozen, 3.00

SASH AND SHUTTER SHEAVES



Nos. 114 and 124. Full Size Cut of No. 114.

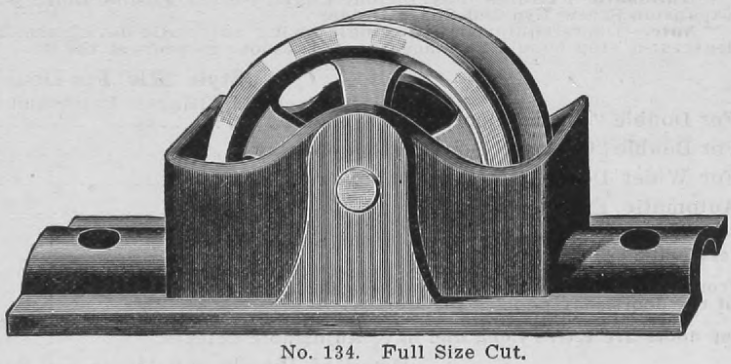
Polished Brass Wheel.

Japanned Case, Flat Face.

No. 114—1¼ inch Wheel, $\frac{9}{16}$x2⅜ inch Face.....Per Set, $0.60

No. 124—1½ inch Wheel, ⅝x3⅛ inch Face.....Per Set, .84

Packed—Four in a Set; Six Sets in a Box.



No. 134. Full Size Cut.

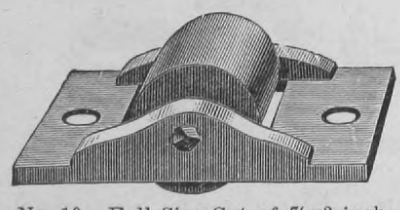
Polished Brass Wheel.

Japanned Case, Astragal Face.

No. 134—1⅝ inch Wheel, ⅞x3½ inch Face.....Per Set, $0.66

Packed—Four in a Set; Three Sets in a Box.

SASH OR TRUNK ROLLERS

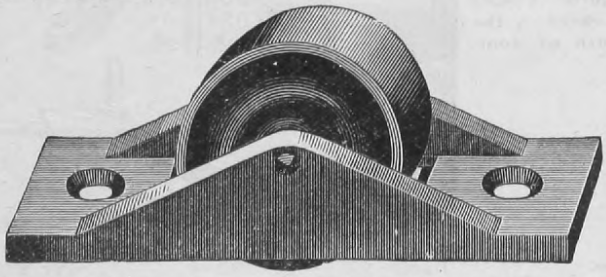


No. 10. Full Size Cut of ⅞x2 inch.

Cast Iron Japanned.

Inches	⅝	¾	⅞	1	1¼
Size of Plate	⅝x1½	¾x1⅝	⅞x2	1x2⅛	1¼x2¼
Diam. of Wheel	⅝	⅝	¾	⅞	1
No. 10—Gross	$2.70	3.20	4.20	5.40	7.70

Packed—⅝ to 1 inch, Half Gross; 1¼ inch, Quarter Gross in a Box.



Nos. 1 to 3. Full Size Cut of No. 1.

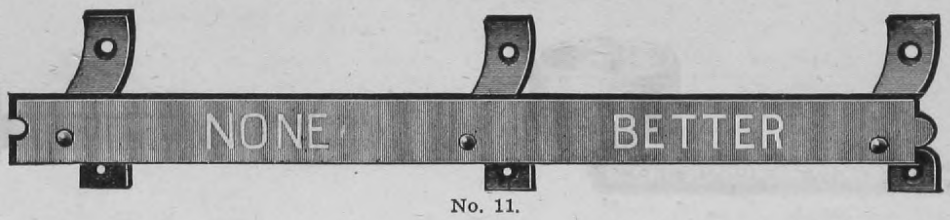
Cast Iron Japanned.

Extra Heavy.....Nos.,	1	2	3
Size of Plate.....Inches,	1x2⅞	1¼x3¼	1½x3⅞
Diam. of Wheel..Inches,	1¼	1½	2
Per Gross	$8.00	12.00	19.00

Packed—No. 1, One-sixth Gross; others, One-twelfth Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BARN DOOR RAIL



No. 11.

All Steel Rail with Brackets Riveted.

Suitable for all Standard makes of Barn Door Hangers, except Hinged Style.

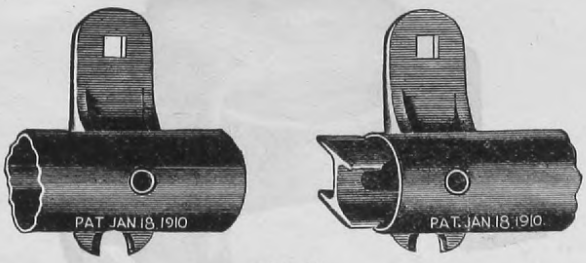
No. 11—3/16x1 inch Rail, in Lengths of 4, 6, 8 and 10 feet.....Per Foot, $.....

No. 12.

Round Edge Steel Rail with Steel Center Brackets, Countersunk for Screws.

For Hinged Barn Door Hangers.

No. 12—3/16x1 1/4 inch Rail, in Lengths of 4, 6, 8 and 10 feet .....Per Foot, $.....



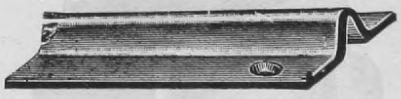
No. 05.

Tubular Steel Rail, with Riveted Brackets. Made without opening in the back. The seam is on the bottom, which prevents rusting. Joints are practically Waterproof. Quickly put in place as the brackets are already attached.

Suitable for No. 5W Wilbern and other Round Track Barn Door Hangers.

No. 05—1 1/4 inch Diameter, in lengths of 2, 6, 8 and 10 feet.....Per Foot, $.....

SASH, SHUTTER AND DOOR RAIL



Nos. 20 to 492C.

Wrought Brass Metal, Polished.

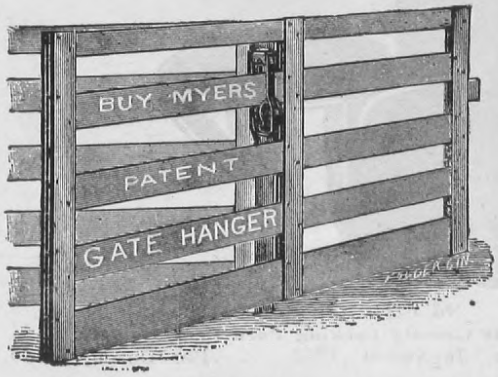
In Lengths of 3, 4, 5, 6, 7 and 8 feet, 3/4 and 1 1/8 inches wide.

Nos.	Per Foot
20— 3/4 inch, for Sash and Shutter Sheaves, $.....	
25—1 1/8 inch, for Sliding Door Sheaves.....	.....

Wrought Steel, Brass Plated.

In Lengths of 3, 4, 5, 6, 7 and 8 feet, 3/4 and 1 1/8 inches wide.

Nos.	Per Foot
491C— 3/4 inch, for Sash and Shutter Sheaves, $.....	
492C—1 1/8 inch, for Sliding Door Sheaves, ...	



MYERS GATE HANGERS

A Practical Device for hanging and operating a common farm gate. It is Double Pivoted, supports a gate perpendicularly. Strong, Simple and Durable. Made of Steel, Assembled with Bolts and is Adjustable for any length or weight of gate.

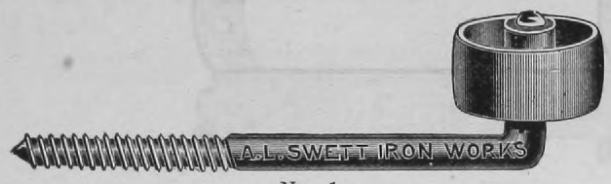
Material Required to Erect a Myers Patent Farm Gate.

One Myers Patent Hanger. Five boards 14 feet long. Six boards 4 feet 8 inches. Two posts.

No. 635—Gate Hangers .....Per Dozen, $9.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BARN DOOR STAY ROLLERS

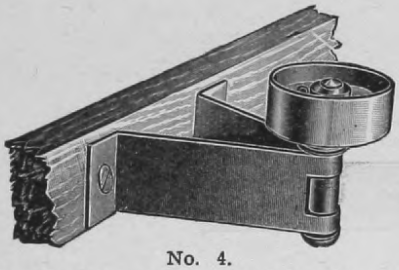


No. 1.

No. 1—Barn Door Stay Rollers, for Outside Doors, with Wrought Iron Shank to Screw .....Per Dozen, $.....

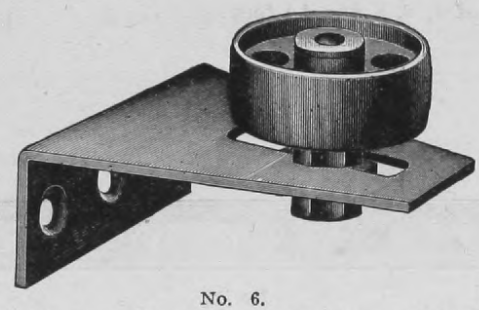
No. 55.

No. 55—Barn Door Stay Rollers, for Inside Doors, with Wrought Iron Shank to Screw .....Per Dozen, $.....



No. 4.

No. 4—Hinged Adjustable Barn Door Stay Rollers, suitable for all thicknesses of Doors ..... Per Dozen, $.....



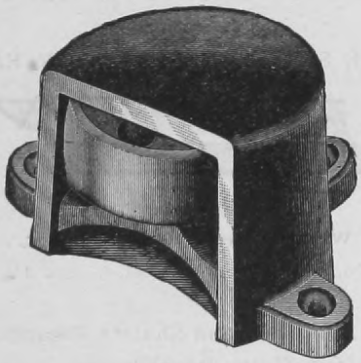
No. 6.

No. 6—Adjustable and **Reversible** Barn Door Stay Rollers, suitable for all thicknesses of Doors .....Per Dozen, $.....

No. 81.

Height to Center of Wheel, 6½ inches.

No. 81—Heavy Steel Fire and Barn Door Stay Rollers, 3¼ inch Wheel, attached by ½ inch Lag Screws .....Per Dozen, $.....



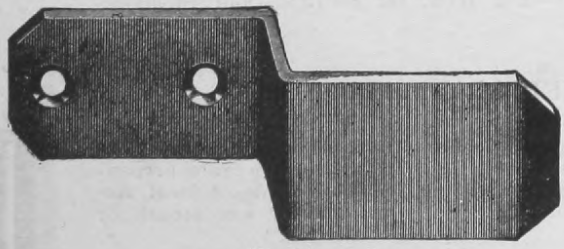
No. 8.

No. 8—Incased Safety Barn Door Stay Rollers, 2 inch Wheel. For Inside Doors only..Per Dozen, $.....

No. 154. Extra Heavy.

No. 154—Extra Heavy Wrought Steel Frame, Gray Iron Wheel, 3½ in. diameter. For Warehouse or other heavy Doors.....Per Dozen, $14.40

WALL BINDER STOPS



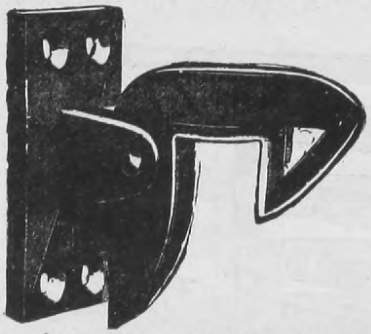
No. 94.

Made of ⅜x3½ inch Steel.

For Fire Doors, may also be used as a Half or Open Bar Staple.

No. 94 { Offset, inches 2 3
Per Dozen ..... $.....

GRAVITY DOOR CATCHES



No. 024. Half Size Cut.

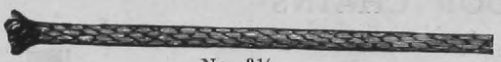
Automatic Gravity Locking Barn Door Holders.

No. 024—Iron, Japanned .....Per Dozen, $1.60

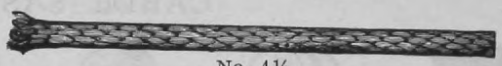
Packed—One Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

SMALL LINES

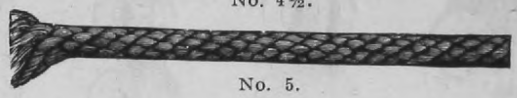


No. 3½.



No. 4½.

No. 4



No. 5.

White Braided Cotton. Masons', Upholsterers', Store Shade, and Awning Lines. In Hanks.

Small Lines	**Nos.**	**3½**	**4**	**4½**	**5**
	Feet in a Hank	48	48	48	100
	Per Dozen	$1.50	2.00	2.50	7.50

Packed—Twelve Connected, One Dozen in a Box.

SASH CORD AND BRAIDED ROPE

"BUSCO"

Made from Best Quality Selected Yarn, twice doubled and twisted, firmly braided and smoothly finished. Will not stretch.

Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound	Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound
6	6/32	66	18	5 and less	$.....	**10**	10/32	27	44	35 to 45	$.....
7	7/32	55	22	5 to 15	.....	**12**	12/32	20	60	over 45	.....
8	8/32	44	27	15 to 25	.....	**14**	7/16	14	.....	.....	.....
9	9/32	36	33	25 to 35	.....	**16**	½	12	.....	.....	.....

Packed—In Hanks of 100 Feet, Two Connected. One Dozen Hanks in a Package.

SILVER LAKE

Made from Best Quality Selected Yarn, twice doubled and twisted, firmly braided and smoothly finished. Will not stretch.

Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound	Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound
6	6/32	66	18	5 and less	$.....	**10**	10/32	27	44	35 to 45	$.....
7	7/32	55	22	5 to 15	.....	**12**	12/32	20	60	over 45	.....
8	8/32	44	27	15 to 25	.....	**14**	7/16	14	.....	.....	.....
9	9/32	36	33	25 to 35	.....	**16**	½	12	.....	.....	.....

Packed—In Hanks of 100 Feet, Two Connected. One Dozen Hanks in a Package.

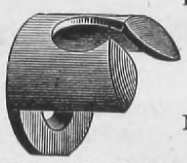
SAMSON SPOT

Samson Spot Cord is made from the Finest Quality Selected Yarn. Warranted to be free from waste stock and imperfections in Braid and Finish.

The Spot is a Guarantee of Extra Quality.

Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound	Nos.	Diameter Inch	Feet Per Pound	Weight Per Dozen	For Weights Pounds	Per Pound
6	6/32	66	18	5 and less	$.....	**10**	10/32	27	44	35 to 45	$.....
7	7/32	55	22	5 to 15	.....	**12**	12/32	20	60	over 45	.....
8	8/32	44	27	15 to 25	.....	**14**	7/16	14	.....	.....	.....
9	9/32	36	33	25 to 35	.....	**16**	½	12	.....	.....	.....

Packed—In Hanks of 100 Feet, Two Connected. One Dozen Hanks in a Package.



Full Size Cut. For use with Screws.

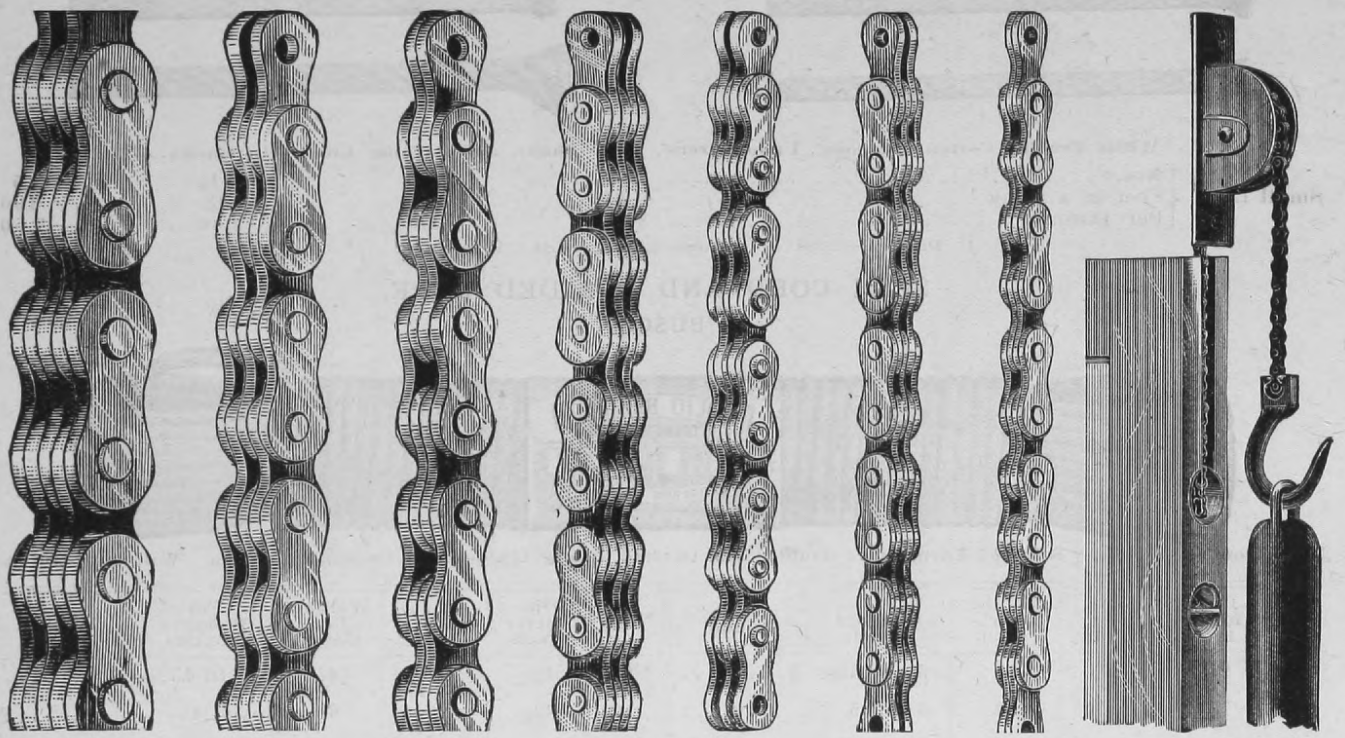
SASH CORD IRONS

No. 1—Sash Cord Irons.....Per Gross $.....

Packed—One Gross in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CABLE SASH AND DOOR CHAINS



No. 6. No. 5 No. 4. No. 110. No. 10. No. 30. No. 40. Fastenings.

Heavy Steel Cable "Door" Chains

For Suspending Doors, Gates and Heavy Weights.

No. 6—Heavy Steel Cable Door Chain, for a Door of 1000 pounds ..... Per Foot, $0.30
No. 5—Heavy Steel Cable Door Chain, for a Door of 800 pounds ..... Per Foot, .22
No. 4—Heavy Steel Cable Door Chain, for a Door of 500 pounds ..... Per Foot, .20
No. 110—Heavy Steel Cable Door Chain, for a Door of 400 pounds ..... Per Foot, .17
No. 10—Heavy Steel Cable Door Chain, for a Door of 250 pounds ..... Per Foot, .14

Fastenings— For Nos. 4, 5 and 6 Chain ..... Per Door, 1.00
For Nos. 110 and 10 Chain ..... Per Door, .40

Special Sash and Door Pulleys

For Cable Sash and Door Chains.

Made with extra heavy Iron Frames, Turned Wheel and Steel Pin.

No. 1—Extra Heavy, for No. 6 Chain, with 6 inch Wheel ..... Per Dozen, $24.00
No. 2—Extra Heavy, for Nos. 4 and 5 Chain, with 4 inch Wheel ..... Per Dozen, 12.00
No. 3—Extra Heavy, for No. 110 Chain, with 3½ inch Wheel ..... Per Dozen, 7.50

Note.—For Lighter Pulleys for this Service, see page 1431.

Steel Cable "Sash" Chains

These Chains, being Jointed, afford a steady movement of the heaviest Window Sash, absolutely noiseless, and are especially desirable where great durability is required.

No. 110—Steel Cable Sash Chain, for a Sash of 400 pounds ..... Per Foot, $0.17
No. 10—Steel Cable Sash Chain, for a Sash of 250 pounds ..... Per Foot, .14
No. 30—Steel Cable Sash Chain, for a Sash of 125 pounds ..... Per Foot, .10
No. 40—Steel Cable Sash Chain, for a Sash of 75 pounds ..... Per Foot, .09

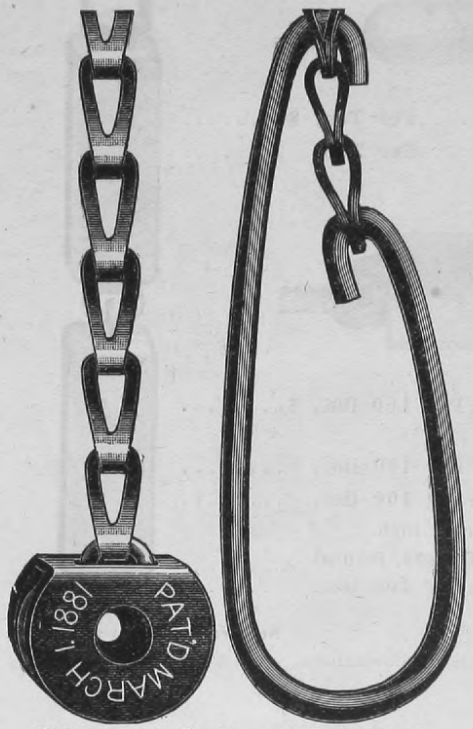
Packed—Reels Contain from 250 to 450 Feet.

Fastenings for Cable Sash Chain ..... Per Window, $0.25

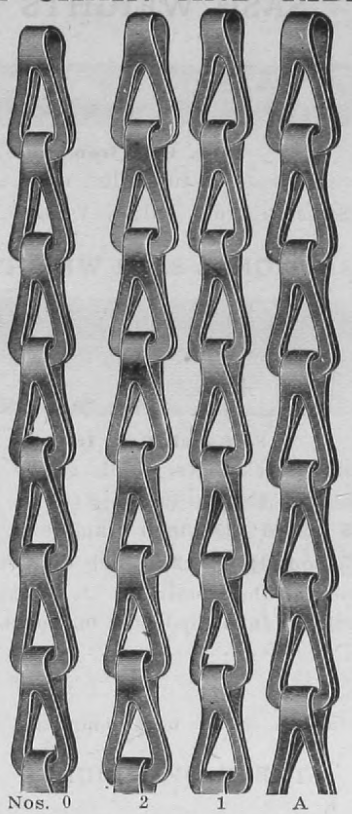
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

SASH CHAIN AND RIBBON

SASH CHAIN

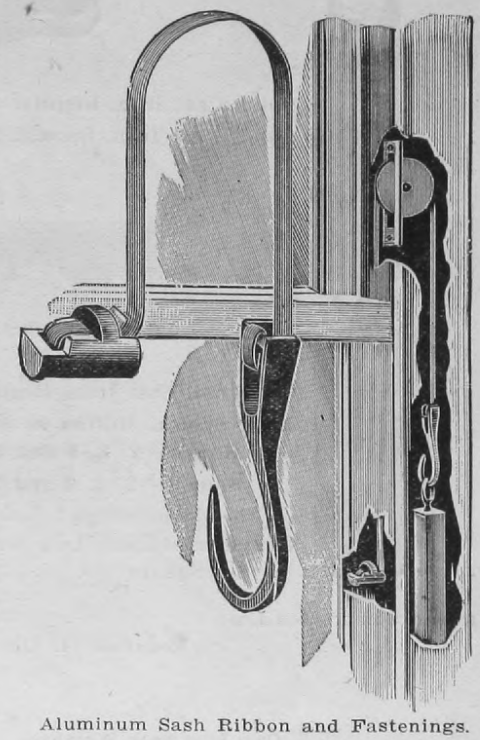


Safety Sash Chain and Fastenings.



Nos. 0 2 1 A

SASH RIBBON



Aluminum Sash Ribbon and Fastenings.

Safety Sash Chains

Safety Sash Chain is not affected by dampness or hard usage, and practically indestructible. Annealed Special, Extra Grade, Hand Drawn, Unsurpassed in strength and wearing qualities.

Nos.	Sash Chain.	Style.	For Sash Weighing.	Per Foot.
0	Steel	Galvanized	Not over 100 pounds	$0.05
2	Steel	Galvanized	Not over 150 pounds	.07
1	Steel	Galvanized	Not over 250 pounds	.09
A	Steel	Galvanized	Not over 400 pounds	.12
XXXX	Giant Metal	Bronze Mixture	Not over 450 pounds	.18
A	Giant Metal	Bronze Mixture	Not over 400 pounds	.15
1	Giant Metal	Bronze Mixture	Not over 275 pounds	.12
2	Giant Metal	Bronze Mixture	Not over 175 pounds	.10
0	Giant Metal	Bronze Mixture	Not over 125 pounds	.08
XXXX	Red Metal	Red Bronze	Not over 400 pounds	.16
A	Red Metal	Red Bronze	Not over 300 pounds	.13
1	Red Metal	Red Bronze	Not over 225 pounds	.10
2	Red Metal	Red Bronze	Not over 150 pounds	.08
0	Red Metal	Red Bronze	Not over 100 pounds	.06
XXXX	Steel	Coppered	Not over 450 pounds	.14
A	Steel	Coppered	Not over 400 pounds	.11
1	Steel	Coppered	Not over 250 pounds	.08
2	Steel	Coppered	Not over 150 pounds	.06
0	Steel	Coppered	Not over 100 pounds	.04

Extras.—Chain Dipped Bright, ½ cent per foot, advance; Dipped and Lacquered, 1 cent per foot advance on list price.

Fastenings
- **No. 1**—For No. XXXX Chain ..... Per Window, $0.25
- **No. 2**—For No. A, 1 and 2 Chains ..... Per Window, .14
- **No. 3**—For No. 0 Chain ..... Per Window, .14

Packed—On 500 foot Reels.

Note—For Pulleys for Safety Chains see Page 1431.

Aluminum Sash Ribbon

Annealed Special, Extra Flexible, Hand Drawn, Rolled Edge.

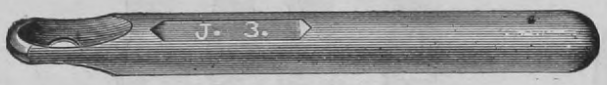
Aluminum Sash Ribbon is soft, pliable, non-corrosive in any atmosphere or temperature and of great tensile strength, smooth and easy running and neat in appearance.

- **No. 60**—⅜ inch Wide, for Sash Weighing from 40 to 60 pounds ..... Per Foot, $0.04
- **No. 150**—½ inch Wide, for Sash Weighing from 100 to 150 pounds ..... Per Foot, .06

Fastenings
- For Use with ⅜ inch Ribbon ..... Per Window, .15
- For Use with ½ inch Ribbon ..... Per Window, .18

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SASH WEIGHTS

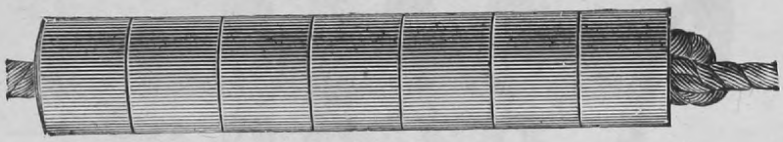


Solid, Cast Iron.

Solid, Cast Iron, **Regular** Stock Sizes 3 to 30 lbs. each.....Per Ton, $.....

Solid, Cast Iron, **Special** Sizes to order only.....Per Ton, ...

SECTIONAL SASH WEIGHTS



Sectional, Cast Iron.

Sectional, Cast Iron, **Regular** Stock Sizes, ½ lb. each.....Per 100 lbs., $.....

Buhl Special Button or Sectional Sash Weights—

Round—2, 3, 4 and 5 pound; 2¼ inch diameter.....Per 100 lbs., ...

Square—2, 3, 4 and 5 pound; 2⅛x2¼ inch diameter.Per 100 lbs., ...

The Round weigh 1 Pound and the Square 1⅛ Lb. to the lineal inch.

Compressed Lead Sash Weights, furnished only on **Special** Orders, Round or Square .....Per 100 lbs., ...

Round Compressed Lead.

Square Compressed Lead.

Requests for Quotations should be accompanied with Specifications.

TABLE OF WEIGHTS

Cast Iron Sash Weights.

Weight	Diameter	Length	Weight	Diameter	Length
3	1⅜	8½	13	1¾	21½
3½	1⅜	9¾	14	2	18
4	1⅜	11	15	2	19
4½	1⅜	12¼	16	2	20¼
5	1½	12	17	2	21½
5½	1½	12½	18	2	22½
6	1½	14	19	2	23½
6½	1½	15	20	2	24½
7	1½	16	21	2⅛	25
7½	1½	17	22	2¼	23
8	1½	18	23	2¼	24
8½	1⅝	16½	24	2¼	25
9	1⅝	17½	25	2¼	25½
9½	1⅝	18½	26	2¼	26
10	1⅝	19½	27	2¼	27
10½	1⅝	20½	28	2¼	28
11	1⅝	21½	29	2¼	28½
11½	1¾	19	.....	.....	.....
12	1¾	20	.....	.....	.....

Note.—Slight variations must be expected.

Compressed Lead Sash Weights.

Size	Round Weights. Weight per Lineal Foot	Square Weights. Weight per Lineal Foot
1 in.	3½ lbs.	4.93 lbs.
1¼ in.	6 lbs.	7.68 lbs.
1½ in.	8¼ lbs.	10.27 lbs.
1¾ in.	11¾ lbs.	15.08 lbs.
2 in.	15½ lbs	19.02 lbs.
2¼ in.	18½ lbs.	24 lbs.
2½ in.	23 lbs.	30.82 lbs.
2¾ in.	28.93 lbs.	37.27 lbs.
3 in.	34.81 lbs.	44.38 lbs.
3¼ in.	40.52 lbs.	52.07 lbs.
3½ in.	47.26 lbs.	60.82 lbs.
3¾ in.	54 lbs.	69.33 lbs.
4 in.	61.93 lbs.	.....

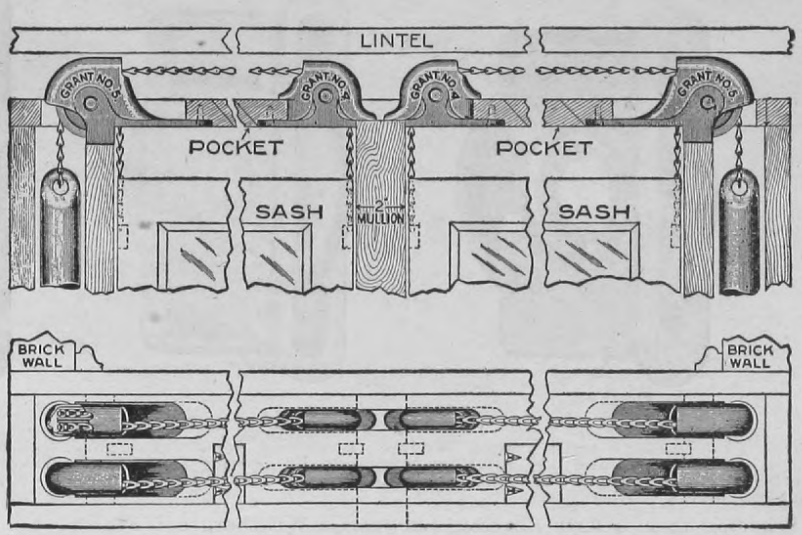
Weight of Windows.

Weight of Four-Light		Weight of Two-Light		
Size of Glass	Pounds per Window	Size of Glass	Pounds per Window, **Single** Strength	Pounds per Window, **Double** Strength
12x20	16	20x28	18	22
12x22	18	20x30	18	22
12x24	18	20x32	20	24
12x26	20	20x34	22	26
12x28	20	20x36	22	26
12x30	20	22x28	20	24
12x32	22	22x30	20	24
12x34	24	22x32	22	26
12x36	24	22x34	24	28
13x24	20	22x36	24	28
13x26	22	24x24	18	22
13x28	22	24x26	20	24
13x30	22	24x28	20	24
13x32	24	24x30	20	24
13x34	26	24x32	22	26
13x36	26	24x34	24	28
13x38	28	24x36	24	28
14x24	22	26x28	22	26
14x26	24	26x30	22	26
14x28	24	26x32	24	28
14x30	24	26x34	26	30
14x32	26	26x36	26	30
14x34	28	26x38	28	32
14x36	28	26x40	28	32
14x38	30	28x28	24	28
14x40	30	28x30	24	28
.....	.....	28x32	26	30
.....	.....	28x34	28	32
.....	.....	28x36	28	32
.....	.....	28x38	30	34
.....	.....	28x40	30	36

Note.—In hanging Windows, Four Sash Weights of one-fourth above weight are required for each window. Above estimates are based on 1⅜ inch Sash.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GRANT OVERHEAD PULLEYS

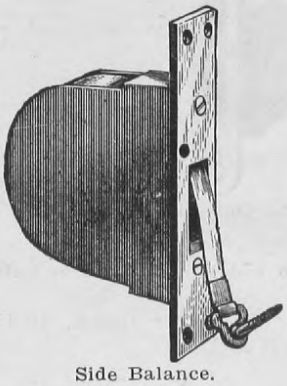


Sectional Cut showing Grant Pulleys in Twin Windows.

The Housing is made in one piece, extra strong and connects with the soffit so that mortar will not clog the wheels. They hang the weight in center of boxes in circle window frames. Can be used in segment head window frames, and are easily removed, if required, after trim is placed. **They require** 8 inches less pocket room than side pulleys and thus an iron weight may be used saving from 100 to 200 pounds of lead to each window. The chain or cords are easily inserted with a mouse furnished with all orders and they are concealed from view when window is closed.

For use on groups of two or more windows where the Mullions are too narrow to admit of using regular Sash Pulleys

For Twin Mullion Windows, 8 Pulleys, with Lacquered Iron Face ..... Per Set, $ 4.00
For Triplet Mullion Windows, 16 Pulleys, with Lacquered Iron Face ..... Per Set, 7.34
For Quadruple Mullion Windows, 20 Pulleys, with Lacquered Iron Face ..... Per Set, 10.15



Side Balance.

CALDWELL SASH BALANCES

Caldwell Sash Balances eliminate box frames, sash weights, cord, chain and pulleys, allowing the utmost possible space for glass and light. Top Balances are used in narrow Mullion Bay Windows, or in any window where there is not sufficient room for Side Balances.

Top Balances.

When ordering Top Balances, **prefix** 0 to the Number of Side Balance, as 06, 08, etc. Side Balances only carried in Stock, Top Balances furnished only on special orders direct from factory, at same list prices as Side Balances.

Top Balance.

Price List of Side Balances

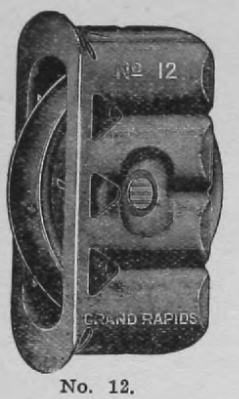
Nos.	Per Set of Four Balances	Weight each Sash, Pounds	Length of Tape, Inches	Regular Cases Contain	Nos.	Per Set of Four Balances	Weight each Sash, Pounds	Length of Tape, Inches	Regular Cases Contain
6	$2.00	4 to 6	30	24 sets	**23**	$4.00	20 to 23	50	16 sets
8	2.20	6 to 8	30	24 sets	**26**	4.25	23 to 26	50	16 sets
10	2.40	8 to 10	34	24 sets	**29**	4.50	26 to 29	52	16 sets
12	2.60	10 to 12	38	24 sets	**32**	4.75	29 to 32	52	16 sets
14	2.80	12 to 14	42	24 sets	**35**	5.50	32 to 35	54	12 sets
16	3.00	14 to 16	42	18 sets	**38**	5.75	35 to 38	54	12 sets
18	3.20	16 to 18	44	18 sets	**41**	6.00	38 to 41	54	12 sets
20	3.40	18 to 20	46	18 sets	**44**	6.25	41 to 44	54	12 sets

Packed—One Set in a Box, with Screws

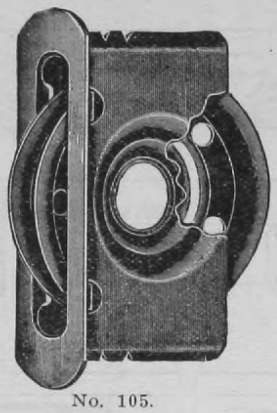
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

Half Size Cuts.

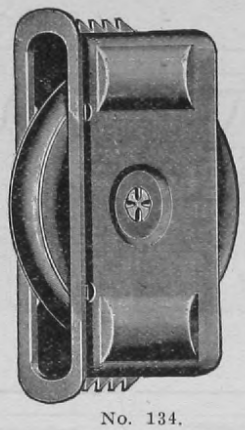
SASH OR FRAME PULLEYS



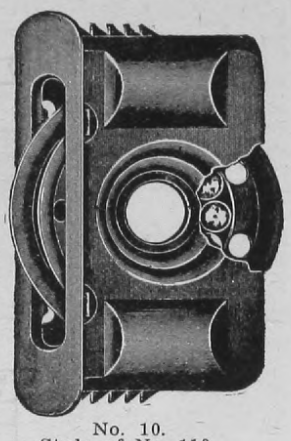
No. 12.



No. 105.



No. 134.



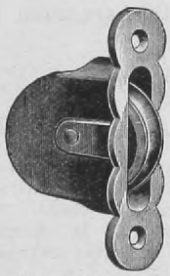
No. 10.
Style of No. 110.

Grand Rapids All Steel Sash Pulleys with 2 inch Wheels. Easy and Perfect Running, guaranteed to carry any sash. No Nails or Screws needed. Nos. 10, 12 and 134 fit Mortises made by boring four 13/16 inch holes, with centers 5/8 inch apart; No. 105 fits a mortise made by boring four 13/16 inch holes, with centers 9/16 inch apart. No counter boring for face plate, no cutting or trimming; every pulley fits.

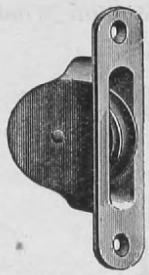
No. 12 —Diameter of Wheel, 2 inches, Axle Bearing, Lacquered Weatherproof Finish.....Per Dozen, $0.50
No. 105—Diameter of Wheel, 2 inches, Cone Bearing, Lacquered Weatherproof Finish.....Per Dozen, .50
No. 134—Diameter of Wheel, 2 inches, Axle Bearing, Lacquered Weatherproof Finish.....Per Dozen, .50
No. 110—Diameter of Wheel, 2 inches, Cone Bearing, Lacquered Weatherproof Finish.....Per Dozen, .50
No. 10 —Diameter of Wheel, 2 inches, **Ball Bearing,** Lacquered Weatherproof Finish.....Per Dozen, .60

Packed—Nos. 10, 12, 110 and 134, 100 Dozen; No. 105, 125 Dozen in a Barrel.

No. 17. Half Size.



No. 52. One Third Size.



Nos. 42 to 146. One Third Size.

All Steel Common Sense Pattern, Plain Front.

Fits a mortise made by boring 5 holes with a 1 inch bit, centers 3/4 inch apart. The two end holes should be only 1/16 inch deep. Face Plate, 4x1 inch.

No. 17—Diameter of Wheel, 2 inches, Axle Bearing, Natural Finish .....Per Dozen, $0.47
Packed—In Open Stock.

Common Sense Pattern, Plain Front

Steel Pin, Round Groove Polished Wheel.

No. 52—Diameter of Wheel, 2 inches; Front, 4x1 inch.....Per Dozen, $0.48
Packed—In Open Stock.

Round End, Plain Front

Steel Pin, Inside Lug, Round Groove Polished Wheel.

No. 42—Diameter of Wheel, 2 inches; Front, 4 7/16 x1 inch .....Per Dozen, $0.54
No. 44—Diameter of Wheel, 2 1/4 inches; Front, 5 x1 1/8 inches .....Per Dozen, .66
No. 46—Diameter of Wheel, 2 1/2 inches; Front, 5 1/2 x1 1/4 inches .....Per Dozen, .90
Packed—In Open Stock.

Round End, Polished and Bronzed Front

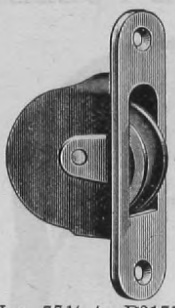
Steel Pin, Inside Lug, Round Groove Polished Wheel.

No. 142—Diameter of Wheel, 2 inches; Front, 4 7/16 x1 inch .....Per Dozen, $0.66
No. 144—Diameter of Wheel, 2 1/4 inches; Front, 5 x1 1/8 inches .....Per Dozen, .81
No. 146—Diameter of Wheel, 2 1/2 inches; Front, 5 1/2 x1 1/4 inches .....Per Dozen, 1.05
Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

One-Third Size Cuts.

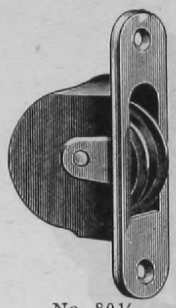
SASH OR FRAME PULLEYS



Nos. 77½ to P2177¾.

Cut showing Anti-Friction Bearings.

Cut showing Ball Bearings.



No. 80½.

Round Ends, Polished Fronts, Round Grooved Wheels

Plain Bearings, Easy Running, Noiseless, Heavy Steel Pins, Wheels Turned True and Polished

Diameter of Wheel.....Inches,		2	2¼	2½	3
Size of Front.....Inches,		4⅝x1	5⅝x1⅛	5⅞x1¼	6½x1 7/16
No. 77½—Polished and Bronzed Front.....Per Dozen,		$1.32	1.47	1.83	2.67
No. P 177½—Plain Bronze Plated Front and Wheel, Per Dozen,		2.40	2.58	3.00	3.90
No. P 277½—Antique Copper Front and Wheel....Per Dozen,		2.70	2.88	3.30	4.20
No. P 477½—Light Dull Brass Front and Wheel...Per Dozen,		2.70	2.88	3.30	4.20
No. P1177¾—Brass Metal Front, Plated Wheel.....Per Dozen,		2.85	3.15	3.75	4.50
No. P2177¾—Brass Metal Front and Wheel.....Per Dozen,		4.95	5.55	6.90	9.00

Packed—No. 77½, in Papers, One Dozen in a Package, without Screws; Others, One Dozen in a Box, with Screws.

Anti-Friction and Ball Bearings.

For Pulleys with Anti-Friction Bearings, Prefix "F" to Number and Add to List.....Per Dozen, $0.45

For Pulleys with Ball Bearings, Prefix "B" to Number and Add to List.....Per Dozen, 3.00

Round Ends, Polished Fronts, Square Grooved Wheels

Plain Bearings, Easy Running, Noiseless, Heavy Steel Pins, Wheels Turned True and Polished.

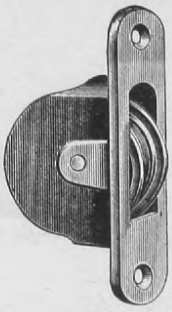
For ⅜ inch Cable Sash Chain.

Diameter of Wheel.....Inches,	2	2¼	2½	3
Size of Front.....Inches,	4⅝x1	5⅝x1⅛	5⅞x1¼	6½x1 7/16
No. 80½—Polished and Bronzed Front..Per Dozen,	$1.32	1.47	1.83	2.67

Packed—In Papers, One Dozen in a Package.

Note.—For Pulleys with Anti-Friction or Ball Bearings add as above.

Cut showing Anti-Friction Bearings.



No. 90½.

Cut showing Ball Bearings.

Round Ends, Polished Fronts, Double Square Grooved Wheels

Plain Bearings, Easy Running, Noiseless, Heavy Steel Pins, Wheels Turned True and Polished.

For Safety Sash Chain.

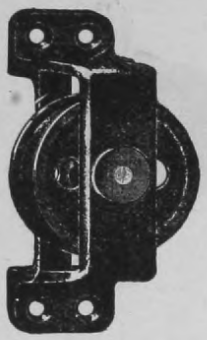
Diameter of Wheel.....Inches,	2	2¼	2½	3
Size of Front.....Inches,	4⅝x1	5⅝x1⅛	5⅞x1¼	6½x1 7/16
No. 90½—Polished and Bronzed Front..Per Dozen,	$1.50	1.67	1.95	3.04

Packed—In Papers, One Dozen in a Package.

Note.—For Pulleys with Anti-Friction or Ball Bearings add as above.

Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

WINDOW PULLEYS



No. 98.
For Chain.

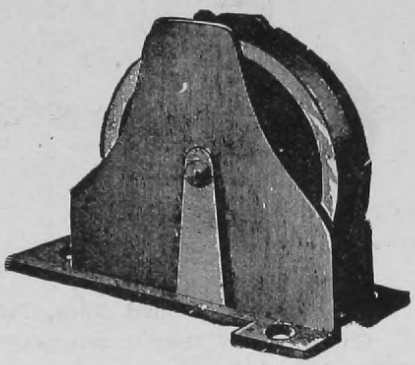
No. 99.
For Cord.

Turned Wheel, Heavy Steel Axle.

No. 98—2½ in. Wheel, Square Groove..Per Doz., $1.98
No. 99—3 in. Wheel, Round Groove....Per Doz., 3.00

Packed—One Dozen in a Box.

SHOW CASE PULLEYS

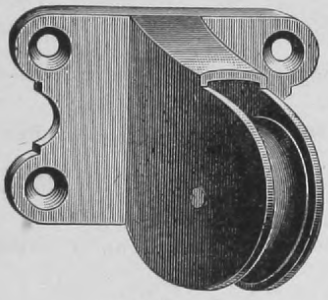


No. 1570.
For Chain, Polished Wheel, Steel Axle, Noiseless.

No. 1570—2½ x ⅜ in. Wheel, Flat Groove.....
.....Per Dozen, $1.40

Packed—In Open Stock.

HOT HOUSE PULLEYS



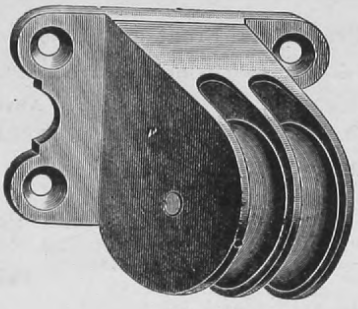
No. 85.

Single Wheel, Japanned.

Diameter of Wheel.....Inches, 2
For Rope .....Inch, 5/16
No. 85—Japanned .....Per Dozen, $2.20

Packed—One Dozen in a Box.

Reduced Size Cuts.



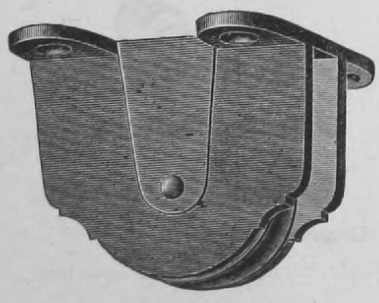
No. 87.

Double Wheel, Japanned.

Diameter of Wheel.....Inches, 2
For Rope .....Inch, 5/16
No. 87—Japanned .....Per Dozen, $3.50

Packed—One Dozen in a Box.

CEILING PULLEYS



No. 95.

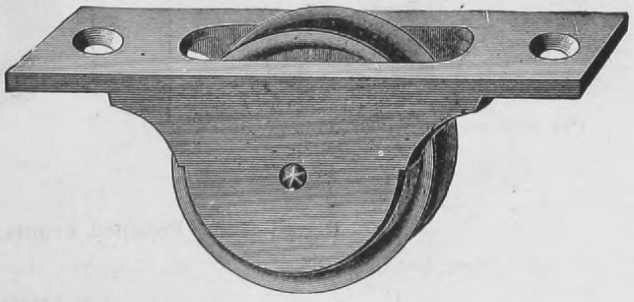
Ceiling Pulleys.

Japanned.

Diameter of Wheel.....Inches,	2	2½
For Rope .....Inch,	5/16	⅜
No. 95—Japanned .....Per Dozen,	$1.85	2.60

Packed—One Dozen in a Box.

DUMB WAITER PULLEYS



No. 40.

Heavy, Square Ends, Steel Pins, Wheels Turned True and Polished.

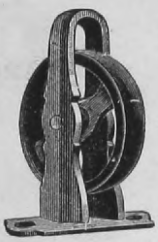
Diameter of Wheel.....Inches, 3
For Rope .....Inch, ½
Size of Front .....Inches, 1¼ x 6
No. 40—Heavy .....Per Dozen, $3.30

Packed—Two-thirds Dozen in a Package.

Digitized by Google Original from UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

SCREW PULLEYS

UPRIGHT PULLEYS



No. 55. Reduced Size Cut.

No. 36. Half Size Cut.

Wrought Brass Screw Pulleys, Polished and Lacquered; with Long Gimlet Point Screws.

No. 36—With ⅝ inch Wheel, for ⅛ in. Rope...Per Dozen, $0.95

Packed—One Dozen in a Box.

Upright Pulleys, Japanned

No. 55—With 2 inch Wheel, for 5/16 inch Rope.....Per Dozen, $1.15

Packed—Two Dozen in a Box.

SCREW PULLEYS

No. 45. Half Size Cut of 2 inch.

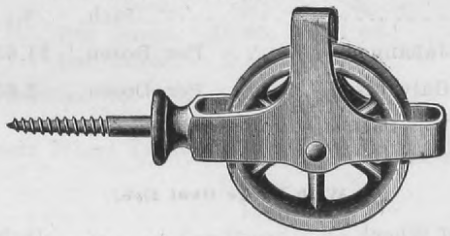
Screw Pulleys, Japanned

With Long Gimlet Point Screws.

Diameter of Wheel.....Inches,	1¼	1½	1¾	2	2¼	2½	3	4
For Rope.....Inches,	¼	¼	5/16	5/16	⅜	⅜	7/16	⅝
No. 45—Japanned.....Per Dozen,	$0.52	.63	.74	.96	1.20	1.30	2.00	4.60

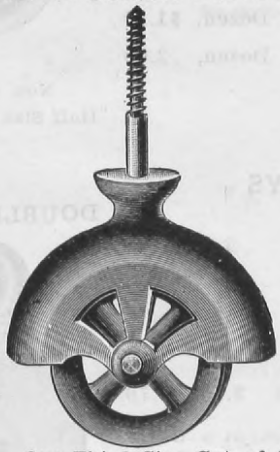
Packed—2¼ inch and Smaller, Two Dozen; 2½ and 3 inch, One Dozen; 4 inch, One-Third Dozen in a Box.

INCASED SCREW PULLEYS



No. 46. Two-Third Size Cut.

INCASED SCREW PULLEYS



No. 43. One-Third Size Cut of 3 inch.

Incased Screw Pulleys, Japanned

With Long Gimlet Point Screws.

Diameter of Wheel.....Inches,	2½	3
For Rope.....Inch,	⅜	⅜
No. 43—Japanned....Per Dozen,	$2.20	3.00

Packed—One Dozen in a Box.

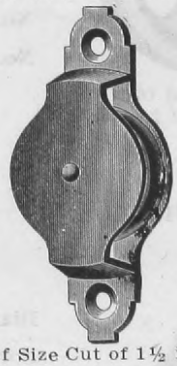
Incased Screw Pulleys, Japanned

With Long Gimlet Point Screws.

No. 46—With 1½ inch Wheel, for ¼ inch Rope..Per Dozen, $1.20

Packed—One Dozen in a Box.

SIDE PULLEYS



No. 25. Half Size Cut of 1½ inch.

Side Pulleys, Single Wheel, Japanned

Diameter of Wheel.....Inches,	1½	1¾	2
For Rope .....Inch,	¼	5/16	5/16
No. 25.....Per Dozen,	$0.90	1.00	1.30

Diam. of Wheel, In..	2¼	2½	3	4
For Rope, Inch.....	⅜	⅜	7/16	⅝
No. 25—Per Dozen..	$1.80	2.00	3.00	7.40

Packed—2 inch and Smaller, Two Dozen; 2¼ and 2½ inch, One Dozen; 3 inch, Half Dozen; 4 inch, Quarter Dozen in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

INCASED SWIVEL PULLEYS

SWIVEL EYE

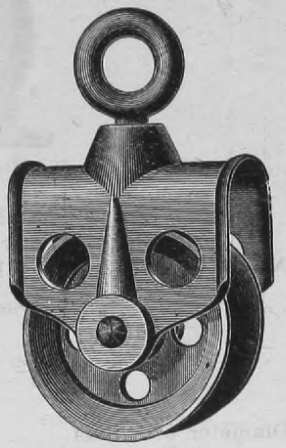
No. 42.
Half Size Cut of 2½ inch.

With Swivel Eye.

Diameter of Wheel	Inches,	2½	3
For Rope	Inch,	5/16	3/8
No. 42—Japanned	Per Dozen,	$2.20	2.80

Packed—One Dozen in a Box.

LARGE SWIVEL EYE



Nos. 62 and 162.
Half Size Cut of 2½ inch.

CLOTHES LINE PULLEYS

With Large Swivel Eye.

Diameter of Wheel	Inches,	2½
For Rope	Inch,	3/8
No. 62—Japanned	Per Dozen,	$2.60
No. 162—Galvanized	Per Dozen,	3.70

Packed—One Dozen in a Box.

SOLID EYE

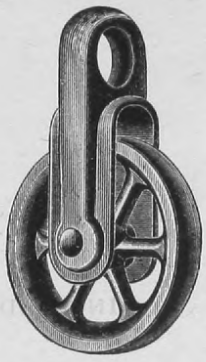
Nos. 63 and 163.
Half Size Cut of 2½ inch.

With Solid Eye.

Diameter of Wheel	Inches,	2½	3
For Rope	Inch,	5/16	3/8
No. 63—Japanned	Per Dozen,	$1.65	2.40
No. 163—Galvanized	Per Dozen,	2.60	3.30

Packed—One Dozen in a Box.

LARGE OVAL EYE



Nos. 65 and 165.
Half Size Cut of 2½ inch.

With Large Oval Eye.

Diameter of Wheel	Inches,	2½
For Rope	Inch,	5/16
No. 65—Japanned	Per Dozen,	$1.30
No. 165—Galvanized	Per Dozen,	2.00

Packed—One Dozen in a Box.

TACKLE OR AWNING PULLEYS

SINGLE WHEEL

No. 75.
Half Size Cut of 2 inch.

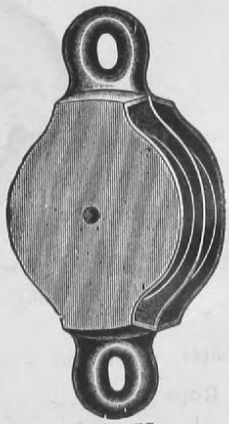
With Eye in each End.

Single Wheel.

Diameter of Wheel	Inches,	2	2½	3
For Rope	Inch,	5/16	3/8	7/16
No. 75—Japanned	Per Dozen,	$1.90	2.70	3.70

Packed—2 inch, One Dozen; Others, Half Dozen in a Box.

DOUBLE WHEEL



No. 77.
Half Size Cut of 2 inch.

Double Wheel.

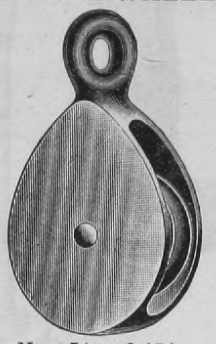
Diameter of Wheel	Inches,	2	2½	3
For Rope	Inch,	5/16	3/8	7/16
No. 77—Japanned	Per Dozen,	$3.00	4.00	5.40

Packed—2 inch, One Dozen; Others, Half Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

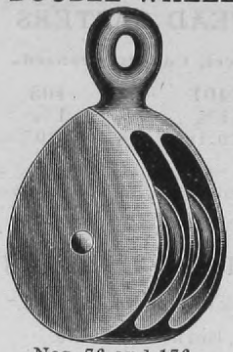
TACKLE OR AWNING PULLEYS

SINGLE WHEEL



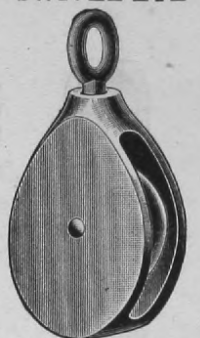
Nos. 74 and 174.
Half Size Cut of 1½ inch.

DOUBLE WHEEL



Nos. 76 and 176.
Half Size Cut of 1½ inch.

SWIVEL EYE



Nos. 73 and 173.
Half Size Cut of 1½ inch.

Single Wheel Tackle or Awning Pulleys, with "Solid" Eye

Diameter of Wheel.....Inches,	⅝	¾	1	1¼	1½	1¾	2	2½
For Rope .....Inch,	3/16	3/16	¼	¼	5/16	⅜	7/16	⅝
No 74—Japanned .....Per Dozen,	$0.54	.59	.67	.80	1.00	1.40	1.85	3.60
No. 174—Galvanized .....Per Dozen,	.74	.80	1.00	1.30	1.85	2.60	4.00	6.60

Packed—1¾ inch and Smaller, One Dozen; 2 and 2½ inch, Half Dozen in a Box.

Double Wheel Tackle or Awning Pulleys, with "Solid" Eye

Diameter of Wheel.....Inches,	¾	1	1¼	1½	1¾	2	2½
For Rope .....Inch,	3/16	¼	¼	5/16	⅜	7/16	⅝
No. 76—Japanned .....Per Dozen,	$0.85	1.00	1.20	1.70	2.40	3.70	6.20
No. 176—Galvanized .....Per Dozen,	1.30	1.55	1.80	2.95	4.90	5.90	9.50

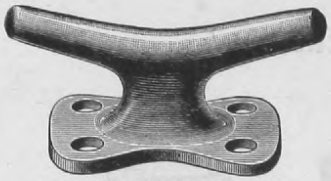
Packed—1¾ inch and Smaller, One Dozen; 2 inch, Half Dozen; 2½ inch, One-Third Dozen in a Box.

Single Wheel Tackle or Awning Pulleys, with "Swivel" Eye

Diameter of Wheel.....Inches,	¾	1	1¼	1½	1¾	2
For Rope .....Inch,	3/16	¼	¼	5/16	⅜	7/16
No. 73—Japanned .....Per Dozen,	$0.85	1.05	1.15	1.65	2.50	3.30
No. 173—Galvanized .....Per Dozen,	1.15	1.40	1.85	2.60	3.90	5.20

Packed—2 inch, Half Dozen; Others, One Dozen in a Box.

LINE CLEATS



No. 107. Half Size Cut.

Heavy Cast Iron Line Cleats.

No. 107—Length 3⅜ inches, Heavy, Japanned.....Per Dozen, $1.00

Packed—One Dozen in a Box.

No. 114. Half Size Cut.

No. 115. Half Size Cut.

Malleable Iron Line Cleats, Galvanized.

No. 114—Length 4½ inches.....Per Dozen, $0.62

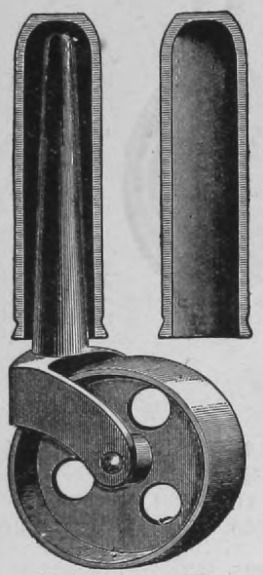
Packed—Two Dozen in a Box.

No. 115—Length 5⅞ inches.....Per Dozen, $0.92

Packed—Two Dozen in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BEDSTEAD CASTERS



Nos. 401 to 405.

BEDSTEAD CASTERS

Iron Wheel, Copper Bronzed.

Nos.	401	402	403	404	405
Wheel, inches	1⅜	1½	1⅝	1¾	1⅞
Per Set	$0.16	.18	.20	.22	.23

Packed—Four in a Set. Nos. 401 to 403, Six Sets; Nos. 404 and 405, Four Sets in a Package.

FURNITURE CASTERS

Grip Neck, Stem and Socket.

Steel Horn and Plate.

Iron Wheel.

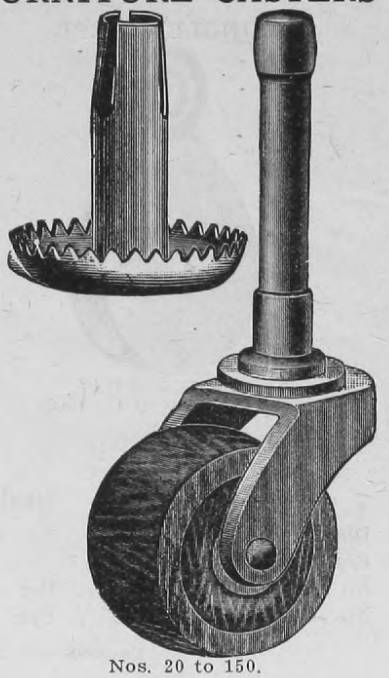
Nos.	20	30	40	50
Wheel, inches	15/16	1 1/16	1¼	1 5/16
Per Set	$0.21	.22	.24	.26

Lignum-Vitae Wheel.

Nos.	120	130	140	150
Wheel, Inches	15/16	1 1/16	1¼	1 5/16
Per Set	$0.22	.23	.25	.28

Packed—Four in a Set. Six Sets in a Box.

FURNITURE CASTERS



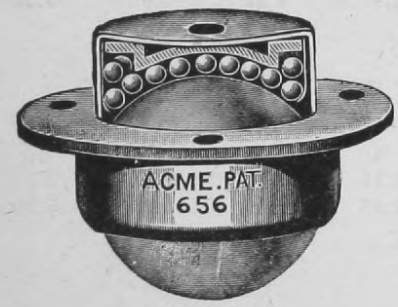
Nos. 20 to 150.

ACME BALL BEARING CASTERS

Tinned Tool Steel Ball Race and Rustless Ball Retainer.

Brassed Finish.

ACME
Countersunk



No. 656.

Countersunk.

Ball, inch	¾	1	1⅛	1¼
No. 656—Per Set	$0.65	.70	.75	.80

Stem and Socket.

Ball, inch	¾	1	1⅛
No. 658—Per Set	$0.70	.75	.80

Packed—Four in a Set. One Set in a Box.

ACME
Stem and Socket

No. 658.

GLIDING CASTERS

H. O. GLIDES

No. 16.

No. 17.

No. 18.

Heavy Gauge Discs, Nickel Plated, Slide Easy and do not scratch floor or tear rugs.

No.	16	17	18	19	20
Diameter, inches	⅞	¾	⅝	½	⅜
Per Dozen Sets of 4	$....	....	....	....	....

Packed—One Dozen Sets in a Box.

Evergrip Assortment

Tempered Armor Plate Steel Discs.

No. 300—Assortment contains 144 Sets (four in a set) assorted in four sizes, 48 sets of each ½ and ⅝ inch slides and 24 sets of each ¾ and ⅞ inch slides. . Per Assortment $7.20

Packed—One Assortment in Display Box.

EVERGRIP ASSORTMENT

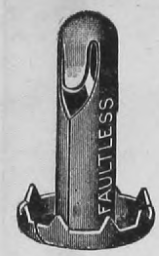
No. 300.

Digitized by
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

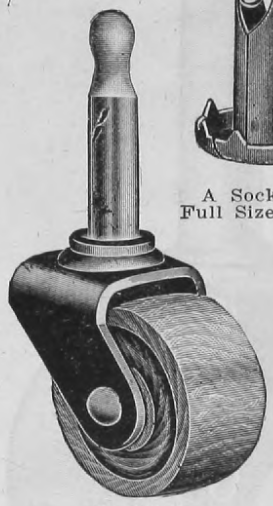
Lignum-Vitæ Wheel .....%
Iron Wheel .....%
Leather Wheel .....%
Glass Wheel .....%

Full Size Cuts

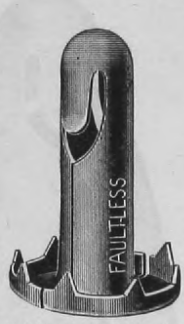
FAULTLESS CASTERS



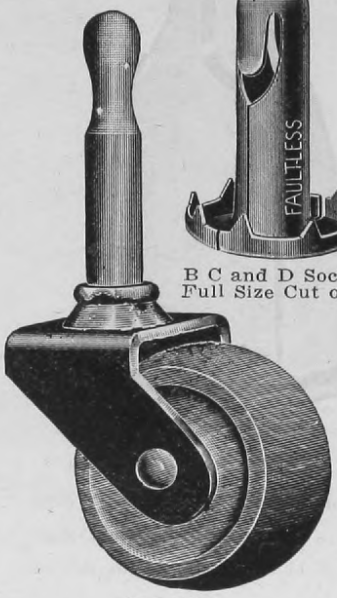
A Socket.
Full Size Cut.



No. A2-3.



B C and D Socket.
Full Size Cut of B.



No. B2-5.

E F and G Socket.
Full Size Cut of 7/8 in. E.

No. E2-4.
Style of C2-6 to G2-8.

Faultless Daisy Casters

Steel Horn with 5/16 inch Diameter Socket with Track Plate.

No. A2-3—Lignum-Vitæ Wheel, $1\frac{1}{16}$x$\frac{9}{16}$ inch.....Per Set, $0.23
No. A6-2—Iron Wheel, 1x$\frac{9}{16}$ inch, Nickel Plated Horn and Wheel.....Per Set, .38
No. A9-3—Leather Wheel, $1\frac{1}{16}$x$\frac{9}{16}$ inch, Nickel Plated Horn.....Per Set, 1.15

Faultless Short Stem Casters

Steel Horn with 3/8 inch Diameter Socket with Double Track Plate.

No. B2-4—Lignum Vitæ Wheel, $1\frac{1}{8}$x$\frac{5}{8}$ inch.....Per Set, $0.26
No. B2-5—Lignum-Vitæ Wheel, $1\frac{1}{4}$x$1\frac{1}{16}$ inch.....Per Set, .28
No. B6-4—Iron Wheel, $1\frac{1}{8}$x$\frac{5}{8}$ inch, Nickel Plated Horn and Wheel.....Per Set, .44
No. B9-5—Leather Wheel, $1\frac{1}{4}$x$1\frac{1}{16}$ inch, Nickel Plated Horn.....Per Set, 1.45

Faultless Long Stem Casters

Steel Horn with 3/8 inch Diameter Socket with Double Track Plate.

No. C 2-6—Lignum-Vitæ Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch.....Per Set, $0.32
No. C 2-7—Lignum-Vitæ Wheel, $1\frac{1}{2}$x$\frac{3}{4}$ inch.....Per Set, .35
No. C 2-8—Lignum-Vitæ Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch.....Per Set, .38
No. C 6-6—Iron Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch, Nickel Plated Horn and Wheel.....Per Set, .50
No. C 6-8—Iron Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch, Nickel Plated Horn and Wheel.....Per Set, .60
No. C 9-6—Leather Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch, Nickel Plated Horn.....Per Set, 1.65
No. C10-8—Leather Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch, Brass Plated Horn.....Per Set, 1.85
No. C12-7—Glass (Insulator) Wheel, $1\frac{1}{2}$x$\frac{3}{4}$ inch, Nickel Plated Horn.....Per Set, 1.40

Faultless Wood Bed Casters

Steel Horn with 9/16 inch Diameter Socket with Double Track Plate.

No. D 2- 6—Lignum-Vitæ Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch.....Per Set, $0.50
No. D 2- 8—Lignum-Vitæ Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch.....Per Set, .56
No. D 9- 8—Leather Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch, Nickel Plated Horn.....Per Set, 2.10
No. D12- 9—Glass (Insulator) Wheel, $1\frac{3}{4}$x $\frac{3}{4}$ inch, Nickel Plated Horn.....Per Set, 2.10
No. D12-11—Glass (Insulator) Wheel, $2\frac{1}{2}$x$1\frac{1}{8}$ inch, Nickel Plated Horn.....Per Set, 4.00

Faultless No. 1 Iron Bed Casters

Steel Horn with Socket to Fit 3/4 and 7/8 inch Outside Diameter Tubing.

No. E2-4—Lignum-Vitæ Wheel, $1\frac{1}{8}$x$\frac{5}{8}$ inch.....Per Set, $0.37
No. E2-6—Lignum-Vitæ Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch.....Per Set, .47
No. E9-5—Leather Wheel, $1\frac{1}{4}$x$1\frac{1}{16}$ inch, Nickel Plated Horn.....Per Set, 1.60

Faultless No. 2 Iron Bed Casters

Steel Horn and Socket to Fit 1 and 1 1/16 inch Outside Diameter Tubing.

No. F 2-6—Lignum-Vitæ Wheel, $1\frac{3}{8}$x$\frac{3}{4}$ inch.....Per Set, $0.51
No. F10-8—Leather Wheel, $1\frac{5}{8}$x$\frac{3}{4}$ inch, Brass Plated Horn.....Per Set, 2.25

Faultless No. 3 Iron Bed Casters

Steel Horn with Socket to Fit 1 1/4 and 1 5/16 inch Outside Diameter Tubing.

No. G 2- 8—Lignum-Vitæ Wheel, $1\frac{5}{8}$x $\frac{3}{4}$ inch.....Per Set, $0.62
No. G 2-10—Lignum-Vitæ Wheel, 2 x1 inch.....Per Set, 1.10
No. G10-10—Leather Wheel, 2x1 inch, Brass Plated Horn.....Per Set, 3.30

Packed—Four in a Set—Nos. A2-3 to C12-7, Six Sets; No. D12-11, One Set; Other Numbers, Four Sets in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

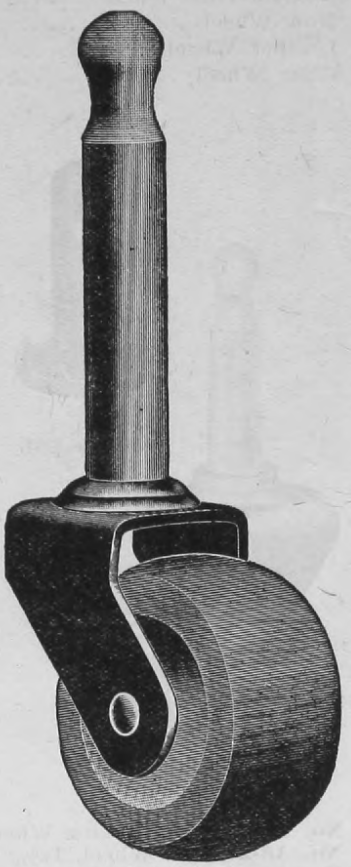
FAULTLESS CASTERS

No. H 10-10.

1½ inch Socket.

Full Size Cut.

Packed—Nos. H 10-10 and I 10-10 Four in a Set, Four Sets in a Box. Nos. H 12-11 and I 12-11 One Set in a Box.



No. I 10-10.

Faultless No. 4, Brass and Iron Bed Casters

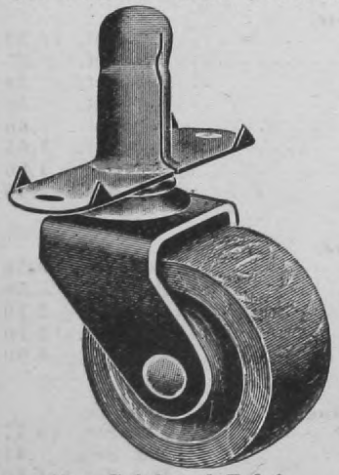
Steel Horn with Socket to Fit 1½ and 1⅝ inch outside Diameter Tubing.

No. H 10-10—Leather Wheel, 2x1 inch, Brass Plated Horn ..... Per Set, $3.50
No. H 12-11—Glass (Insulator) Wheel, 2½x1⅛ inches, Brass Plated Horn ..... Per Set, 4.50

Faultless No. 5, Brass and Iron Bed Casters

Steel Horn with Socket to Fit 1⁹⁄₁₀ and 2 inch outside Diameter Tubing.

No. I 10-10—Leather Wheel, 2x1 inch, Brass Plated Horn ..... Per Set, $3.65
No. I 12-11—Glass (Insulator) Wheel, 2½x1⅛ inches, Brass Plated Horn ..... Per Set, 5.00



Nos. S 2-3 and T 2-6.

NEW IDEA CASTERS

With Sockets Attached.

Steel Horn with Socket Attached to fit ¾ and ⅞ inch outside Diameter Tubing.

No. K 1-4—Maple Wheel, 1⅛x⅝ inches.... ..... Per Set, $0.24

Packed—Four in a Set. Six Sets in a Box.

FAULTLESS PLATE CASTERS

Packed—Four in a Set; Nos. S2-3 to S6-5, Six Sets; Nos. T2-6 to T6-8, Four Sets in a Box.

DISCOUNTS

Iron Wheel ..... %
Lignum-Vitae Wheel ..... %
Leather Wheel ..... %
Glass Wheel ..... %

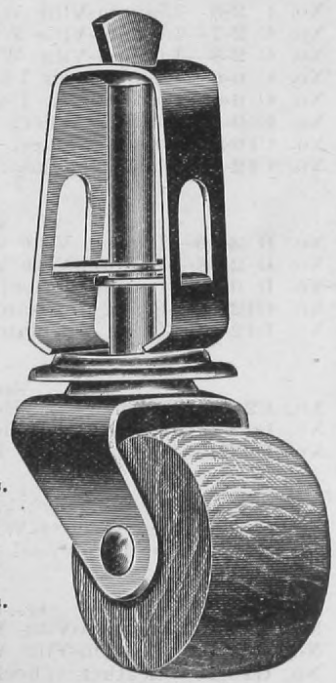
Faultless Combination Plate Casters

Steel Horn with ⅜ inch Diameter Socket with Steel Plate to be used with or without Screws.

No. S 2-3—Lignum-Vitae Wheel, 1¹⁄₁₆x⁹⁄₁₆ inch ..... Per Set, $0.26
No. S 2-4—Lignum-Vitae Wheel, 1⅛x⅝ inch..... Per Set, .28
No. S 2-5—Lignum-Vitae Wheel, 1¼x¹¹⁄₁₆ inch ..... Per Set, .30
No. S 6-5—Iron Wheel, 1¼x¹¹⁄₁₆ inch, Nickel Plated Horn and Wheel. Per Set, .48

Steel Horn with ½ inch Diameter Socket with Steel Plate to be used with or without Screws.

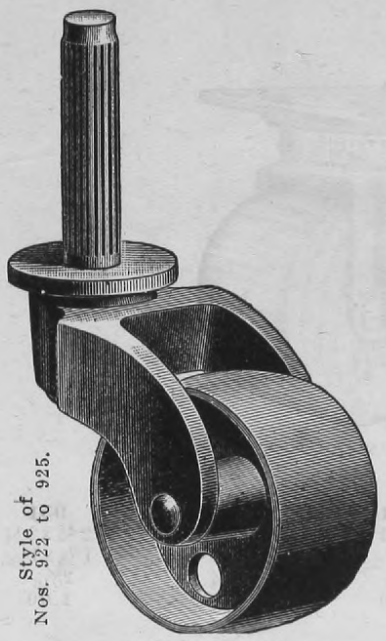
No. T 2-6—Lignum-Vitae Wheel, 1⅜x¾ inch..... Per Set, $0.50
No. T 2-8—Lignum-Vitae Wheel, 1⅝x¾ inch..... Per Set, .56
No. T 6-6—Iron Wheel, 1⅜x¾ inch, Nickel Plated Horn and Wheel. Per Set, .68
No. T 6-8—Iron Wheel, 1⅝x¾ inch, Nickel Plated Horn and Wheel. Per Set, .78



No. K 1-4.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

PHILADELPHIA CASTERS



Style of Nos. 922 to 925.

Nos. 902 to 905.

PHILADELPHIA CASTERS

Iron Wheel.

Iron Horn, Copper Bronzed, Corrugated Stem.

Nos.	902	903	904	905
Diam. of Wheel, Inches,	1	1⅛	1¼	1⅜
Per Set	$0.15	.17	.19	.21

Packed—Four in a Set, Six Sets in a Package.

Lignum-Vitæ Wheel.

Iron Horn, Copper Bronzed, Corrugated Stem.

Nos.	922	923	924	925
Diam. of Wheel, Inches,	1	1⅛	1¼	1⅜
Per Set	$0.17	.19	.22	.24

Packed—Four in a Set, Six Sets in a Package.

"STEEL GEM" CASTERS

Nos. 354 to 754.
Style of Nos. 353 to 753.

"STEEL GEM" CASTERS

Roller Bearing

Iron Wheel, Philadelphia Stem.

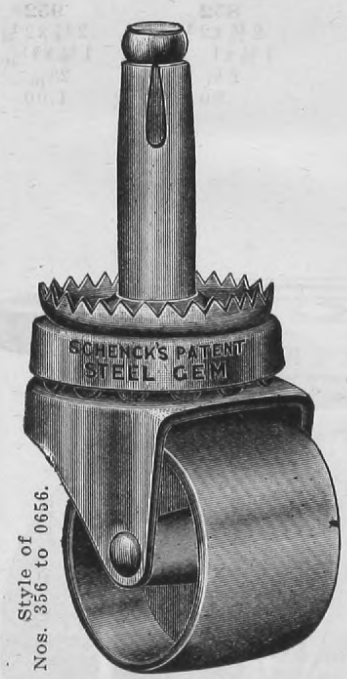
Nos.	353	453	753
Top Plate, inches	1	1	1¼
Wheel, inches	1 1/32 x ⅝	1 3/16 x ⅝	1½ x 25/32
Height, inches	1⅝	1¾	2⅛
Per Set	$0.42	.47	.60

Packed—Four in a Set, One Set in a Box.

Lignum-Vitæ Wheel, Philadelphia Stem.

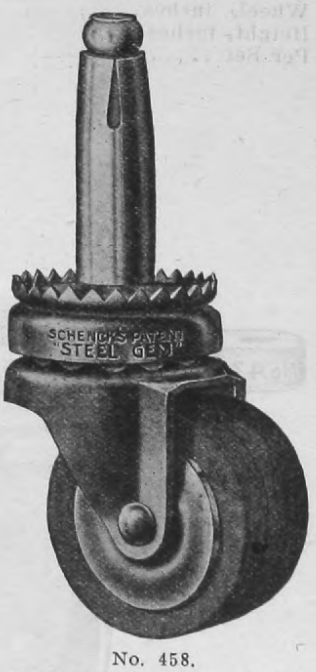
Nos.	354	454	754
Top Plate, inches	1	1	1¼
Wheel, inches	1 1/32 x ⅝	1 3/16 x ⅝	1½ x 25/32
Height, inches	1⅝	1¾	2⅛
Per Set	$0.42	.47	.60

Packed—Four in a Set, One Set in a Box.



Style of Nos. 356 to 0656.

Nos. 355 to 655.



No. 458.

"STEEL GEM" CASTERS

With Spring Sockets

Iron Wheel, Spring Socket.

Nos.	355	455	655
Top Plate, inches	1	1	1¼
Wheel, inches	1 1/32 x ⅝	1 3/16 x ⅝	1⅜ x 25/32
Height, inches	1⅝	1¾	2
Per Set	$0.42	.47	.53

Lignum-Vitæ Wheel, Spring Socket.

Nos.	356	456	0656
Top Plate, inches	1	1	1
Wheel, inches	1 1/32 x ⅝	1 3/16 x ⅝	1⅜ x 25/32
Height, inches	1⅝	1¾	2
Per Set	$0.42	.47	.53

Packed—Four in a Set, One Set in a Box.

Leather Wheel, "Spring Socket," Polished and Brass Plated.

No.	458
Top Plate, inches	1
Wheel inches	1 3/16 x ⅝
Height, inches	1¾
Per Set	$2.00

Leather Wheel, "Philadelphia Stem," Polished and Brass Plated.

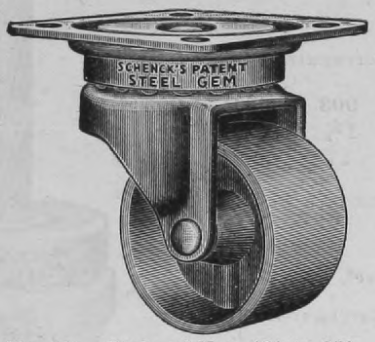
No.	459
Top Plate, inches	1
Wheel, inches	1 3/16 x ⅝
Height, inches	1¾
Per Set	$2.00

Packed—Four in a Set, One Set in a Box.

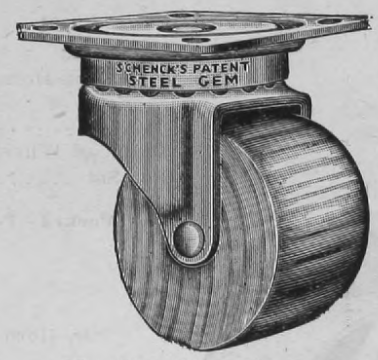
Digitized by
UNIVERSITY OF MICHIGAN
UNIVERSITY OF MICHIGAN

"STEEL GEM" CASTERS

Roller Bearing



No. 351. Style of Nos. 451 to 951.



No. 352. Style of Nos. 452 to 952

Iron Wheel, Square Plate.

Nos.	351	451	651	751	851	951
Plate, inches	1½x1½	1½x1½	1⅞x1⅞	1⅞x1⅞	2¼x2¼	2¼x2¼
Wheel, inches	1 1/32 x⅝	1 3/16 x⅝	1⅜x 25/32	1½x 25/32	1½x1	1⅞x1 1/16
Height, inches	1⅝	1¾	2	2⅛	2¼	2 9/16
Per Set	$0.42	.47	.53	.60	.90	1.00

Packed—Four in a Set, One Set in a Box.

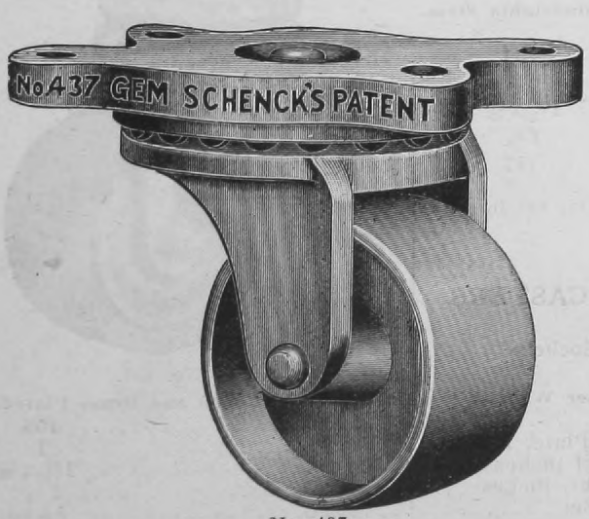
Lignum-Vitae Wheel, Square Plate.

Nos.	352	452	652	752	852	952
Plate, inches	1½x1½	1½x1½	1⅞x1⅞	1⅞x1⅞	2¼x2¼	2¼x2¼
Wheel, inches	1 1/32 x⅝	1 3/16 x⅝	1⅜x 25/32	1½x 25/32	1½x1	1⅞x1 1/16
Height, inches	1⅝	1¾	2	2⅛	2¼	2 9/16
Per Set	$0.42	.47	.53	.60	.90	1.00

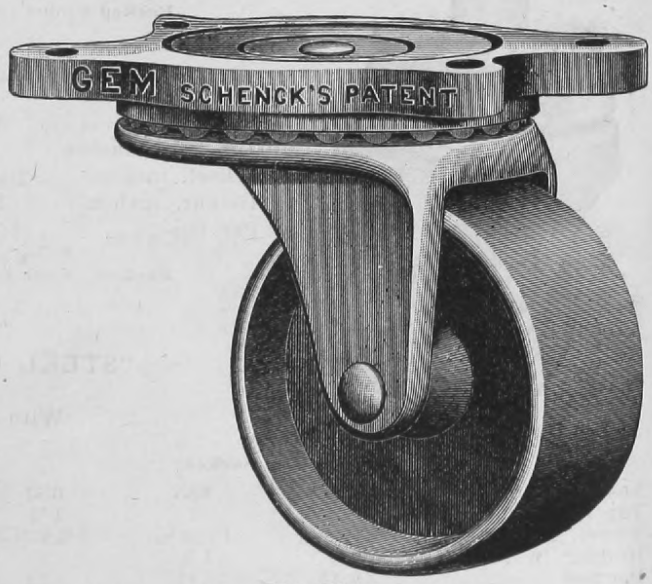
Packed—Four in a Set, One Set in a Box.

IRON GEM CASTERS

Roller Bearing



No. 437.



No. 637.

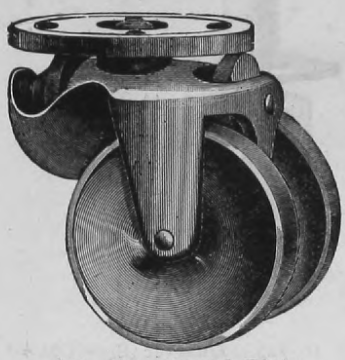
Iron Wheel, Oblong Plate.

Nos.	437	637	837	937	1037
Plate, inches	2⅝x2	2⅞x2¼	2⅞x4	3½x4½	3½x4½
Wheel, inches	1⅝x 15/16	2 x⅞	2½x1¼	3⅛x1½	4 x1½
Height, inches	2¼	2⅝	3¾	4¼	5¼
Per Set	$0.95	1.25	2.75	4.00	5.00

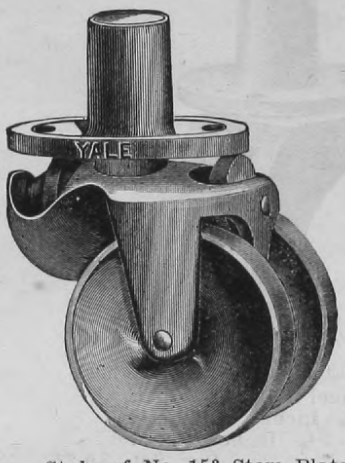
Packed—Four in a Set—Nos. 437 and 637, One Set in a Box; Others, In Open Stock.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

YALE CASTERS



No. 121. Round Plate.



Style of No. 153 Stem Plate.

No. 152. Oblong Plate.

Round Plate, Iron Wheels

Nos.	101	121	151	181
Diameter of Plate, inches,	1	1 3/8	1 5/8	2
Diameter of Wheels, in..	1	1 1/8	1 1/2	1 3/4
Height, inches	1 1/2	1 3/4	2 1/8	2 3/8
Per Set	$0.45	.60	.65	.70

Packed—Four in a Set, One Set in a Box.

Stem Plate, Iron Wheels

No.	153
Diameter of Plate, inches	1 5/8
Diameter of Wheels, inches	1 3/4
Per Set	$0.65

Packed—Four in a Set, One Set in a Box.

Oblong Plate, Iron Wheels

Nos.	122	152	182	232	332	0402
Size of Plate, inches	1 1/2 x 2	1 5/8 x 2 1/4	2 x 2 5/8	2 5/8 x 3 1/2	3 3/4 x 4 1/2	4 3/4 x 5 3/8
Diameter of Wheels, in..	1 1/8	1 1/2	1 3/4	2 3/10	3 1/4	4
Height, inches	1 3/4	2 1/8	2 3/8	3 1/8	4 1/4	5 1/8
Per Set	$0.60	.65	.70	1.10	2.00	4.50

Packed—Four in a Set. Nos. 122 to 232, One Set in a Box; Others, In Open Stock.

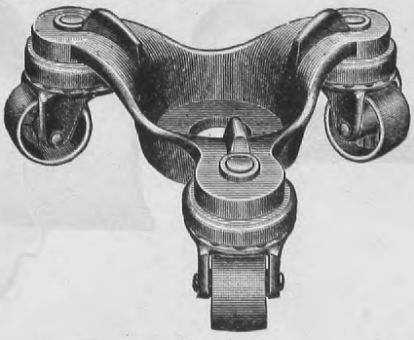
STOVE AND RANGE CASTERS

No. 2.

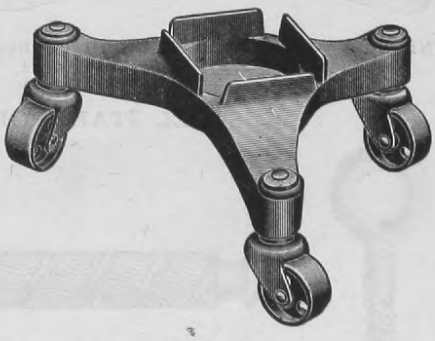
No. 2—Harper Stove Casters, Diameter of Wheels, 1 3/8 inches..Per Dozen Sets, $11.85

Packed—Four in a Set.

Especially designed for use under stoves in the store and blacking-room. Also useful for moving boxes, bins and heavy weights of all kinds. Strong and durable.



No. 1.



No. 3.

No. 3—Independent Combination Steel Range and Stove Casters .....Per Dozen Sets, $13.60

Packed—Four in a Set.

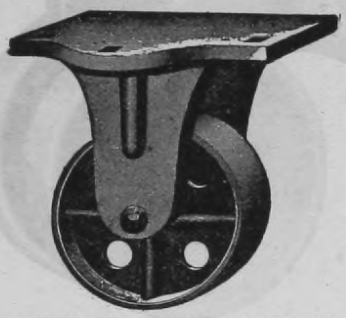
No. 1—Gem Roller Bearing Stove Casters, Diameter of Wheels 1 3/8 inches.....Per Dozen Sets, $19.10

Packed—Four in a Set.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

PIANO CASTERS

STORE TRUCK CASTERS



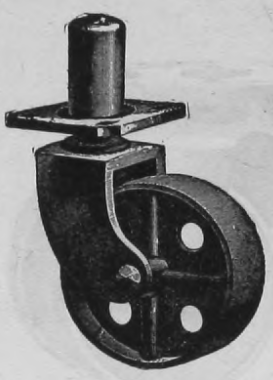
Nos. 823 to 825. Quarter Size Cut of No. 825.

No. 8.
Round Plate, Turned Iron Wheel.

No. 8—Wheel 1 9/16 x 1 inch, Stem 1 3/8 inches, Diameter of Plate 2 1/8 inches..... .....Per Set, $0.75

Packed—Four in a Set. Four Sets in a Package.

STORE TRUCK CASTERS



Nos. 833 to 835. Quarter Size Cut of No. 835.

Iron Wheel, Stationary, Japanned.

Nos.	Wheel Inches	Plate Inches	Height from Top of Plate to Floor	Each
823	2 7/8 x 1	4 3/4 x 2 7/8	4	$0.30
824	3 7/8 x 1 1/8	5 x 3	5 1/8	.43
825	4 1/8 x 1 1/4	5 1/8 x 3 1/4	5 1/2	.50

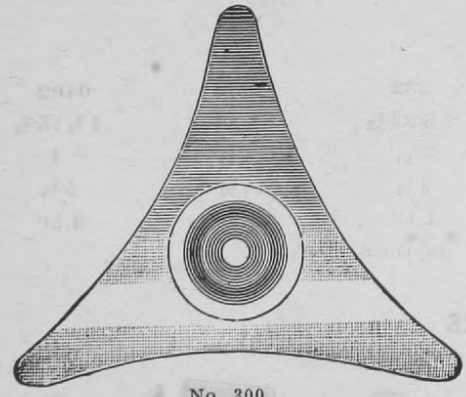
Packed—In Open Stock.

Iron Wheel, Swivel, Japanned.

Nos.	Wheel Inches	Plate Inches	Height from Top of Plate to Floor	Each
833	2 7/8 x 1	2 3/8 x 2 3/8	4 1/8	$0.36
834	3 7/8 x 1 1/8	2 7/8 x 2 7/8	5 1/4	.50
835	4 1/8 x 1 1/4	2 7/8 x 2 7/8	5 7/8	.67

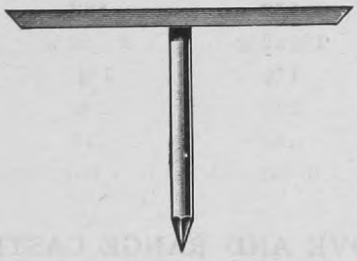
Packed—In Open Stock.

STAIR CORNERS

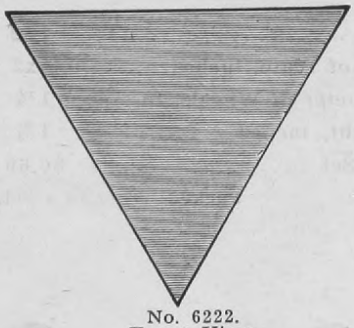


No. 300.

No. 300—Wrought Brass Stair Corners. Per Gross, $...
Packed—One Gross in a Box, with Nails.



No. 6222. End View.



No. 6222.
Front View.

No. 6222—Cast Brass Stair Corners. . Per Gross, $.....
Packed—One Gross in a Box.

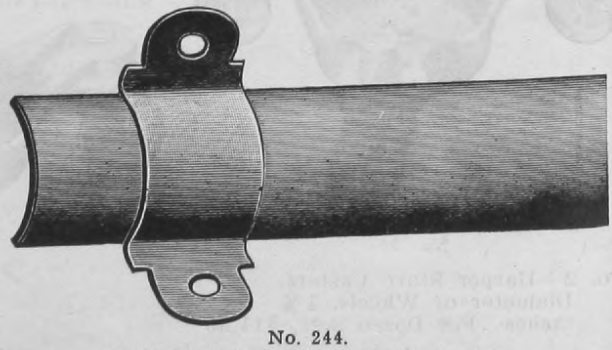
STEEL STAIR RODS

No. 85.
Nickel Plated Steel, with Fastenings.

Length, inches	28	30
Diameter, inch	5/16	5/16
No. 85—Per Dozen..... $.....	.....	.....

Packed—One Dozen in a Box.

BRASS STAIR RODS



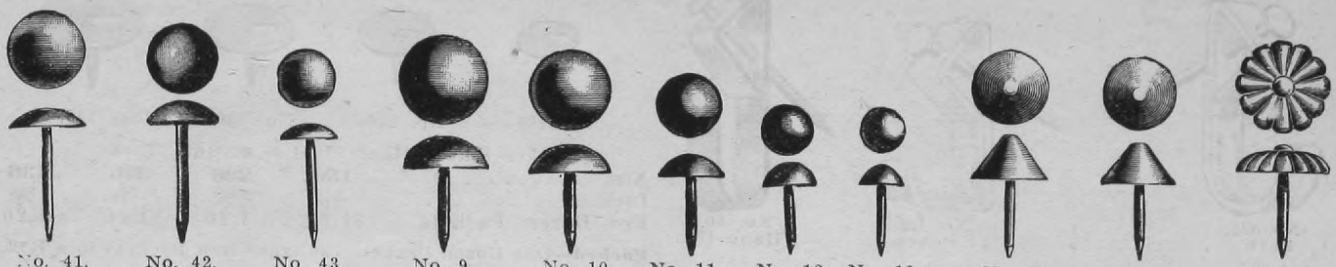
No. 244.
Polished Oval Brass, with Fastenings.

Length, inches.....	26	28	30
Width, inch	5/8	3/4	3/4
No. 244 ..... $.....	.....	.....	.....

Packed—Two Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

FURNITURE NAILS



No. 41. No. 42. No. 43. No. 9. No. 10. No. 11. No. 12. No. 19. No. 3. No. 4. No. 1533

Gilt Furniture or Upholsterers' Nails.

50 in a Box.

Nos.	**541**	**542**	**543**
Size	41	42	43
Per 1000	$2.50	1.90	1.70

Packed—Fifty in a Box, 20 Boxes in a Carton.

100 in a Box.

Nos.	**141**	**142**	**143**	**9**	**10**	**11**	**12**	**19**
Size	41	42	43	**9**	**10**	**11**	**12**	**19**
Per 1000	$2.30	1.70	1.50	3.00	2.60	2.10	1.60	1.60

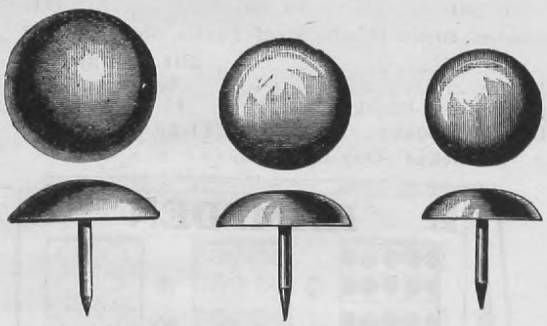
Packed—One Hundred in a Box, 10 Boxes in a Carton.

In Bulk.

Nos.	**41**	**42**	**43**	**3**	**4**
Size	41	**42**	**43**	**3**	**4**
Per 1000	$2.00	1.40	1.20	3.00	2.60

No. 1533—Gilt Furniture or Upholsterers' Nails, **Antique** Copper Finish, ¾ inch Shank.....Per 1000, $7.20

Packed—One Thousand in a Box.



No. 37. No. 38. No. 39.

Gilt Furniture or Upholsterers' Nails.

100 in a Box.

Nos.	**137**	**138**	**139**
Size	37	38	39
Per 1000	$.....	.....	.....

Packed—One Hundred in a Box, 5 Boxes in a Carton.

In Bulk.

Nos.	**37**	**38**	**39**
Size	37	38	39
Per 1000	$.....	.....	.....

Packed—Half Thousand in a Package.

No. 200.

Black Furniture or Upholsterers' Nails, ½ inch Nails, ⅜ inch Head.

50 in a Box.

No.	**5200**
Size	200
Per 1000	$.....

Packed—Fifty in a Box, 20 Boxes in a Carton.

In Bulk.

No.	**200**
Size	200
Per 1000	$.....

Packed—One Thousand in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WALL HOOKS

No. C2. Bath.

No. L2. Kitchen.

No. 50. Hang-Up.

Bath Room Hooks

Nickel Plated Wrought Steel. For use in Bath Room, Nursery or Hospital.

Nos.	C1	C2	C3	C4
Hooks in Packet	8	6	4	2
Sustains Pounds	10	20	30	40
Per Dozen Packets	$1.20	1.20	1.20	1.20

Packed—One Dozen Packets in a Box.

Kitchen Hooks

Nickel Plated Wrought Steel. For use in Kitchen, Laundry and Closets.

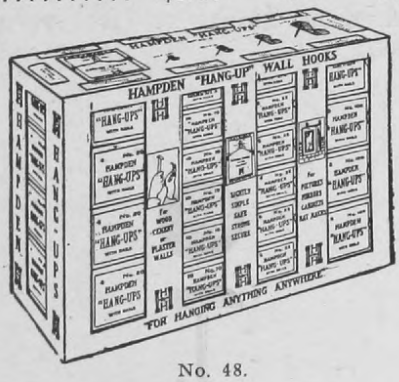
Nos.	L1	L2	L3	L4
Hooks in Packet	8	6	4	2
Sustains Pounds	10	20	30	40
Per Dozen Packets	$1.20	1.20	1.20	1.20

Packed—One Dozen Packets in a Box.

"Hang-Up" Picture Hooks

Gilded Wrought Steel. For use in Hanging Pictures, Mirrors and Shelves.

Nos.	10	25	50	100
Hooks in Packet	10	6	4	3
Sustains Pounds	10	25	50	100
Packets in a Box	24	24	12	12
Per Box	$2.40	2.40	1.20	1.20



No. 48.

"Hang-Up" Hook Assortments

Containing 6 Packets No. 10, 18 Packets No. 25, 16 Packets No. 50 and 8 Packets No. 100 Hooks.

No. 48—48 Packets as listed....Per Assortment, $4.80

Packed—One Assortment in Handsome Display Box.

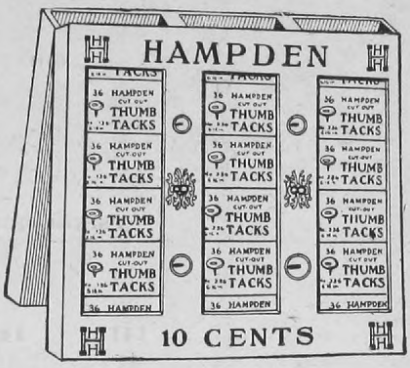
THUMB TACKS

No. 136. No. 236. No. 336. No. 436.

Nickel Plated Hard Steel "Cut-Out" Tacks.

Nos.	136	236	336	436
Inch	5/16	3/8	7/16	9/16
Per Dozen Packets	$1.20	1.20	1.20	1.20

Packed—One Dozen Packets (36 tacks in a Packet) in a Box.



No. 3036.

"Cut-Out" Thumb Tack Assortments

Contain 6 Packets No. 136, 12 Packets No. 236, 8 Packets No. 336 and 4 Packets No. 436 Tacks.

No. 3036—30 Packets as listed..Per Assortment, $3.30

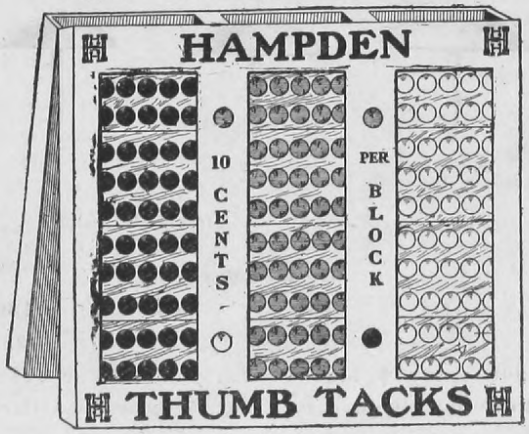
Packed—One Assortment in Display Box.

No. 291. No. 391. No. 491.

Convex Brass Heads, Steel Tacks, Sharp Points.

Nos.	291	391	491
Inch	3/8	1/2	5/8
Number on one Block	15	12	9
Per Dozen Blocks	$1.20	1.20	1.20

Packed—One Dozen Blocks in a Box.



No. 2479.

Thumb Tack Assortments

Contain 4 Ten Cent Blocks each No. 173, 174 and 175 Pantry Trimming and 4 Ten Cent Blocks each No. 291, 391 and 491 Brass Head Thumb Tacks.

No. 2479—24 Blocks as listed..Per Assortment, $2.75

Packed—One Assortment in a Display Box.

THUMB TACKS

Nos. 173 to 175.

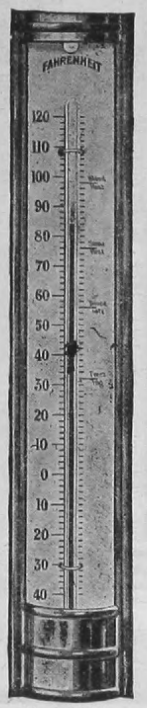
Colored Enameled Heads for Trimming Pantry Shelves, Tables, Boxes and Window Seats.

Nos.	173	174	175
Color	White	Blue	Oak
Per Box of 12 Blocks (120 tacks)	$1.20	1.20	1.20

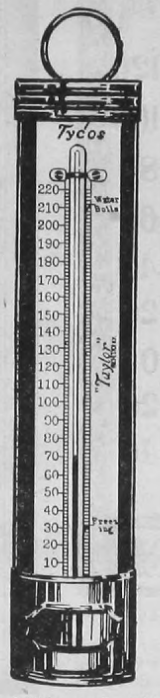
Packed—One Dozen Blocks of a number in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

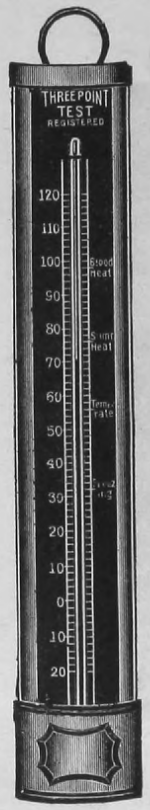
THERMOMETERS



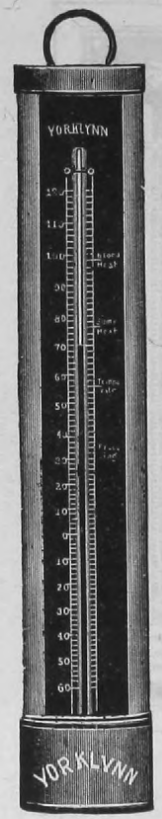
No. 5440.



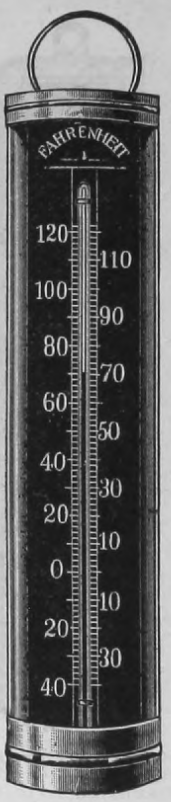
Nos. 5401 and 5402.



No. 17001.



Nos. 17601 and 17602.



No. 5154S.

Common Grade

Japanned Tin Case, Lithographed Scale, Black Filled Figures and Graduations, Magnifying Mercury Tubes. Graduated 10 to 40 degrees below to 120 above zero.

No. 5440—Inches	8	10
Per Dozen	$2.75	3.25

Packed—One Dozen in a Box.

Standard Grade—High Temperatures

Japanned Tin Case, Silvered Brass Scale, Black Filled Figures and Graduations, Magnifying Mercury Tubes. Graduated as designated below.

No. 5401—10 inch, Graduated 0 to 220 degrees above zero ..... Per Dozen, $13.00
No. 5402—12 inch, Graduated 50 to 350 degrees above zero ..... Per Dozen, 18.00

Packed—Half Dozen in a Box.

Three Point Test High Grade—High Temperatures

Japanned Tin Case, Black Background Scale, White Filled Figures and Graduations, Mercury Tubes. Graduated 10 to 40 degrees below to 300 to 330 degrees above zero.

No. 17001—10 inch ..... Per Dozen, $8.50

Packed—Half Dozen in a Box.

Yorklynn Grade

Copper Plated Case, Black Background Scale, White Filled Figures and Graduations. Blue Spirit Filled Tubes.

No. 17601—10 inch, Graduated 10 to 60 degrees below to 110 to 130 degrees above zero..... Per Dozen, $5.00
No. 17602— 8 inch, Graduated 10 to 60 degrees below to 110 to 130 degrees above zero..... Per Dozen, 4.00

Packed—Half Dozen in a Box.

Distance Reading

Selected Common Grade, Polished Copper Plated Case, Black Oxidized Brass Scale, White Filled Figures and Graduations. Magnifying Spirit Tubes. Graduated 20 to 60 degrees below to 120 degrees above zero.

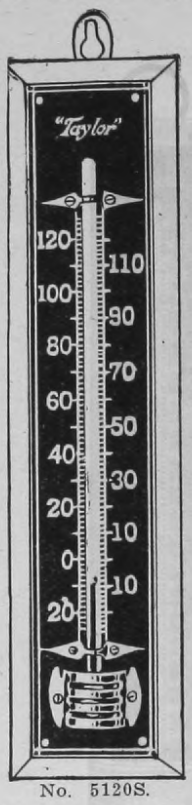
No. 5154S—Inches	8	10
Per Dozen	$7.00	8.50

Packed—One Dozen in a Box.

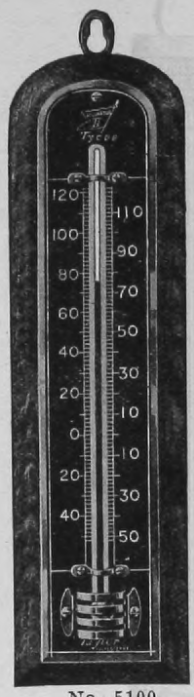
Digitized by UNIVERSITY OF MICHIGAN Original from UNIVERSITY OF MICHIGAN

THERMOMETERS

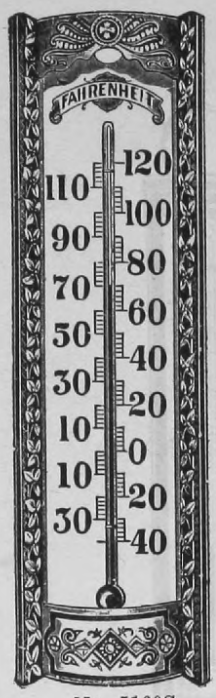
No. 5140S.



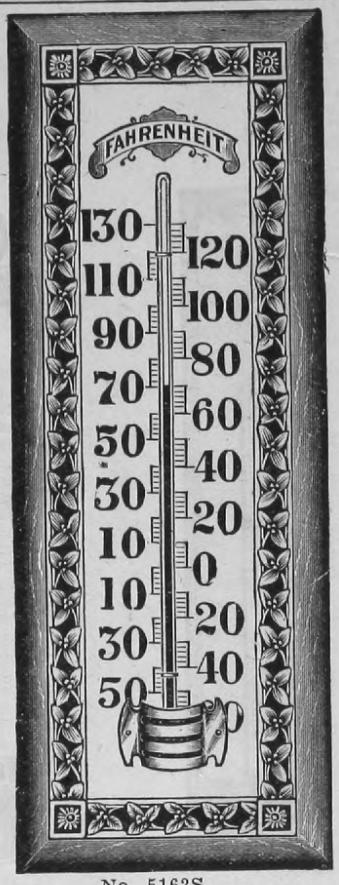
No. 5120S.



No. 5100.



No. 5160S.



No. 5162S.

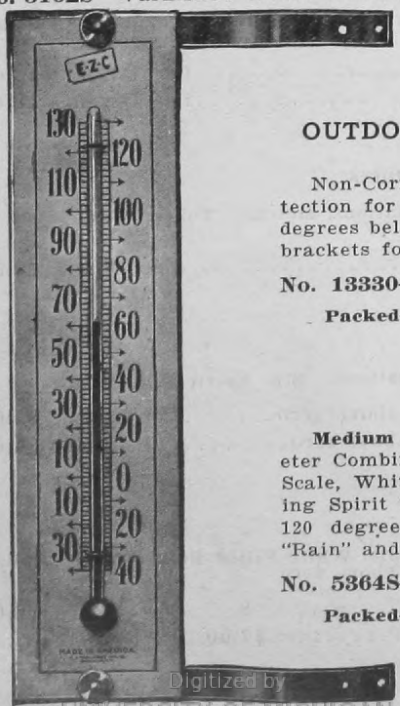
CABINET STYLE—Highly Finished Wood Back, Black Oxidized Scale, White Filled Figures and Graduations, Metal Straps and Bulb Guards, Magnifying Tubes. Mercury Tubes Graduated 10 to 40 degrees below to 120 degrees above zero. Spirit Tubes Graduated 20 to 60 degrees below to 120 degrees above zero.

No. 5140S—Common Grade, Spirit Tubes, Inches	8	10
Per Dozen, Oval Edge Walnut Finish Backs	$5.00	7.00
No. 5120S—Medium Grade, Spirit Tubes, Inches	8	10
Per Dozen, Beveled Oak Backs	8.50	11.50
No. 5100—Standard Grade Mercury Tubes, Inches	8	10
Per Dozen, Ebonized Wood Backs	15.00	19.50

DISTANCE READING—Common Grade Magnifying Spirit Tubes, Lithographed Tin Scale. Graduated 20 to 60 degrees below to 130 degrees above zero.

No. 5160S—Lithographed Tin Cases	8 inch—Per Dozen,	$2.25
No. 5162S—Varnished White Wood Backs	Inches 8	10
	Per Dozen, $2.75	3.25

Packed—One Dozen in a Box.



No. 13330.

OUTDOOR OR WINDOW THERMOMETERS

Non-Corrosive Metal Back, Water-Proof Celluloid Protection for Scale, Red Spirit Tube. Graduated 20 to 60 degrees below to 120 degrees above zero. Complete with brackets for attaching to casing.

No. 13330—8½ inch .....Per Dozen, $9.00

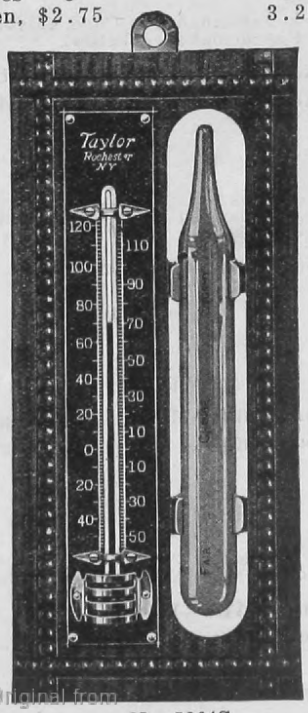
Packed—One in a Carton, One Dozen in a Box.

STORM GLASSES

Medium Grade Thermometer, Storm Glass and Barometer Combined. Beaded Edge Oak Back, Black Oxidized Scale, White Filled Figures and Graduations, Magnifying Spirit Tubes. Graduated 10 to 40 degrees below to 120 degrees above zero. Storm Glass etched "Fair," "Rain" and "Stormy."

No. 5364S—8½ inch .....Per Dozen, $13.50

Packed—One in a Carton, Half Dozen in a Box.

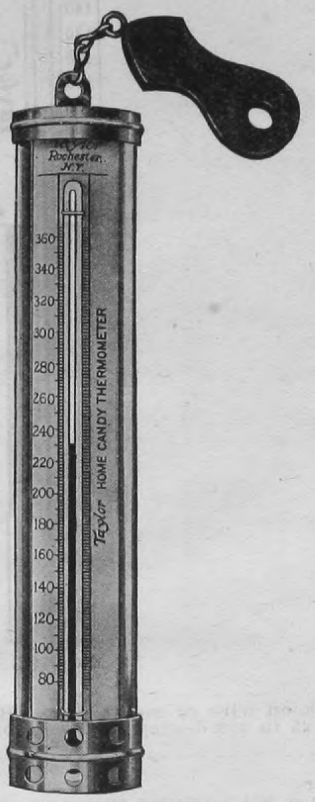


No. 5364S.

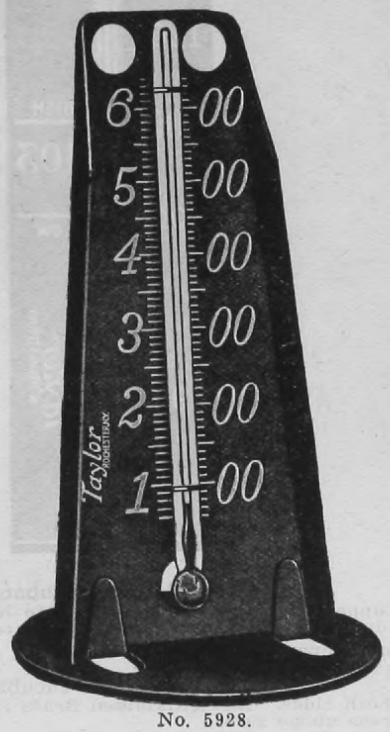
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THERMOMETERS

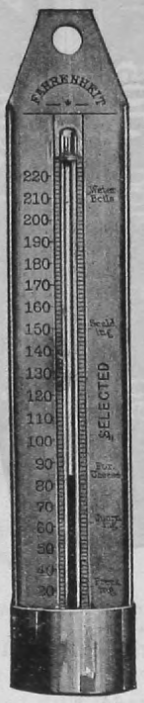
No. 5606.



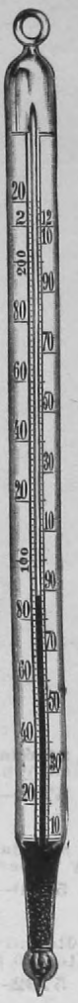
No. 5908.



No. 5928.



No. 5740S.



No. 5701.

Bath

Handled Ash Frame or Back, Silvered Brass Scale, Black Figures, Magnifying Mercury Tube. Graduated 30 to 150 degrees above zero.

No. 5606—12 inch ..... Per Dozen, $8.50

Packed—One Dozen in a Package.

Candy

Taylor Home Candy Makers Thermometer, Copper Case with metal clip on back for fastening to vessel containing mixtures, Silvered Brass Scale, Black Filled Figures and Graduations, Mercury Tubes.

No. 5908—8 inch, Graduated 80 to 350 degrees F..... Per Dozen, $13.50

Packed—Half Dozen in a Box.

Oven

Taylor Medium Grade, Flanged Brass Oxidized Scale, Silver Deposited Figures, Easel Back, Mercury Tubes. Approximate Scale Range 100 to 600 degrees above zero.

No. 5928—6 inch ..... Per Dozen, $16.50

Packed—One Dozen in a Box.

Flanged Dairy

Selected Common Grade Flanged Nickeled Brass Scale, Nickeled Figures and Graduations, Sliding Guard, White Back Red Liquid Tubes. Approximate Scale Range 20 degrees to 220 degrees above zero.

No. 5740S—8 inch ..... Per Dozen, $5.00

Packed—One Dozen in a Box.

Floating Glass Dairy

Standard Grade Pasteurizing, Glass Cylinder, Hand Written Paper Scale, 2 degree Graduation. Accurate within one division of the Scale. Mercury Tube. Approximate Scale Range 30 degrees to 220 degrees above zero.

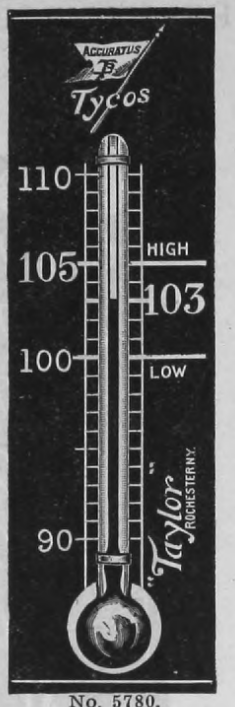
No. 5701—10 inch .....Per Dozen, $24.00

Packed—One Dozen in a Box.

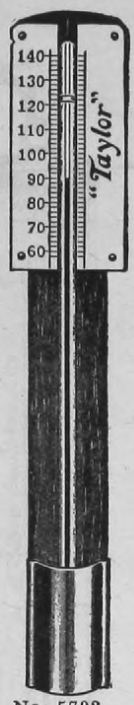
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

THERMOMETERS

No. 5774.



No. 5780.



No. 5792.

Angle Pattern Incubator

Standard Grade, with flange on upper edge turned over so as to hook on wire or metal strip. Black Oxidized Brass Scales, White Filled Figures and Graduations, Mercury Tubes. Graduated 85 to 110 degrees above zero.

No. 5774—Angle Pattern Incubator Thermometers.....Per Dozen, $7.50

Straight Pattern Incubator

Standard Grade, with flange on both sides. Black Oxidized Brass Scales, White Filled Figures and Graduations. Mercury Tubes. Graduated 85 to 110 degrees above zero.

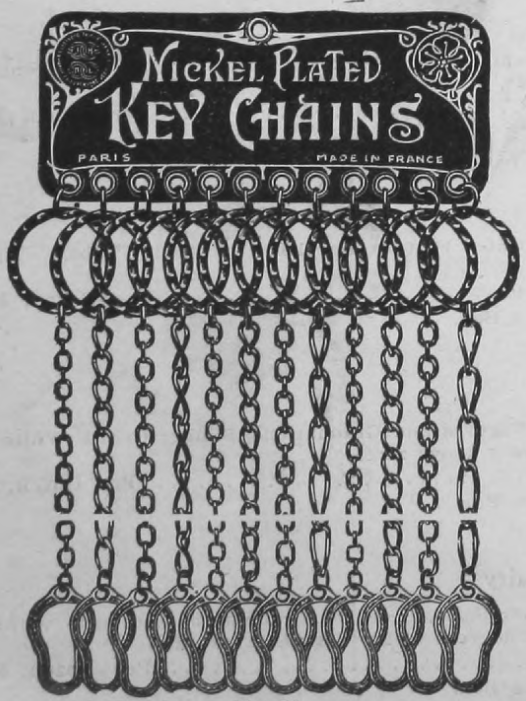
No. 5780—Straight Pattern Incubator Thermometers.....Per Dozen, $7.50

Medium Grade Brooder

Round Wooden Frame, Silvered Brass Scale, Black Filled Figures and Graduations, Magnifying Mercury Tubes. Graduated 60 to 140 degrees above zero.

No. 5792—Brooder Thermometers.....Per Dozen, $7.50

Packed—One Dozen in a Box.



No. 50.

KEY CHAINS

No. 50—Key Chains, Nickel Plated, with Loop and Snap, Assorted.....Per Dozen, $.....

Packed—One Dozen on a Card.

EXPANSION COIL KEY CHAINS

Made of one continuous coil of best quality plated Music Wire, with solid nickel silver button Loop at one end, and eye and nickel plated steel key ring at other end. A strong piece of braided fish line which is securely fastened inside the coil, limits the stretch and prevents the coil from being drawn out far enough to weaken it.

No. 3—Length, Closed 12 inches; Extended 25 inches.....Per Dozen, $.....

Packed—Two Dozen in a Box with a Display Card for each Dozen.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

KEY RINGS

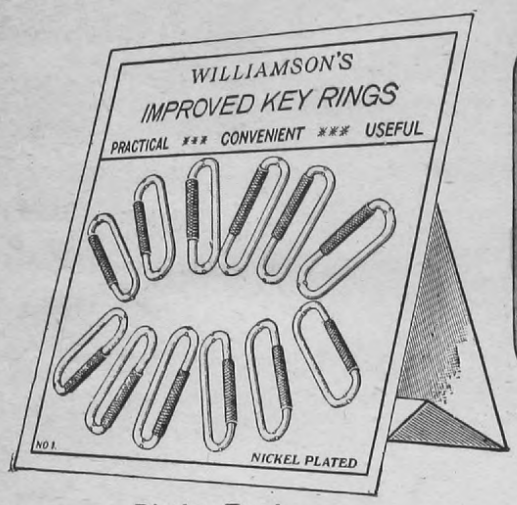
Nos. 14 to 100.

No. 8015.

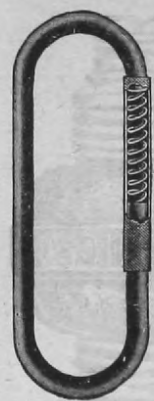
No. 400.

No. 14—Split Key Rings, Polished Steel, Hardened and Tempered, ¼ in. Diameter...Per Dozen, $.....
No. 20—Split Key Rings, Polished Steel, Hardened and Tempered, 1 in. Diameter...Per Dozen, ...
No. 100—Split Key Rings, Polished Steel, Hardened and Tempered, Assorted Sizes.....Per Dozen, ...
No. 8015—Scallop Key Rings, Polished Steel, Hardened and Tempered, Assorted Sizes.....Per Dozen, ...
No. 400—Ball Key Rings, Polished Steel, Hardened and Tempered, Assorted Sizes.....Per Dozen, ...

Packed—Nos. 14 and 20, One Gross in a Box; Nos. 100 to 400, One Dozen on a Card.



Display Easel.

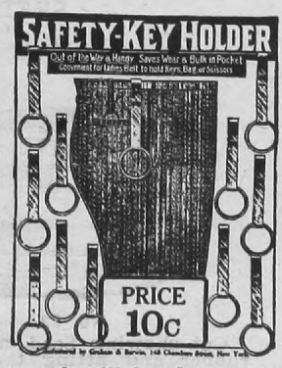


No. 01.
Full Size.

Bessemer Steel Wire Ring, Brass Slide and Piano Wire Spring.

No. 01—Nickel Plated.....Per Dozen, $.....
Packed—One Dozen on Display Easel, One Gross in a Box.

SAFETY KEY HOLDERS



Out of the way and still handy, saves wear and bulk in pocket; Convenient for Ladies' Belt to hold keys, bag or scissors.

Safety Key Holders, with Rings as illustrated
.....Per Dozen, $.....
Packed—One Dozen on a Card.

CHAIN KEY RINGS

No. 03.

The only Chain Key Ring made which holds one key separate from the rest. The chain is securely locked, it being impossible to pull it apart; but it can be removed from either end by pressing down individual part of loop and slipping the loop in either direction through the slide. Made of Steel, Nickel Plated with Fancy Embossed Backs.

No. 03—Individual Chain Key Rings.....
.....Per Dozen, $.....
Packed—One Dozen on a Card, Twelve Cards in a Box.

KEY CHAINS

No. 25.

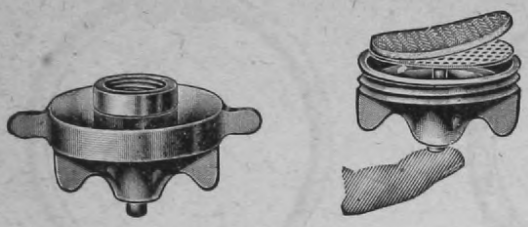
Aluminum Key Chains, with Loop and Ring.

No. 25—Length 19 inches....Per Dozen, $.....
No. 3825—Switchmen's Chains, Length 38 inches .....Per Dozen, ...
Packed—One Dozen on a Display Card, One Card in a Box.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WATER FILTERS

REX



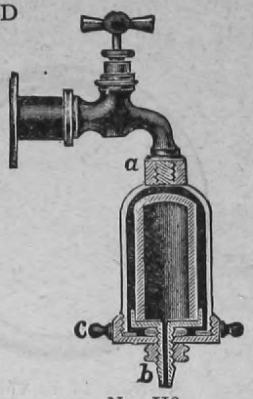
White Cotton Filter Pulp Discs make a Superior Filtering Medium. The Projecting peg on the loose perforated plate furnishes a ready means for removing the discs and it also serves as a guide for the water, preventing spattering. Each Rex Filter is equipped with twelve discs, and a Tap Union for use on plain bibbs, the Filters being threaded as shown for use on hose bibb.

Rex—Brass, Nickel Plated.....Each, $1.50

Packed—One in a Box.

BERKEFELD

No. H5.



No. H2.

Cast Brass, Nickel Plated equipped with a Hollow Cylinder of Infusorial Earth. The water passes through the walls of this cylinder, while all impurities are retained. The Filter is easily cleaned and boiling sterilizes the cylinder.

No. H5—Capacity 1 Gallon in 6 minutes...Each, $3.00
No. H2—Capacity 1 Gallon in 4 minutes...Each, 4.00

Packed—One in a Box.

No. 6.

Opal Glass Sanitary Reversible Filter with Nickel Plated Ends threaded to attach to any faucet or bibb having a hose nozzle thread. Rubber Gaskets with each filter furnish a means for attachment to any plain faucet.

No. 6—Seed's Opal Filters, Reversible.....Each, $.....

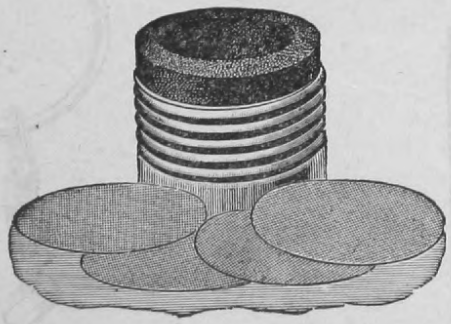
Packed—One in a Box.

ANTI-SPLASHERS

EUREKA

No. 11.

Cut Showing Eureka with Screw ready to attach to threaded faucet.



Cut showing 4 screens and rubber gasket for attaching Eureka Screw Filter to plain faucet.

SEED

No. 12.

Cut showing Seed, made entirely of rubber and fitting threaded or plain faucets.

Anti-Splashers are indispensable in the household as they act as strainers or filters while causing the water to flow in a steady, smooth stream with absolutely no splash.

No. 11—Eureka Anti-Splashers. Three Dozen in a Box.....Per Dozen, $.....
No. 12—Seed Anti-Splashers. One Dozen in a Box, Six being on a Display Card.....Per Dozen, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WATER COOLERS

Nos. 03 to 010.

Galvanized Iron Lining.

Heavy Tin Body and Base. Decorated in Assorted Designs and Colors.

With Nickel Plated "Push Button" Faucets.

Nos.	03	04	06	08	010
Capacity, gallons	3	4	6	8	10
Each	$3.25	4.00	4.75	5.50	8.00

Enameled Iron Lining.

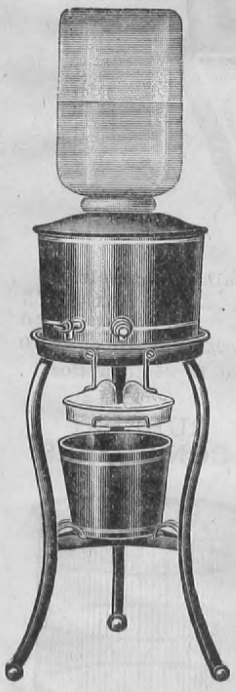
Gotham Water Coolers, nicely decorated. The linings of these coolers are of wrought iron, coated with pure **Agate Enamel,** preserving the water free from Metallic Oxides, which it is impossible to avoid with the ordinary linings. Fitted with Ice Receptacle and Nickel Plated "Push Button Faucet."

Nos.	G6	G8
Capacity, gallons	6	8
Each	$23.90	27.35

Packed—Nos. 03 to G8, One in a Crate.

Nos. G6 and G8.

WATER COOLERS



No. 560.

No. 56.

XXth Century Bottle Water Coolers, Mahogany Finish. Furnished with green glass bottle. Ice Capacity 15 to 20 pounds.

No. 56-3—Cooler with 3 Gallon Bottle....Each, $12.10
No. 56-5—Cooler with 5 Gallon Bottle....Each, 12.60

Packed—One in a Box.

XXth Century Bottle Water Coolers, Mahogany Finish. Furnished with green glass bottle and fibre waste water pail. Ice Capacity 15 to 20 pounds.

No. 560 Complete	With **3** Gallon Bottle...Each,	$16.10	
	With **5** Gallon Bottle...Each,	17.60	
Extra Bottles	Gallons	3	5
	Each	$1.10	1.60

Extra Fibre Waste Water Pails.....Each, $.....

Packed—One in a Box.

WATER COOLER STANDS

No. 115.

Japanned Water Cooler Stands, Height 29½ inches. Furnished complete with Drip Pail.

No. 115—Will hold 4 to 8 gallon Coolers..
.....Each, $.....

Packed—One in a Crate.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

WATER PAILS

No. 3.

Star.

Star—12 Quart Indurated Fibre Water Pails
.....Per Dozen, $.....

Packed—Half Dozen in a Crate.

White Pine Water Pails, Oak Grained.

No. 2—With **Two** Electric Welded Wire Hoops.....Per Dozen, $.....

No. 3—With **Three** Electric Welded Wire Hoops.....Per Dozen, ...

Packed—One Dozen (Nested) in a Bundle.

STABLE PAILS

J. I. C.

Oak Stable Pails with continuous Strap Ear and Bottom Support.

J. I. C.—With **Three** Iron Hoops..Per Dozen, $.....

Packed—Half Dozen (Nested) in a Bundle.

REPAIR HOOPS

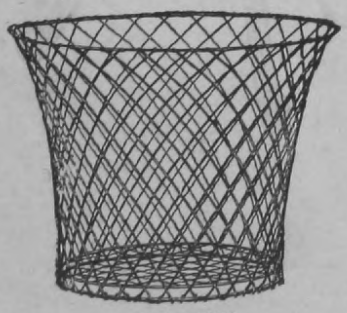
Nos. 0 and 1.

Handy Hoops, for repairing tubs, pails or barrels.

No. 0—Size 5/8x39 inches.....Per Box $1.75
No. 1—Size 7/8x78 inches.....Per Box 3.30
No. 3—Size 1¼x80 inches.....Per Box 3.50

Packed—Nos. 0 and 1, 50 in a Box; No. 3, 25 in a Box.

WASTE PAPER BASKETS



No. 155W.

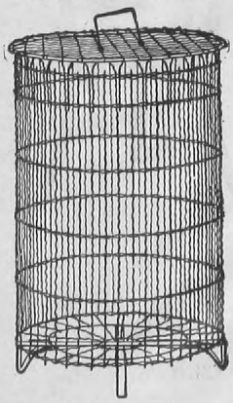
Waste Paper Baskets

Retinned Wire Body and Bottom, 17 gauge Wire, 1¼ inch Diamond Mesh. Top Diameter, 15 inches; Height 12 inches.

No. 155W—Waste Baskets.....Per Dozen, $.....

Packed—Half Dozen in a Package.

RUBBISH CONSUMERS



Nos. 1 to 3.

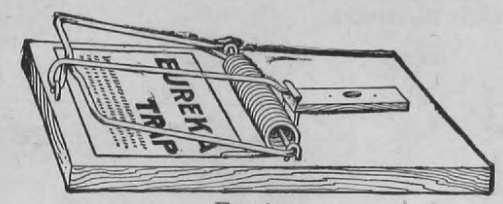
Rubbish Consumers

Cyclone Consumers, used for burning waste paper and rubbish without danger, dirt or litter. Made of heavy Galvanized Steel Wire, with hinged covers; has no soldered joints. Uprights alternate Nos. 9 and 11 crimped wire, Cables No. 12½ wire; bottoms braced with steel crossbars. No. 1 is reinforced with steel frame.

Nos.	1	2	3
Diameter, inches	20	17	14
Height, inches	30	25	21
Per Dozen	$40.00	30.00	27.00

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

MOUSE AND RAT TRAPS



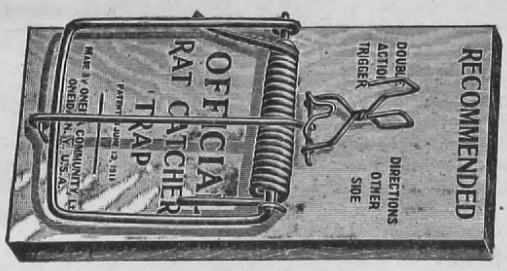
Eureka.

Hardwood Base, Coppered Steel Springs.

Eureka Mouse—4x2 inches.....Per Dozen, $.....

Eureka Rat—7x3½ inches.....Per Dozen, ...

Packed—One Dozen in a Box.



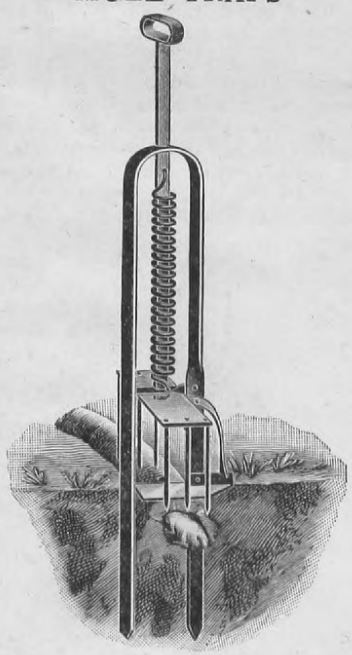
Official.

A Strongly Constructed Superior Trap with Double Action Trigger. Works both up and down.

Official Rat—7x3½ inches.....Per Dozen, $.....

Packed—In Open Stock.

MOLE TRAPS



Reddick.

Reddick Reliable Mole Traps.....Per Dozen, $.....

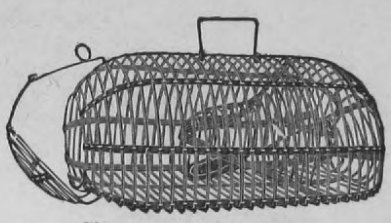
Packed—Half Dozen in a Crate.

RAT POISON

Rat-Nip is as enticing to Rats as Catnip is to Cats. It is however Sure Death to the Rats. Put up in Collapsible Screw Top Tubes, it is easy to use and absolutely safe to handle.

Rat-Nip—In Tubes .....Per Dozen Tubes, $.....

Packed—One Dozen Tubes in a Box.



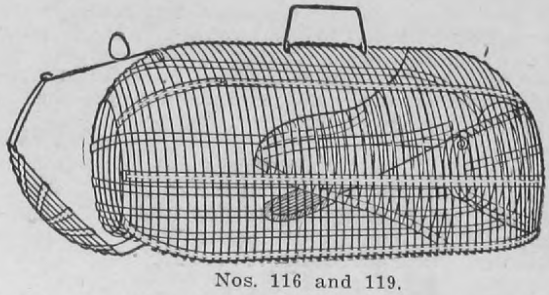
Clipper and Surprise.

Coppered Steel Wire and Flat Coppered Steel Ribs. Rounded Ends, Safety Door, Rust-proof Lacquer Finish.

Clipper—Mouse Traps, 9x4¾ in., No. 19 Wires ¼ in. apart.....Per Dozen, $.....

Surprise—Rat Traps, 15x8½ in., No. 17 Wires ½ in. apart.....Per Dozen, ...

Packed—Half Dozen in a Package.



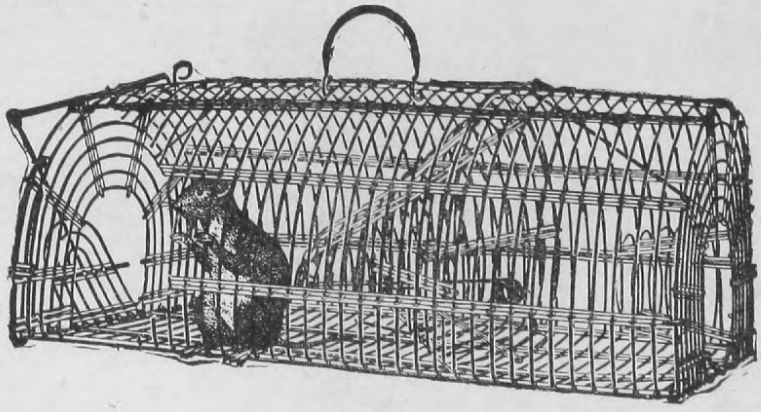
Nos. 116 and 119.

Combination Lock Ribbed Mouse and Rat Traps. No. 18 Coppered Steel Wires, ¼ inch apart, Flat Coppered Steel Ribs, Flange around opening prevents escape of catch. Rounded Ends, Safety Door, Rust-proof Lacquer Finish.

No. 116—16x8½x6¾ inches, Nine Ribs.....
.....Per Dozen, $.....

No. 119—16x10½x8½ inches, Eleven Ribs....
.....Per Dozen, ...

Packed—Half Dozen in a Crate.



Holdfast.

"Rat Traps."

Made of No. 16 Coppered Steel Wires ½ inch apart and eleven flanged coppered steel ribs. Patent Flange around opening prevents escape of catch. **Length** 19 inches, **Width** 10½ inches, Height 8 inches. Has square ends and safety door. Finished with rust-proof lacquer.

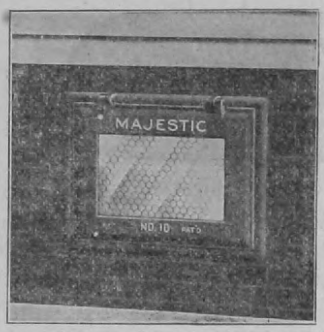
Holdfast Lock Ribbed Rat Traps....Per Dozen, $.....

Packed—Half Dozen in a Crate.

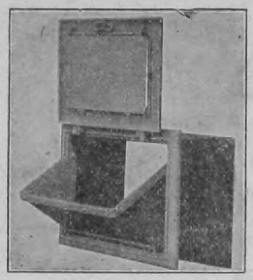
Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

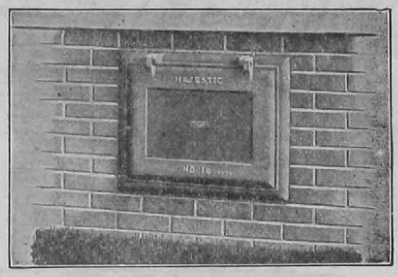
MAJESTIC FOUNDATION COAL CHUTES

For Residenees, Churches and Public Buildings.



Nos. 10A and 20A. Glass Panel.





Nos. 10B and 20B. Steel Panel.

The Majestic Foundation Coal Chute is designed to be placed in the foundation wall for depositing coal, wood or vegetables into the cellar. It affords splendid protection to the building and saves the side of the house from becoming damaged by careless coal deliverers, as the door locking automatically open protects the building just where the protection is needed and instead of throwing coal carelessly against the side of the building as is the case with an ordinary cellar window, it strikes the door, falls into the hopper and passes to the basement without being scattered upon the lawn and without permitting the dust and dirt to disfigure the side of the building. When the door closes it locks itself automatically and can only be opened from the inside, making it burglar proof.

The body of the chute is made of heavy steel. The door and frame are made of the best quality of grey cast iron, the hopper of twelve gauge boiler plate and is so designed that when not in use it lies in the bottom of the chute body. All parts are thoroughly painted.

With Glass Panel

Fitted with ¼ inch Wire Glass Panel and Automatic Steel Protection Shield. When door is closed the shield lies in body of the chute, allowing a full ray of light to shine in.

No. 10A—Wall Opening, 24 inches Wide, 17 inches High, 13 inches Deep. For Residences.....Each, $15.00
No. 20A—Wall Opening, 33 inches Wide, 22 inches High, 18 inches Deep. For Schools, Churches and Public Buildings.....Each, 26.00

With Steel Panel

The protecting shield that hangs in front of the glass in style "A" acts as a steel panel in style "B" and is fastened into the opening with the same adjustable clips that hold glass in style "A," so at any time this panel can be removed and glass put in its place, in which case the panel would then be used as a shield.

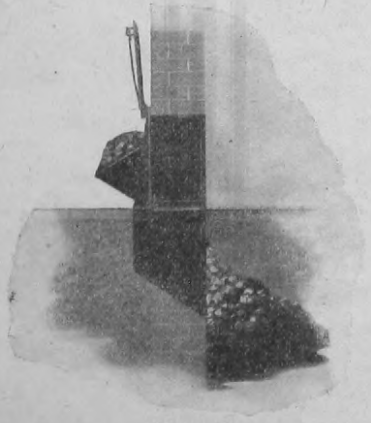
No. 10B—Wall Opening, 24 inches Wide, 17 inches High, 13 inches Deep. For Residences.....Each, $14.00
No. 20B—Wall Opening, 33 inches Wide, 22 inches High, 18 inches Deep. For Schools, Churches and Public Buildings.....Each, 24.00

Note.—If desired, a chain attachment, consisting of 10 feet of American Chain attached to the gravity latch and running through the necessary pulleys, can be furnished at 50 cents added to list. By the use of this attachment the user can open the chute without going into the bin.

Weight:—No. 10A, 95 lbs.; No. 10B, 80 lbs.; No. 20A, 180 lbs.; No. 20B, 145 lbs.

For Store Buildings

Nos. 12 and 15.



End View showing Chute in position.

These Chutes provide a neat, safe and burglar proof receptacle for depositing coal, wood or vegetables into the cellar of a store building or any class of building where the grade line or sidewalk and floor are on the same level.

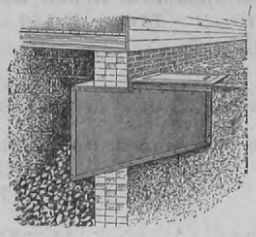
The Door and Frame are made of heavy cast iron and provided with slotted hinges to hold the door open, protecting the building when coal is being thrown in. The door is also provided with a heavy, self-closing gravity latch, which can be opened very conveniently by means of a chain and pulley, from the inside only. The Hopper is made of 12-gauge steel. The Body of sheet steel and angle iron.

Nos.	Size of Door Inches	Total Height Inches	Opening at Grade Inches	**With** Hopper Each	**Without** Hopper Each
12	22 Wide, 20 High	48	24x16	$35.00	$31.50
15	30 Wide, 24 High	52	30x20	47.00	42.50

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

MAJESTIC FOUNDATION COAL CHUTES

For Residences, Churches and Public Buildings

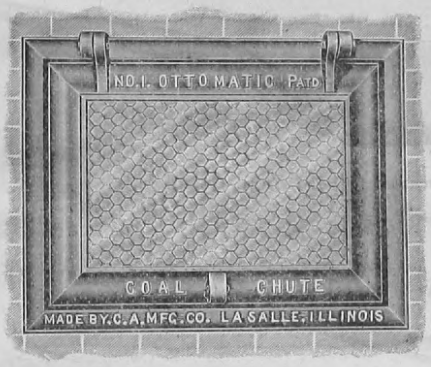


Nos. 16 and 18 Grade Line Chutes.

Very low foundations and in some cases no foundation above the grade line are responsible for the introduction of this type of Chute. It can be used to advantage in a store, where the floor is level with the sidewalk. The Door and Frame are Very Heavy Cast Semi-Steel and can be driven over by team. The Sides that form the Hopper are Heavy Steel. The Body is Heavy Steel and Angle Iron.

Nos.	Door, Inches.	Wall Opening.	Length, Inches.	
16	18 x 24	25 in. Wide x 24 in. High	36	Each, $31.50
18	24 x 30	31 in. Wide x 31 in. High	42	Each, 55.00

OTTOMATIC FOUNDATION COAL CHUTES



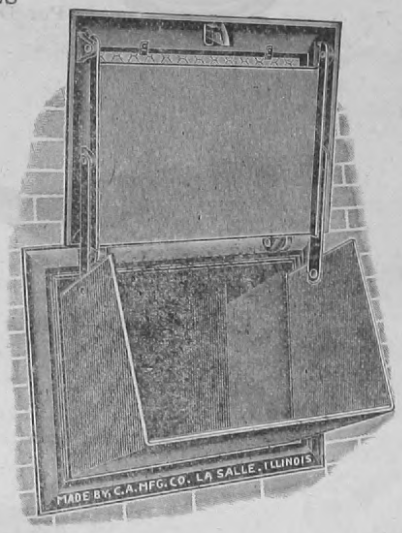
The Ottomatic Coal Chute consists of two pieces, comprising a shield and hopper. The shield is riveted to the free end of the door and has its opposite end riveted to the hopper.

It will be noticed that the door, shield and hopper are all linked together.

Opening the door brings out hopper, and suspends shield directly in front of the glass, ready to receive coal. Closing the door sends shield and hopper back into the opening, and there is no obstruction of light.

The chute is automatic in action and that is why it is called the Ottomatic.

The construction is more simple than a chute which has no automatic feature at all.



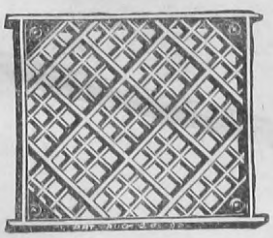
With Glass Panel.

No. 1A—Wall Opening 24x18 inches, 13 inches deep. Complete with Hopper and Glass.....Each, $12.50
No. 2A—Wall Opening 28x22 inches, 17 inches deep. Complete with Hopper and Glass.....Each, 22.00

With Steel Panel.

No. 1B—Wall Opening 24x18 inches, 13 inches deep. Complete with Hopper and Steel Panel.....Each, $12.00
No. 2B—Wall Opening 28x22 inches, 17 inches deep. Complete with Hopper and Steel Panel.....Each, 21.00

VENTILATOR GRATES

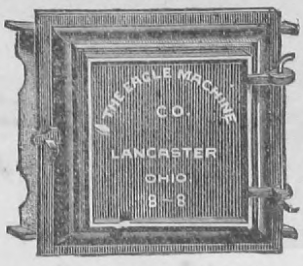


Cast Iron, Japanned.

Inches.....	8x10	8x12	10x12
Per Dozen.. $	.....	.....	.....

Packed—One Dozen in a Crate.

ASH PIT DOORS



Cast Iron, Japanned.

Inches.....	8x8	8x10	10x12	12x15
Per Dozen, $	.....	.....	.....	.....

Packed—In Open Stock.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

COAL HODS

Nos. 115 to 120.

Open, Japanned, Round Bottoms.

Nos.	115	116	117	118	120
Inches	15	16	17	18	20
Per Dozen, $					

Packed—Half Dozen in a Bundle.

Funnel, Japanned, Round Bottoms.

Nos.	316	317	318
Inches	16	17	18
Per Dozen $			

Packed—Quarter Dozen in a Bundle.

Nos. 316 to 318.

Nos. 616 to 620.

Open, Galvanized, Round Bottoms.

Nos.	616	617	618	620
Inches	16	17	18	20
Per Dozen, $				

Packed—Half Dozen in a Bundle.

Funnel, Galvanized, Round Bottoms.

Nos.	716	717	718
Inches	16	17	18
Per Dozen $			

Packed—Quarter Dozen in a Bundle.

Nos. 716 to 718.

FIRE SHOVELS

No. 80.

Japanned, with **Flat** Handles.

No.	80
Inches	14¼x7x4⅝
Per Dozen	$

Packed—One Dozen in a Package.

Nos. 54 and 56.

Japanned, with **Round** Handles.

Nos.	54	56
Inches	14x7x4¾	20x7x4¾
Per Dozen	$	

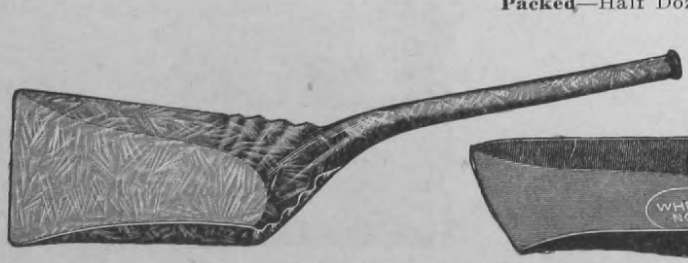
Packed—Quarter Dozen in a Package.

Nos. 7 to 11.

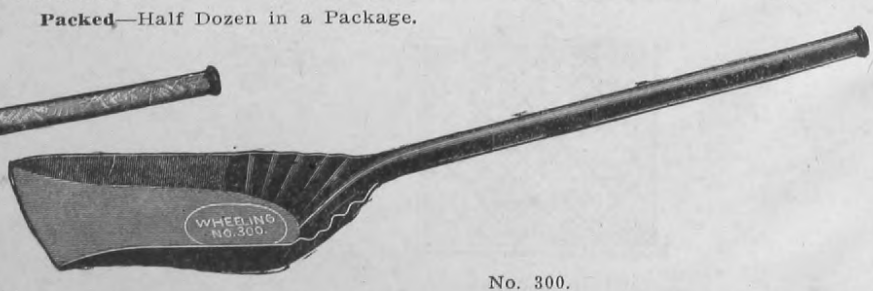
Extra Heavy and Strong, **Japanned,** with Riveted **Double Band** Steel Handles.

Nos.	7	9	11
Inches	16x7½x5⅛	22x8¾x5⅛	25x9x5⅛
Per Dozen	$		

Packed—Half Dozen in a Package.



No. 255.



No. 300.

No. 255—**Galvanized,** with **Round Canopy** Handles, 19x7x4¾ inches .....Per dozen, $.....

No. 300—Extra Strong, **Japanned,** with Long **Round Canopy** Handles, 25½x9x6 inches.....Per Dozen, ...

Packed—Quarter Dozen in a Package.

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

STOVE PUTTY

Tharco "Asbestos" Stove Putty.

(In Plastic Form.)

A Compound of Asbestos Fibre, Pigment and Oil.

For mounting and setting hot water and steam boilers and for filling joints in stoves, ranges and heaters.

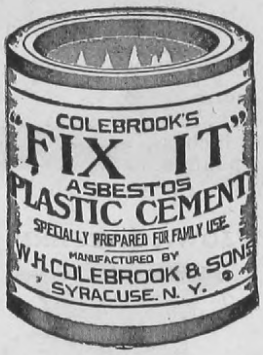
Keeps soft in package and becomes a tough, permanent packing in joint upon exposure to air. Ready for use and easy application under the thumb.

No. 1—**In One** Pound Cans.....Per Dozen, $.....

No. 5—**In Five** Pound Cans.....Per Dozen, ...

Packed—In Open Stock.

STOVE LINING CEMENT



"Fix It" Asbestos Plastic Cement is prepared ready for use and is easily applied with a knife. Used for Cementing Joints and Broken Parts of Stoves and Ranges. It makes a gas-tight, smoke and dust proof joint.

"Fix It"—In 1 Pound Friction Top Cans...
..... Per Dozen, $.....

Packed—Three Dozen in a Case.

FURNACE CEMENT

Tharco "Asbestos" Furnace Cement.

(In Plastic Form.)

For mounting, cementing, repairing and setting furnaces, stoves, ranges, heaters and fire brick and for sealing joints exposed to intense heat. Odorless, indestructible, fire and acid proof. Non-shrinking in setting and adheres to either side of a joint, making it gas tight. Withstands action of intense heat and direct flame.

No. 11—**In One** Pound Cans.....Per Dozen, $.....
No. 15—**In Five** Pound Cans.....Per Dozen, ...

Packed—In Open Stock.

SMOOTH-ON

Smooth-On Iron Cement
For Engineers

No. 1	In	1 Lb. Cans	5 Lb. Cans
	Each	$.....	.....

Smooth-On Castings Cement
For Foundrymen

No. 4	In	1 Lb. Cans	5 Lb. Cans
	Each	$.....	.....

NOTE.—No. 1 Smooth-On is unequalled for stopping leaks of Steam, Water, Fire or Oil because it becomes metallic iron that has the same expansion and contraction as iron, thus keeping the joint tight at all temperatures and joints can easily be taken apart. **No. 4** Smooth-On has the same color and appearance as Cast Iron which makes it valuable for smoothing over and filling up blow holes and other defects in iron or steel castings. This Cement must be applied to cold metal.

Smooth-On while metallizing expands in bulk and it is this action that makes them valuable for mechanical use.

SALAMANDERS

No. 2.

No. 22. Hood.

Made of No. 18 Gauge Steel, with 1⅛x⅛ inch steel band legs, rounded under pan to prevent cutting up the floors, and heavy cast iron grate. Strongly riveted and braced. Used for drying out plaster, old buildings, etc.

No. 2—Salamanders, Diameter of Body 16 inches, Height of Body 15 inches, Height over all 30 inches .....Each, $.....

Covers, Hoods and Grates for Salamanders

No. 12—Covers for No. 2 Salamanders..... Each, $.....
No. 22—Hoods for Salamanders, made of No. 22 Gauge Steel, with heavy steel supporting band, 6 inch pipe outlet and hinged door opening for inserting coal..... Each, ...
No. 32—Grates for No. 2 Salamanders..... Each, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

BUHL SANITARY MILK CANS

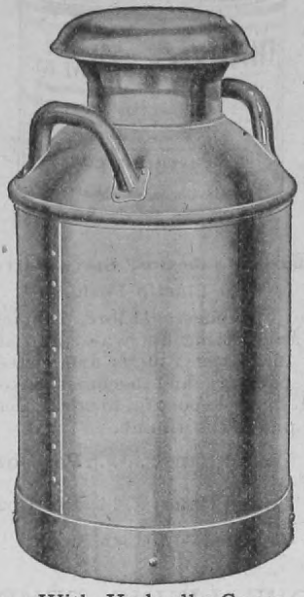
OHIO PATTERN

With Victor Cover

Especially built to meet the demands of a low price high grade milk can. Our aim has been to make this can the very best obtainable for the money. They are assembled and soldered just as carefully as the higher grades. Perfectly smooth inside. No humps or crevices. Welded galvanized iron bottom hoop, Fitted with No. 1 Victor Cover, and Pioneer Breast Handles.

Capacity, quarts	20	32	40
Diameter of Neck, inches	6	6	6
Average Weight, pounds	10¾	15½	17¾
With Victor Covers.....Each, $	....	....	....

OHIO PATTERN



With Umbrella Cover

Especially built to meet the demands of a low price high grade milk can. Our aim has been to make this can the very best obtainable for the money. They are assembled and soldered just as carefully as the higher grades. Perfectly smooth inside. No humps or crevices. Welded galvanized iron bottom hoop. Fitted with No. 8 Umbrella Cover and Pioneer Breast Handles.

Capacity, quarts	20	32	40
Diameter of Neck, inches	6	6	6
Average Weight, pounds	10¾	15½	17¾
With No. 8 Umbrella Covers, Each, $	....	....	....

VICTOR PATTERN

Cylinder, Breast and Neck, made in One Piece, Seamlessly Drawn. Breast Hoop is attached by our special process which prevents it from becoming loose.

Special beaded Inside Bottom Hoop protects the bottom edge of the can.

No Seams in Cylinder, Breast or Neck, no chance to leak.

Capacity, quarts	20	32
Diameter of Neck, inches	6	6
Average Weight, pounds	10½	15
With Victor Covers.....Each, $	....	....

IOWA PATTERN

This can is a general favorite throughout the west, and has been steadily gaining favor in the east. The neck and breast are seamless, making an uncrushable and sanitary construction.

Heavy steel. Tinned and soldered as are only the Buhl "Sanitary" brand. Heavy Breast Hoop and Inside Bottom Hoop .Fitted with No. 1 Victor Cover and Pioneer Breast Handles.

Capacity, quarts	20	32	40
Diameter of Neck, inches	6	6	6
Average Weight, pounds	12	19½	21
With Victor Covers.....Each, $	....	....	....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

ASH CANS

Buhl Royal Steel Ash Cans, with Wrought Iron Top and Bottom Hoops, Corrugated Steel Center Hoops, and Drop Side Handles.

Galvanized—Without Covers.

Nos.	3	4	5	6
Inches	15x26	17x26	18x26	20x26
Gallons	19½	25½	29	35
Each	$.....	.....	.....	.....

ASH CAN COVERS

Galvanized—With Handle.

Nos.	3	4	5	6
Diameter, inches	15	17	18	20
Per Dozen	$.....	.....	.....	.....

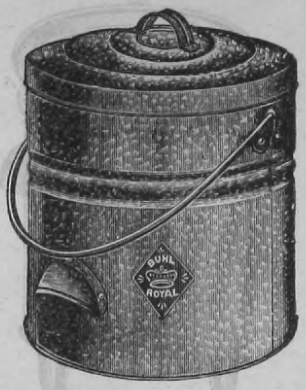
ASH CANS

Cream City Corrugated Steel Ash and Garbage Cans. Extra Heavy, Welded Top Rim, Seamless Wide Flange Covers.

Galvanized.

Nos.	150	180	210
Inches	15x26	18x26	21x26
Gallons	18	25½	33½
Each	$.....	.....	.....

GARBAGE CANS



Buhl Royal Steel Garbage Cans, with Bails. Seamless Covers with Outside Rims.

Galvanized.

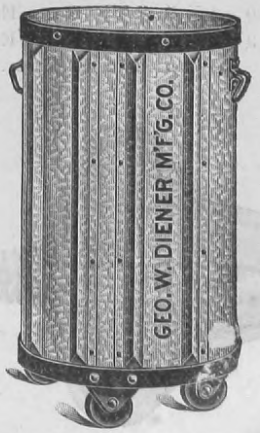
Nos.	10	11	12	13	14
Inches	10½x11⅜	12x10¼	13x12½	14⅜x14	14⅜x15½
Gallons	3¾	5½	8	9½	10½
Per Dozen $	.....	.....	.....	.....	.....

HANDY KITCHEN CANS

Cream City, Galvanized, with Seamless Covers.

No. A—9x8½ inches. 7 Quarts..Per Dozen, $.....

TOTE CANS



Strong and Durable for Manufacturers' Use. Galvanized Reinforced Body, Heavy Steel Bands, Steel Casters. Will carry 300 pounds.

No. 113—16x26 inches. 22 Gallons.....Each, $3.00
No. 114—19x28 inches. 32 Gallons.....Each, 3.50

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

OILY WASTE CANS

Buhl Royal Steel Oily Waste Cans, with Side Handles. Wrought Iron Feet and Self Closing Covers.

	Galvanized.					
Nos. ...	1	2	4	5	6	8
Inches..	11¼x15	12x18	14x22	16x24	18x26	24x36
Each ...	$.....	.....	.....	.....	.....	.....

Justrite Steel Automatic Oily Waste Cans. Cut shows Can in normal position. To raise the cover press handle with foot. Remove foot from handle and cover will close automatically.—Approved by the National Board of Fire Underwriters.

	Galvanized.		
Nos.	1/0	2/0	3/0
Inches	11¾x13	12½x14	13½x15
Each	$.....	.....	.....

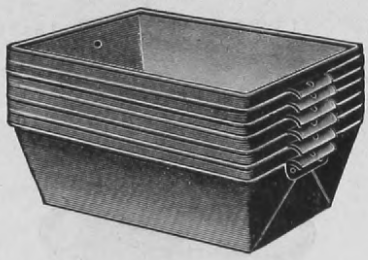
SHOP BOXES

"Iron Clad" Steel Shop or Tote Boxes.

Straight Pattern—Made from a single piece of sheet steel, with a triple reinforcing fold on the upper edges, the sides lapping around on the corners, making a continuous band around the top sides and corners. Provided with strong handles and a hole for hook insertion.

Standard Sizes.					
No. 1—18	x10	x5 in.	20 Ga.	Each,	$.....
No. 4—18	x10	x5 in.	18 Ga.	Each,	.....
No. 7—18	x10	x5 in.	16 Ga.	Each,	.....
No. 14—20	x10	x5 in.	18 Ga.	Each,	.....
No. 17—20	x10	x5 in.	16 Ga.	Each,	.....
No. 20—21	x10	x5 in.	20 Ga.	Each,	.....
No. 23—21	x10	x5 in.	18 Ga.	Each,	.....
No. 24—18½x	9½x6	in.	20 Ga.	Each,	.....

Special Sizes to order.

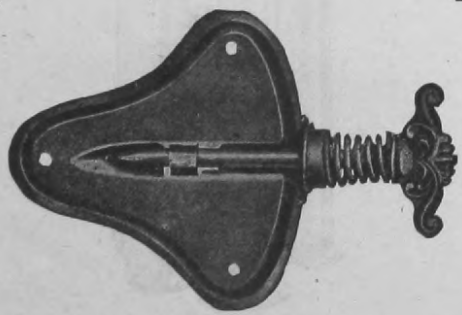


Taper Pattern—Otherwise same as Iron Clad opposite. Will nest closely and outlast any common wooden box.

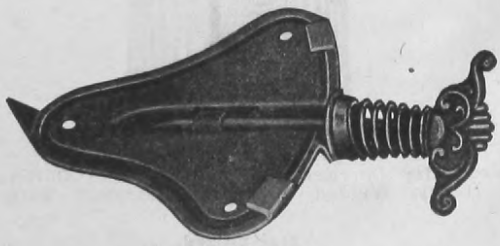
Standard Sizes.					
Nos. Top	Bottom		Depth	Ga.	Each
29—19¾x11½	16	x8	6 in.	20	$.....
32—19¾x11½	16	x8	6 in.	18	.....
35—19¾x11½	16	x8	6 in.	16	.....
41—21¾x11½	18	x8	6 in.	18	.....
44—21¾x11½	18	x8	6 in.	16	.....
45—21½x12½	18½x9½		6 in.	20	.....
47—21½x12½	18½x9½		6 in.	16	.....

Special Sizes to order.

DAMPER CLIPS



Nos. 12 and 13.



Nos. 22 and 23.

Ideal Steel Damper Clips, with Iron Handles, Nickel plated. Can be applied with or without rivets. The corrugation around the edge of the blades make them the strongest clips on the market. Has patent locking device on spindle

No. 12—With Tail Piece.....Per Dozen, $.....
No. 13—Without Tail Piece.....Per Dozen, ...

No. 22—With Tail Piece.....Per Dozen, $.....
No. 23—Without Tail Piece.....Per Dozen, ...

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

GASOLINE FUNNELS

Galvanized—Extra Heavy and Extra Large. With Brass Wire Strainer, and Extra Hoop to Fasten Chamois.

Nos.	31	51
Diameter, inches	9½	12¼
Per Dozen	$13.00	27.70

Galvanized—Extra Heavy and Extra Large. With Brass Wire Strainer and Extra Hoop to Fasten Chamois. Funnel Tube on side.

Nos.	33	53
Diameter, inches	9½	12¼
Per Dozen	$22.20	36.10

FILTERING FUNNELS

Heavily Coppered and Lacquered to prevent corrosion. Fine Brass Strainer and Removable Ring with Filtering Fabric. When this Special Filtering Fabric is saturated with Gasoline, dirt will not pass through it.

Nos.	0	1	2
Diameter, inches	2⅜	5	9
Capacity, per minute, gallons	1	5	12
Per Dozen	$9.00	18.00	33.00

Packed—Twelve in a Crate.

FUNNELS

I. C., up to 4 quarts; 6 quarts is I.X.

Sizes,	¼ Pt.	½ Pt.	1 Pt.	1 Qt.	2 Qt.	4 Qt.	6 Qt.
Inches,	3⅞	3⅞	4⅜	5¾	6½	7½	9

Dozen, $.... ....

WATER DIPPERS

Stamped Tin—Water Dippers .

	Plain.		
Nos.	2	4	5
Trade Capacity	1 Pt.	1 Qt.	2 Qt.
Actual Capacity	¾ Pt.	1¼ Pt.	1½ Pt.
Inches	4½x2	5⅜x2⅜	5¾x2½
Per Dozen	$.....	.....	.....

LAUNDRY DIPPERS

Galvanized—Stamped—Round Handles.

No. 600—4 Quarts, 8⅜x3⅞ in... Per Dozen, $.....

WASH BOWLS

Stamped Tin—With Eyelets.

	Galvanized.		
Nos.	65	70	75
Quarts	2	2½	3¼
Inches	10½	11½	12¼
Per Dozen	$.....	.....	.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

DRINKING CUPS

I. C. Pieced Tin—Straight.

No. 1—½ Pint, 3⅛x2⅛ inches..Per Dozen, $.....

No. 2— 1 Pint, 3⅝x2⅝ inches..Per Dozen, ...

I. C. Pieced Tin—Straight.

No. 4—1 Quart, 4½x4¼ inches..Per Dozen, $.....

Stamped Tin—Riveted Handles.
Retinned.

No.	**9**
Pints	¾
Inches	3⅞x2¼
Per Dozen	$.....

Stamped Tin—Deep Pattern—Riveted Handles.
Straight—Retinned.

No. 23—⅞ Pint, 3¾x2⅝ inches..Per Dozen, $.....

Aluminum—One Piece Drinking Cups.
Riveted Handles.

No. 706—Capacity, 4½ ounces; height, 2⅛ inches; diameter, 2½ inches. Weight, 7½ pounds per gross.....Per Dozen, $.....

Packed—One Dozen in a Carton.

DRINKING CUPS

Collapsible Drinking Cups.
Pure Aluminum, with Cover.

No. 1—Height: Open 2⅞ inches, Closed 1¼ inches; Diameter at Top, 2⅝ inches... ..... Per Dozen $.....

Packed—One Dozen in a Box.

CUSPIDORS

Cottage, Japanned, Assorted Colors, Striped.

No. 010—7x3⅜ inches.....Per Dozen, $.....

Darling, Japanned, Assorted Colors, Striped.

No. 030—7⅝x5 inches .....Per Dozen, $.....

Jumbo, Japanned, Assorted Colors, Striped.

No. 040—8x5½ inches .....Per Dozen, $.....

Self-Righting.
Broad Top, Cast Iron, White Enameled Inside.
Size, 9x6 inches.

No. 7—Painted Outside, Assorted Colors.. ..... Per Dozen, $.....

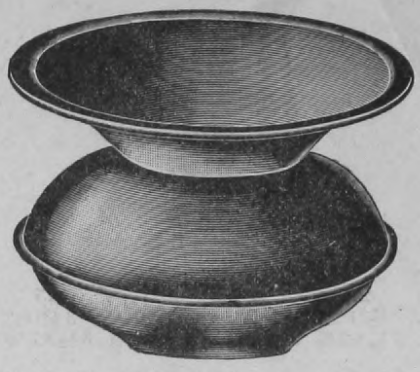
No. 17—Speckled Gray Enamel Outside.... ..... Per Dozen, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

CUSPIDORS

Self-Righting, Nickel Plated and Polished.
Loaded Bottom.

No. 210—Height, 4¼ in.; Diam., 7¾ in...
..... Per Dozen, $.....



Self-Righting, Nickel Plated and Polished.
Loaded Bottom.

No. 21—Height, 5¼ in.; Diam., 7¾ in...
..... Per Dozen, $.....

Self-Righting, Solid Brass, Highly Polished.
Very Heavy Loaded Bottom.

No. 1264—Height, 7⅛ in.; Diam., 8 in.....
..... Per Dozen, $22.00

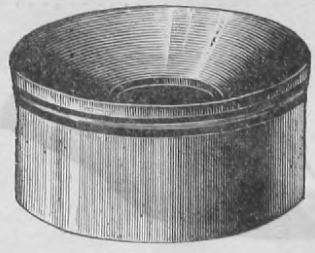
Self-Righting, Solid Brass, Highly Polished.
Very Heavy Loaded Bottom.

No. 1220—Height, 12 in.; Diam., 9 in.....
..... Per Dozen, $28.00

Weighted Bottom, Solid Brass, Highly Polished.
Height, 10¼ in.; Diameter, 9 in.

No. 1266—Polished Brass .....Per Dozen, $26.00
No. 1267—Nickel Plated .....Per Dozen, 28.00

SPITTOONS



Heavy Brass. Very Highly Polished.
Removable Covers. Enameled Pans.

No. 14—Height, 4 in.; Diam., 8¾ in.....
..... Per Dozen, $.....

Digitized by Google
UNIVERSITY OF MICHIGAN
Original from
UNIVERSITY OF MICHIGAN

LIQUID MEASURES

I. C., with Lips.

Nos.	22	23	24	25	26
Capacity	½ Pt.	1 Pt.	1 Qt.	2 Qts.	4 Qts.
Inches	3⅛x2¾	3⅝x4⅜	4⅜x5¾	5½x7½	6¼x9¼
Per Dozen. $					

I. X., with Lips—**Sealed.**

Nos.	53	54	55	56
Capacity	1 Pt.	1 Qt.	2 Qts.	4 Qts.
Inches	3⅝x4⅛	4⅜x5¾	5½x7½	6¼x9¼
Per Dozen. $				

I. C., with Funnel Attachment.

Nos.	84	85	86
Capacity	1 Qt.	2 Qts.	4 Qts.
Inches	4⅜x5¾	5½x7½	6¼x9¼
Per Dozen $			

MARKING POTS

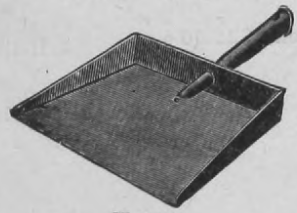
Seamless Bodies.

Nos.	1	2
Inches	5¾x2¾	6½x3
Per Dozen $		

OIL PUMPS

No. 40—Oil Pumps, with Iron Rods and Valves, 40 inches.....Per Dozen, $.....

DUST PANS



Heavy.

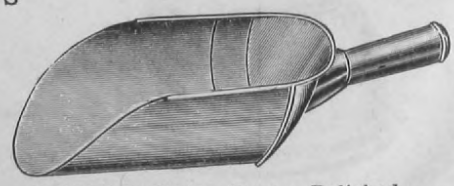
Japanned, Round Riveted Handles, Steel Strip on Edges, Handles through Back.

Nos.	30
Inches	9x13
Per Dozen	$.....

GROCERS' SCOOPS

Retinned—Covered Pattern.

Nos.	20	30	40	50
Inches	6¾x4½	8x5½	9¾x6¾	11¼x7¼
Per Dozen $				



I.X.X.X.X. Extra Heavy, Polished.

Nos.	102	103	104
Inches	8x5	9x5½	10¼x6¼
Per Dozen $			

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

FIRE PAILS

Royal—Round Bottom Fire Pails.

Galvanized.

Nos.	9512	9514
Quarts	12	14
Inches	10½x10¾	11x12
Per Dozen	$.....	.....

CEMENT OR MORTAR PAILS

Royal Cement or Mortar Pails. Straight, Full Capacity, Extra Heavy, Wrought Iron Ears.

Galvanized.

Nos.	7612	7614	7616
Quarts	12	14	16
Inches	11x10	11½x10½	12¼x10¾
Per Dozen	$.....	.....	.....

STOCK PAILS

Royal Stock or Mule Pails. Heavy Flaring Pattern. Full Capacity.

Galvanized.

Nos.	8416	8418	8420
Quarts	16	18	20
Inches	13½x9½	14½x9¾	15x10½
Per Dozen	$.....	.....	.....

WATER PAILS

Royal Water Pails. Straight Pattern. Full Capacity.

Galvanized.

Nos.	7410	7412	7414	7416
Quarts	10	12	14	16
Inches	10½x8¾	11x10	11½x10½	12¼x10¾
Per Dozen, $	.....	.....	.....	.....

Cream City Water Pails. Flaring Pattern. Extra Heavy Body and Ears. Coppered Wire Bails with Natural Finish Bail Woods.

Galvanized—Red Banded.

Nos.	3111	3113	3116
Quarts	11½	13	16
Inches	11½x9½	12x10	12⅞x10½
Per Dozen	$.....	.....	.....

FLARING PAILS

I. C.

Nos.	6	8	10
Trade Capacity, Qts.	6	8	10
Actual Capacity, Qts.	4¾	7	9¼
Inches	9½x6¼	10¼x7¾	10¾x8¾
Per Dozen	$.....	.....	.....

Digitized by Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

SPRINKLERS

I.C. Plain Tin, with Zinc Roses.

Nos.	01	02	04	06	08	010
Nominal Capacity—Quarts..	1	2	4	6	8	10
Inches	4 3/8 x 4 5/8	5 1/8 x 5 1/4	6x6 1/2	7x7 3/4	8 3/8 x 8 1/4	8 3/4 x 10 3/8
Per Dozen	$.....	.....	.....	.....	.....	.....

Galvanized—Heavily Coated, Smooth Spangled Finish, Zinc Roses.

Nos.	104	106	108	110	112	116
Quarts	4	6	8	10	12	16
Per Dozen	$.....	.....	.....	.....	.....	.....

TIN CAN SCREWS

COFFEE FLASK SCREWS

ZINC CAN SCREWS

Tin, Deep, Not Lined.

Inch	½	¾	1	1 ¼	1 ½	2
Gro. in box,	1	1	½	⅓	¼	¼
Per Gross..	$1.00	1.20	1.25	1.95	2.20	4.25

Zinc, Deep, Not Lined.

Inch	½	¾	1	1 ¼	1 ½	2
Gro. in box,	½	½	½	½	¼	¼
Per Gross..	$4.00	4.50	6.00	8.00	12.00	20.00

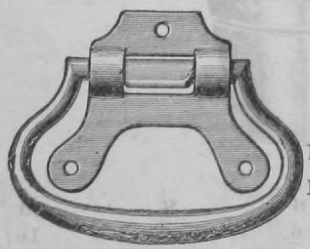
Coffee Flask Screws, Tin, Cork Lined.....

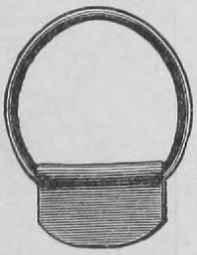
Inch	½	¾
Per Gross	$1.40	1.60

Packed—Half Gross in a Box.

WIRE RINGS AND CLIPS

BOILER HANDLES

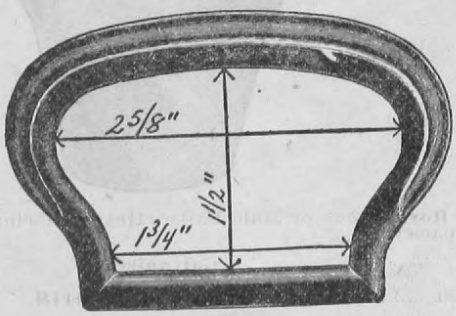




Inches...	¾	⅞	1	1 ¼
Per Gross	$0.25	.30	.35	.40

Packed—One Gross in a Box.

BOILER HANDLES

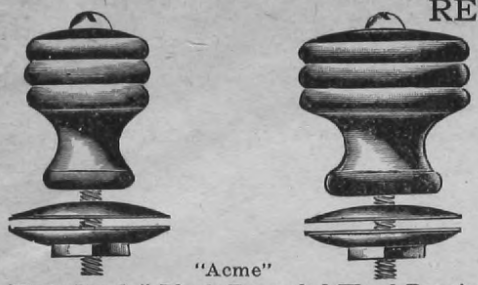


No. 3575C—Drop Boiler Handles, with Clip, Tinned. 100 weigh 23 lbs...Per Pound, $.....

No. 1—Common Cast Iron Boiler Handles, Coppered. 100 weigh 16 lbs. Per Pound, $.....

Digitized by UNIVERSITY OF MICHIGAN
Original from UNIVERSITY OF MICHIGAN

REPAIR KNOBS

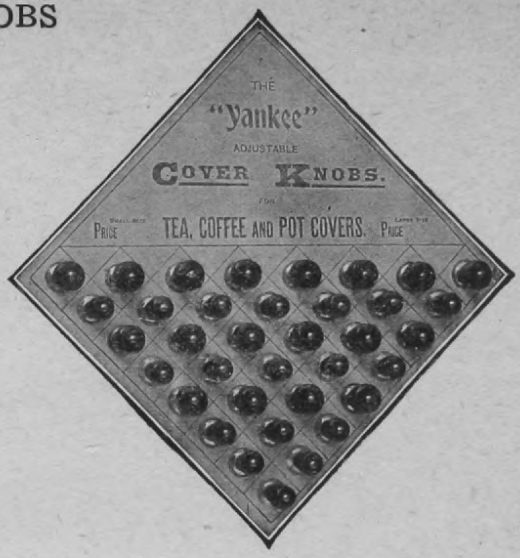


"Acme"

Acme "Ever Ready" Black Enameled Wood Repair Knobs. With Bolt, Nut and Two Washers.

Acme—Assorted large and small....Per 100, $.....

Packed—One Hundred in a Box.



"Repair Knobs on Card."

Yankee—Adjustable Repair Knobs, same style as Acme. Assorted 3 dozen on Card....

.....Per Card $.....

.....Per Gross, ...

SPRINKLER ROSES

Combination Sprinkler Roses. Tin Base, Zinc Cap.

Nos.	0	1	2	3
Inches	2 5/16	2 15/16	3 5/8	4 5/16
Per Gross	$5.00	6.25	10.00	13.00

Packed—One-Twelfth Gross in a Box.

MEDIUM KETTLE EARS

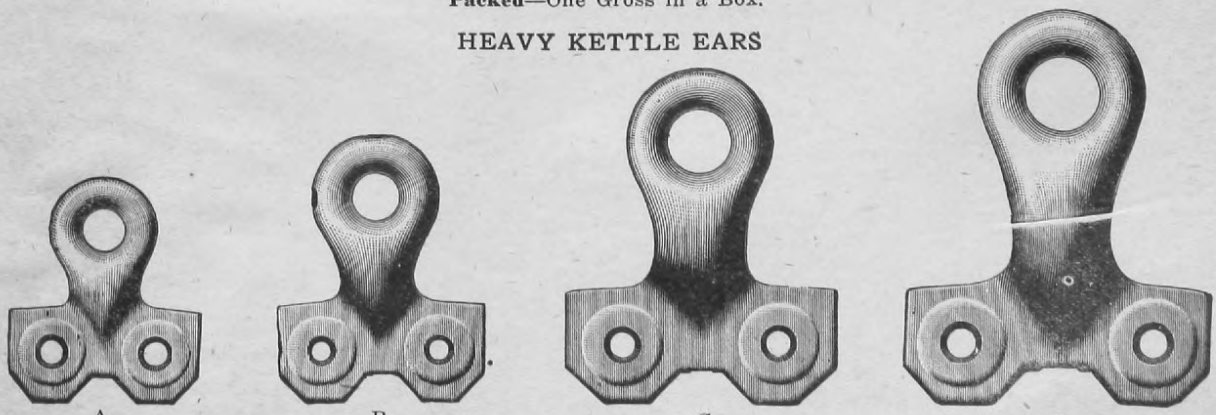
A B C D E

Retinned, Medium Pattern Malleable Iron Kettle Ears. Two-Thirds Size Cuts.

No. 3510—Size	A	B	C	D	E
Inches	7/8 x 1 1/8	1 1/8 x 1 1/4	1 1/4 x 1 3/8	1 7/16 x 1 1/2	1 5/8 x 1 3/4
Per Gross	$0.36	.60	.80	1.00	1.50

Packed—One Gross in a Box.

HEAVY KETTLE EARS



A B C D

Retinned, Medium Pattern Malleable Iron Kettle Ears. Two-Thirds Size Cuts.

No. 3515—Size	A	B	C	D
Inches	1 7/16 x 1 5/8	1 1/2 x 2	2 x 2 5/8	2 1/4 x 2 3/4
Per Pound	$0.18	.18	.18	.18

Packed—In Bulk, 50 Pounds in a Box.

Digitized by Google Original from UNIVERSITY OF MICHIGAN UNIVERSITY OF MICHIGAN

"A QUALITY RULE—BUY GOODS BRANDED BUHL"

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN

Digitized by
UNIVERSITY OF MICHIGAN

Original from
UNIVERSITY OF MICHIGAN